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GUERNSEY'S OBSTETRICS.

THE

APPLICATION

OF THE

PRINCIPLES AND PRACTICE OF HOMŒOPATHY

TO

OBSTETRICS

AND THE

DISORDERS PECULIAR TO WOMEN AND YOUNG CHILDREN.

BY

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WITH NUMEROUS ILLUSTRATIONS.

THIRD EDITION.

REVISED, ENLARGED AND GREATLY IMPROVED

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PREFACE TO THE FIRST EDITION.

In preparing this work for the press, I need not remark upon the great interruption a large practice and the great labor of lecturing one hour or more every day in the week for six months out of the twelve upon some medical subject, and many other duties at the College besides, have occasioned. Very many physicians can testify to the all-engrossing of almost every moment of time in conducting a large practice. Add to this the labor as above indicated, and most physicians can understand that it is an easy matter for many imperfections to creep into a work of this size, prepared under such pressing circumstances. No one can be more conscious of these imperfections than myself. This being the pioneer of all works of this kind ever published, it will be an easy matter to offer criticisms and to improve on the issue of future editions.

The same reasons have compelled the long delay in the publication of the work, due entirely to the impossibility of more rapidly supplying the copy. Nor indeed could the work have made its appearance so promptly, but for the assistance rendered by my friend and colleague, J. H. P. Frost, M. D., in preparing the physiological parts, description of diseases, etc., and in carrying the whole through the press.

Both the author and publisher desire to acknowledge the liberality of Messrs. Lindsay & Blakiston in furnishing a considerable part of the illustrations employed in this work.

The plan of treatment may seem to some rather novel, and perhaps on its first view, objectionable, inasmuch as it may seem like prescribing for single symptoms; whereas such is

not the fact. It is only meant to state some strong characteristic symptom, which will often be found the governing symptom, and on referring to the Symptomen Codex all the others will surely be there if this one is. There must be a head to everything; so in symptomatology—if the most interior or peculiar, or key-note, is discernible, it will be found that all the other symptoms of the case will be also found under that remedy that gives existence to this peculiar one, if that remedy is well proven. It will be necessary, in order to prescribe efficiently, to discover in every case that which characterizes one remedy above another in every combination of symptoms that exists. There is certainly that, in every case of illness, which pre-eminently characterizes that case, or causes it to differ from every other. So in the remedy to be selected, there is or must be a combination of symptoms—a peculiar combination, characteristic, or more strikingly key-note. Strike that and all the others are easily touched, attuned or sounded. There is only one key-note to any piece of music, however complicated, and that note governs all the others in the various parts, no matter how many variations, trills, accompaniments, etc.

Such a work as the present was needed, indeed urgently called for, and I have spared no pains to render it useful to students and to the junior members of the profession, for whom it was especially designed, and to whom it is respectfully dedicated by

THE AUTHOR.

PREFACE TO THE SECOND EDITION.

In placing before the profession a second edition of his work the author desires to call attention to the fact that he has endeavored to make it more acceptable and valuable by a thorough revision of the entire text of the first edition; by rewriting parts, and even whole chapters, wherever it was deemed necessary to do so; by a free consultation of the most recent authorities, thus bringing it up to the advanced opinions of the day; and especially by the addition of much new material, chiefly gathered from the writings of experienced homœopathic practitioners, from the valued verbal communications of numerous esteemed professional friends, and from personal experience. While, however, new measures of practice have been introduced, nothing has been recommended that has not fully borne the test of practical experimentation. Thus, for instance, in the use of the forceps in breech presentations, mentioned on page 260, while it may seem to many a novel and problematical procedure, yet it has received the endorsement of Dr. James Kitchen, of Philadelphia, one of the most experienced and skillful of accoucheurs, of the author, and of other practitioners.

It is proper that the author should here place on record an expression of his increased confidence in the methods of practice strictly medical which were laid down in the first edition of the work, and which were regarded by certain critics as chimerical. Increased experience has only served

to add to the author's faith in the efficiency of homœopathic medication in the greatest exigencies of life, and this faith has been additionally strengthened by the related experience of many of the most eminent and skillful practitioners of the homœopathic school.

The *Clinical Index*, it is hoped, will prove a great help to the busy practitioner. By it the therapeutical parts of the work may be read "cross-wise," as Dr. Hering expresses it, which will facilitate the selection of the remedy at the bedside. A copious *General Index* has been supplied to this edition, a glance at which will indicate the additions and improvements that have been made. The complete *Glossary* at the end of the volume is intended to aid the novitiate.

The author desires to express his thanks to the many friends who have kindly made suggestions for the improvement of this edition, and to acknowledge his special obligations to Dr. R. J. McClatchey, of Philadelphia, editor of the *Hahnemannian Monthly*, for valuable assistance in preparing the material for, and carrying the work through, the press.

1423 Chestnut Street, Philadelphia,
August 1, 1873.

PREFACE TO THE THIRD EDITION.

The call for a Third Edition of my work on Obstetrics, at the present time, affords me much gratification, and I feel well assured the improvements in this, over previous editions, will be satisfactory to the profession.

Since publishing the First Edition my knowledge of the opinions and wants of our school has been constantly increasing, and it is exceedingly gratifying to know that the mass and strength of the profession demand more knowledge, more remedies, fuller indications, and all other improvements that have stood the test of the increasing light of science. It has been my aim to satisfy these demands, but to specify every improvement would be tedious and difficult. Suffice it to say, that all through the work matter that could be dispensed with has been expunged, and more useful material inserted. New remedies and their indications have been given, while old ones have been amplified and verified. New and valuable manipulations have been described, and an Appendix added, the intrinsic value of which will greatly enhance the value of the entire volume. It is a matter of congratulation that the Homœopathic school is making such rapid strides in the science and art of Therapeutics. An increased confidence is expressed universally in the methods of practice, strictly medical, which were laid down in the First Edition, and which were regarded by

certain critics as chimerical. On the contrary, daily experience has only served to increase the faith of the profession everywhere in the efficiency of Homœopathic medication in the most trying exigencies of life.

In the obstetric art, when mechanical means become necessary, the new ideas advanced in former editions are growing in favor, such as applying forceps to the breech, the management of placenta prævia, etc. From the first, my work has been based upon the principles of *Samuel Hahnemann's Organon of the Healing Art*, and the curative measures adopted are all in harmony with that greatest of text-books. The more the profession read and apply the teachings of this great book in their daily rounds among the sick, so much the more will they value my work on *Obstetrics and Diseases of Women and Children.*

I am indebted to my son, Joseph C. Guernsey, M. D., for his assistance in making many important corrections and for carrying the entire work through the press.

A Treatise on Obstetrics.

CHAPTER I.

THE BONES OF THE PELVIS.

OBSTETRICS, as a science and as an art, has relation to the phenomena of pregnancy and parturition considered as physiological processes. Its study naturally includes a consideration of the developments necessary to the occurrence of pregnancy, the period of pregnancy itself, and the conditions which, succeeding parturition, may be regarded as its consequences. At the same time, however, all inequalities in form and function, and all difficulties and disorders attendant upon, connected with, or following after these processes, with their proper treatment, must be thoroughly understood, in order that the student may become an accomplished and successful accoucheur and physician. The anatomy and physiology of the pelvis, therefore, and of the parts of which it is composed, of the organs which it contains, and of those which are functionally associated with them, demand the first attention. And it is to be remembered that no mere description of these several organs and regions can alone be sufficient to impart a knowledge of them adequate to the purposes of the obstetrician, for the bones of the pelvis and their relations to each other, the pelvis as a whole and its relations to the mechanism of pregnancy and parturition, and the soft parts *in situ*, must be carefully and scrutinizingly studied, on the skeleton and on the cadaver.

In describing the anatomy of these parts and organs, a well-formed adult—having passed through the successive stages of progressive development, from the embryonic formation to that of maturity—is taken as a standard.

The Pelvis is composed of four bones—viz., the sacrum, the coccyx, and the ossa innominata. The sacrum and coccyx form the posterior part of the pelvis, and are placed on the median line, while

the ossa innominata form the sides and front. These bones unitedly form a cavity or basin (πελυξ, a basin), which gives general support to the contents of the abdomen, and the surfaces of which afford places of attachment to numerous muscles. In the adult it occupies the centre of the body, and is interposed between the lower end of the vertebral column, to which it gives support, and the inferior extremities, upon which it rests; articulating superiorly with the last lumbar vertebra, and inferiorly with the femoral bones. In the erect position it is placed obliquely with regard to the trunk of the body; the inner surface of its anterior wall—the symphysis pubis—looking upward and backward, while the inner surface of its posterior wall—the sacrum—looks downward and forward.

A brief description of the several bones which compose the pelvis will prepare the way for a more particular account of it.

The SACRUM is the largest bone of the series of vertebræ, and is situated at the lower part of the spinal column and at the superior and posterior part of the pelvis, presenting the appearance of a wedge forced between the ossa innominata. It is concave in front and convex behind, and is curved upon itself from above downward and forward. Superiorly it articulates with the last lumbar vertebra. This articulation, owing to the projection forward of the anterior part of the articulating surface of the sacrum, and to the projection backward from this point of the body of the bone, forms a considerable prominence called the *sacro-vertebral angle*, or *promontory of the sacrum*, the angle being obtuse relatively with the lumbar portion of the vertebral column. Inferiorly the sacrum articulates with the coccyx. It is from four to four and a half inches in length and of nearly equal breadth, but in consequence of its spongy texture and the numerous foramina by which it is perforated, it is the lightest bone, for its size, in the skeleton. It is triply wedge-shaped, as will be shown by the following description: In the first place, it is wider at its base, superiorly, than at its apex, having a breadth above of four and a half inches, from which it rapidly tapers toward its coccygeal extremity; secondly, it is broader on its anterior than on its posterior surface; and, thirdly, while the antero-posterior thickness of the bone at its base is two and a half inches, that of the apex is usually not more than two lines. It presents for examination an anterior and a posterior surface, two lateral surfaces, a base, an apex, and a central canal.

The *anterior surface* is comparatively smooth and concave. This concavity is an important feature in the construction of the pelvis;

varying in degree in different subjects, being usually estimated at from one-half to three-fourths of an inch. In the middle of this depression there are four transverse ridges, which show the lines of union of the five segments of bone of which the sacrum is originally composed. At the ends of each of these ridges are the anterior sacral foramina—eight in number—through which pass the anterior branches of the sacral nerves. These foramina are rounded in form, the superior being the largest and the inferior the smallest. Opposite to the extremities of the ridges above described, the margins of the foramina are beveled to form a groove, which runs toward the lateral margins of the bone, so that on their outer side the nerves transmitted are in a great measure protected from pressure by the descending head, during parturition, by being thus sunk below the surface of the bone. On the inner side, the transverse ridges themselves answer a similar purpose of preventing undue pressure upon the nerves, which pass as it were beneath them. External to these foramina, on either side, are the *lateral masses* of the bone, which complete its anterior surface.

The *posterior surface* is very rough, irregular, convex and much narrower than the anterior surface. Along the median line it is studded with eminences—rudimentary spinous processes—which afford greater surface and security to the muscles that originate from, and that are inserted into, the sacrum. These processes and tubercles form an irregular bony ridge, whose projections afford greater firmness of attachment to the numerous ligaments which unite this bone to the os innominatum of either side; while the general contour of the ridge itself renders the convexity of this posterior surface even greater than the corresponding concavity of the anterior surface. This convexity presents in both directions, longitudinally and laterally; so that the slope from the posterior surface inclines toward each lateral border, as well as toward the base above and the apex below. At the base of the spinous ridge, and immediately external to it, are the *laminæ*, broad and well marked superiorly, but narrower and less pronounced as the apex is approached; while external to the laminæ are a series of indistinct tubercles which correspond to the articulating processes of the lumbar vertebræ. The first or upper pair are large and well developed, the second and third more indistinct, and the fourth and fifth, which are usually blended together, are called the *sacral cornua*, and articulate with corresponding processes of the coccyx. External to these processes on either side are four *posterior sacral foramina*, through which are transmitted the posterior branches of the sacral

nerves. On the outer side of these foramina, a second series of indistinct tubercles will be found, which constitute the rudimentary posterior transverse processes of the sacral vertebræ.

The *sacral canal* extends centrally throughout the greater part of the bone. In its lower portion it is often incomplete in consequence of the non-development of the spinous processes and laminæ. It is triangular above, follows the curvature of the sacrum, and is both narrowed and flattened from before backward in its descent toward the apex. It gives lodgment to the sacral nerves, which pass out through the anterior and posterior sacral foramina by which the canal is perforated.

Each *lateral border* is divided into two distinct parts, a superior or iliac and an inferior part. The superior, *auricular* or ear-shaped part is covered by cartilage for articulation with the ilium. Posteriorly it is marked by irregular impressions, to which the posterior sacro-iliac ligaments are attached. The inferior part of the lateral border is thin and curved, and gives attachment to the greater and lesser sacro-ischiatic ligaments and to some portions of the gluteus maximus muscle. The anterior branch of the fifth sacral nerve passes through a small indentation at the lower edge of this border and at its angle of junction with the coccyx.

The *base* is directed upward and a little forward, and is largest in its transverse diameter. In the middle and anteriorly it is surmounted by a transverse oval surface, placed obliquely, to correspond with the body of the last lumbar vertebra, with which it is articulated by the medium of intervertebral cartilage. Upon each side of this articulating facet, a smooth surface is observed, concave transversely, convex from before backward, inclined forward, covered in the recent subject by the anterior sacro-iliac ligaments, and continuous with the iliac fossa. The anterior margin of these surfaces is formed of a rounded lip or border, which separates them from the anterior surface, and forms the posterior part of the superior strait, as will be hereafter shown. Behind the articulating surface is observed the orifice of the sacral canal, and the two articular processes of the upper segment of the bone.

The *apex* is directed downward and a little forward, and presents a transverse oval surface by which it is articulated with the coccyx.

In the female the *sacrum* is broader than in the male; less curved, especially in its upper part; and directed more obliquely backward: thus at the same time increasing the projection of the promontory of the sacrum, and the capacity of the cavity of the pelvis.

The pyriformis and coccygeus muscles are attached to the sacrum on either side; the gluteus maximus and erector spinæ behind.

The Coccyx corresponds to the sacrum in general appearance, shape, and mode of formation. From the gradual diminution in size, from above downward, of the four or five pieces of which it is composed, it presents the form of an inverted triangular pyramid. Its *anterior surface* is concave, and marked by three transverse grooves. It gives attachment to the levator ani muscle, the anterior sacro-coccygeal ligament, and affords support to the lower portion of the rectum. The *posterior surface* is convex, marked by similar grooves, and presents on each side a row of tubercles. The superior and largest pair of these—the cornua of the coccyx—project upward to articulate with the cornua of the sacrum; by which articulation the fifth sacral foramen is formed, for transmitting the posterior branch of the fifth sacral nerve. The posterior surface of the coccyx is covered in by and gives attachment to the posterior sacro-coccygeal ligament, and has attached to it some fibres of the gluteus maximus muscle. The borders of the bone are thin, and give attachment to the coccygeus muscle and the sacro-sciatic ligaments. To the rounded *apex* is attached the tendon of the external sphincter ani muscle. The only articulation of the coccyx is with the sacrum above, by means of an oval articulating surface.

The Os Innominatum is so called from the impossibility of giving it a truly descriptive name. The bone is developed from three primary centres of ossification, and in early life consists of three separate pieces, which are then regarded as distinct bones, and named the *ilium*, the *ischium* and the *pubes*. These subsequently become united to form a single bone, and in the maturer subject the same names are employed to designate the respective portions of this large, irregular and anomalous bone.

The *ilium* occupies the side, the *ischium* the inferior and posterior portion, and the *pubes* the anterior part of the pelvis. These three bones coalesce on either side, uniting at the acetabulum or cup-shaped cavity for the reception of the head of the femur, and at the ascending and descending ischio-pubic rami, and thus form the os innominatum.

It will be more convenient first to describe by itself each of these constituent bones; afterward to consider them as they unite to form one single bone.

The Ilium, the largest of the three, presents an external and an internal surface, an anterior and a posterior border, and a crest.

The *external surface*, or *dorsum of the ilium*, is bounded above by

the crest; below by the acetabulum; and in front and behind by the anterior and posterior borders. It is alternately convex and concave, broad and smooth, forms the external iliac fossa, and is crossed in a curved direction by three lines—the superior, middle and inferior curved lines. It gives attachment, principally, to the gluteus maximus, medius and minimus muscles, which make up the full and rounded contour of the hip.

The *internal surface* is bounded above by the crest, below by a well-marked ridge called the ilio-pectineal line, and in front and behind by the anterior and posterior borders. It may be divided into two parts. The anterior part is a smooth and concave surface, of considerable extent, called the internal iliac fossa, or *venter of the ilium*, and gives lodgment and attachment to the iliacus internus muscle. The posterior portion, lying behind the iliac fossa, consists of two portions; a superior, which is rough, uneven and irregularly shaped, gives attachment to the sacro-iliac ligaments; and an inferior or auricular portion, which is uneven, is covered with cartilage in the recent state, and articulates with the corresponding ear-shaped portion of the lateral border of the sacrum.

The *crest* of the ilium, longer in the female than in the male, is thick, convex, and arched. Its terminations in front and behind form prominent eminences, which are termed respectively the anterior and posterior superior spinous processes. The former, or anterior superior spinous process, gives attachment to Poupart's ligament, and to the sartorius and tensor vaginæ femoris muscles. Into the latter, or posterior superior spinous process, are inserted strong ligaments which aid in firmly uniting the ilium to the sacrum. The outer edge or lip of the crest gives attachment to the tensor vaginæ femoris, obliquus externus abdominis, and latissimus dorsi muscles, and the fascia lata—a dense fascia which covers in, and by its inner surface gives attachment to, the muscles of the hip and thigh. The inner lip has attached to it the transversalis, quadratus lumborum, and erector spinæ muscles; while between the two, attachment is given to the obliquus internus abdominis muscle.

The *anterior border* of the ilium extends from the anterior superior spinous process to the ilio-pectineal eminence. It presents two depressions, which are separated by the anterior inferior spinous process. To the edge of the upper depression, which is a lunated notch, some fibres of origin of the sartorius muscle are attached, while the external cutaneous nerve passes across it. The straight tendon of the rectus femoris muscle arises from the anterior inferior spinous process. Be-

low this process is a shallow notch or groove, which completes the anterior border of the ilium, and across which the iliacus muscle passes.

The *posterior border*, which is shorter than the anterior, extends from the posterior superior spinous process above to a deep notch below—the great sacro-sciatic notch—its termination being marked by a projecting process of bone, the posterior inferior spinous process. The upper portion of this border corresponds with that portion of the dorsum of the ilium which gives attachment to the sacro-iliac ligaments; the lower portion to the auricular surface which articulates with the sacrum.

The ISCHIUM, the second in size and lowest in position of the bones forming the os innominatum, is divided into a base or body and a ramus or branch. The *base* is the thickest part, and forms a larger portion of the acetabulum than does the ilium. From the posterior border of the bone arises the *spinous process* of the ischium, which marks the inferior boundary of the great sacro-sciatic notch. This process gives attachments to the gemellus superior, coccygeus, and levator ani muscles, and the lesser sacro-sciatic ligaments. Below it will be found a smaller notch, the lesser sacro-sciatic notch. The outlet of the pelvic cavity is sometimes materially affected by the abnormal length and internal inclination of the spinous process or spine of the ischium; which hence becomes an important element in determining the obstetric capacity of the pelvis itself. The *tuberosity* of the ischium forms the part upon which the body rests in the sitting position. It gives attachment to numerous muscles, and to some of the ligaments of the pelvis. The *ramus* of the ischium, thin and flattened, extends from the tuberosity upward and inward to join the ramus of the pubis. Its lower border forms part of the outlet, and its inner surface forms part of the anterior wall of the pelvis.

The PUBES, the smallest of the three divisions of the os innominatum, with its fellow of the opposite side, forms the pubic arch or anterior portion of the pelvis. It may be divided for the sake of description into a body or horizontal ramus and a descending ramus. The *horizontal ramus* presents at its inner extremity the *symphysis*, marked on its surface by a number of transverse ridges separated by grooves, which serve for the attachment of the interarticular fibro-cartilage placed between the two pubic bones. The upper surface of this ramus is bounded posteriorly by a sharp ridge of bone, the *linea ilio-pectinea*, which marks the brim of the true pelvis. The internal surface of the horizontal ramus is smooth, and forms a portion of the

anterior wall of the pelvis. The *descending ramus* is that portion of the bone which extends outward and downward to join with the ascending ramus of the ischium; the point of union is generally marked by a slight ridge. It becomes thin and narrow as it descends; is smooth on its inner surface, and rough externally for the attachment of muscles. The pubic bones are not in actual contact at the symphysis, but are separated by fibro-cartilage, as mentioned above. These cartilages are remarkably adapted to promote elasticity of the pelvis. In some instances the state of this inter-pubic fibro-cartilage is such as to admit so much lateral movement between the pubic bones as to greatly impede locomotion. This is particularly the case during pregnancy, as this state favors softening of the tissues.

The *acetabulum*, or cotyloid cavity of the os innominatum, is the circular, cup-shaped depression for the reception of the head of the femur. The ischium forms something more, and the ilium something less, than two-fifths each of this depression, and the pubes the remainder. Thus the acetabulum forms the centre of union of the three bones which compose the os innominatum; and these three original bones, which, for distinction's sake, have thus been separately described, unite to form the os innominatum, which latter must therefore be regarded as one bone.

The *obturator*, or *thyroid* foramen, or foramen ovale, as it is sometimes termed, large and irregularly oval in the male, but smaller and triangular in shape in the female, is a large aperture situated between and formed by the ischium and the pubes. Formed on the same principle of the double arch which is seen on a larger scale in the construction of the pelvis, it gives lightness to the bone, with strength. Its margins, which are thin and uneven, have attached to them a strong membrane, the obturator ligament or membrane, which covers in the entire foramen excepting at its upper and outer part, at which point, by a notch in the bone and a corresponding hiatus of the membrane, a foramen is formed through which are transmitted the obturator vessels and nerve. A portion of intestine may descend through this opening and become strangulated. It will be perceived that the obturator membrane forms a part of the wall of the pelvis; and by its elasticity more room may be provided for the descending fœtal head during parturition. It may be remarked, that the combination of osseous and membranous constituents of the pelvic parietes serves, at the same time, to relieve the fœtal head and the soft parts of the mother from the danger of undue compression.

The *great sacro-sciatic* notch is a deep, lunated depression, formed

by the ilium and ischium, extending from the posterior inferior spinous process of the ilium superiorly to the spine of the ischium inferiorly. In the recent state this notch is converted into a foramen by the lesser sacro-sciatic ligament. Through it are transmitted the pyriformis muscle, the gluteal vessels and nerve, and the internal pudic vessels and nerve.

The *os innominatum* is formed by the union of the three bones thus separately described; and this bone, considered now as a unit, presents for study an external and an internal face, an anterior, a posterior, a superior and an inferior border.

The *external face* of the os innominatum is occupied, in its upper and posterior portion, by the external iliac fossa. In its respective convex and concave surfaces, this fossa gives origin, insertion and attachment to the gluteus maximus, medius and minimus muscles. Anteriorly and superiorly appears the acetabulum or cotyloid cavity. Still more directly in front and beneath is found the obturator foramen, already described as being nearly subtended by the obturator ligament.

The *internal face* of the os innominatum is occupied, in its superior portion, by the internal iliac fossa and the auricular facet for articulation with the sacrum. Beneath is found the triangular surface which corresponds to the acetabulum and body of the ischium. Anteriorly appear the inner surface of the obturator foramen and membrane, and the internal faces of the ischio-pubic rami and symphysis pubis.

The *anterior border* is concave, oblique above and horizontal in front; marked by the anterior superior and anterior inferior spinous processes and ilio-pectineal eminence, and terminated by the spine and angle of the pubes.

The *posterior border* is irregular in shape, oblique from above downward and from without inward; marked by the posterior superior and posterior inferior spinous processes, great sciatic notch, spine of the ischium and lesser sciatic notch, and terminated by the tuberosity of the ischium.

The *superior border*, or *crest of the ilium*, is convex and sinuously curved, being bent outward anteriorly and slightly inward posteriorly. It is terminated by the anterior superior spinous process in front, and by the posterior superior spinous process behind.

The *inferior border*, shorter than either of the others, is marked above by the oval articulating surface which forms the symphysis pubis, below by the tuberosity of the ischium, and between the two we find the ischio-pubic rami.

CHAPTER II.

THE ARTICULATIONS OF THE PELVIS, AND THE PELVIS AS A WHOLE.

THE four bones which compose the pelvis are united by five articulations—the junction of the coccyx with the sacrum; the sacro-vertebral junction; the symphysis pubis, and the sacro-iliac symphyses. Each of these articulations is a true amphiarthrosis,—by some authors, however, classed as arthrodia,—a species of articulation in which corresponding surfaces of bones are united together by an intermediate substance, yet admitting limited motion. These joints are each supplied with a partial synovial membrane, and it is supposed that during gestation the secretion from these membranes is more abundant. During this period, also, all shocks to either or all these pelvic bones are expended upon their elastic interarticular fibro-cartilages and synovial membranes, and the contents of the pelvis are thereby preserved from serious injury.

In the COCCYGEAL JUNCTION, or connection of the coccyx with the sacrum, there are found fibro-cartilages which cover each articulating surface. Between these cartilages is placed the synovial capsule. Thus the sacro-coccygeal articulation admits of free motion,—especially backward,—by means of which the inferior outlet of the pelvis may be enlarged at least one inch in its antero-posterior diameter. This movement of the coccyx, so important in obstetric practice, is facilitated by the minor articulations of the small bones which compose the coccyx itself. In some rare instances these fibro-cartilages become completely ossified; as well at the junction of the coccyx with the sacrum, as at the points of union of the minor bones of the coccyx. In such cases the coccyx forms one continuous bone with the sacrum, greatly extending its curve, and constituting a formidable obstacle to the passage of the head through the inferior strait in parturition. But ordinarily the mobility of the coccyx as a whole, and of the parts which compose it, increases during pregnancy; and so affords an additional advantage in labor.

The *anterior* and *posterior sacro-coccygeal ligaments* support this articulation in front and behind.

In the SACRO-VERTEBRAL JUNCTION, or articulation of the base of the sacrum with the lower articulating surface of the last lumbar vertebra, is found the wedge-shaped interarticular fibro-cartilage common to the inter-vertebral articulations. This fibro-cartilage is much thicker anteriorly than posteriorly, and assists in the formation of the sacro-vertebral prominence. The oblique processes of the sacrum, in conjunction with similar processes of the vertebra, complete the articulation, and at these points a synovial membrane is supplied. The movements common to the true spinal articulations may be accomplished, but to a limited extent only. The lumbar curve, which begins with the last dorsal vertebra, terminates at the sacro-iliac junction,—the pelvic curve commencing at the same point, and terminating at the extremity of the coccyx. The sacro-vertebral ligament and the ilio-lumbar ligament are those which more immediately connect the spine with the sacrum and pelvis.

The SYMPHYSIS PUBIS, or articulation of the pubic bones in front, is formed by means of two dense oval-shaped fibro-cartilaginous plates, which cover the articulating surfaces of the pubic bones. The surfaces of these plates lying next to the bones are firmly connected to the bones themselves by nipple-shaped processes which fit within corresponding depressions on the osseous surface before described; while their opposing surfaces are connected by an intermediate fibrous elastic tissue, especially where the opposing convex surfaces of the pubic bones recede from each other. The interarticular fibro-cartilages vary greatly in thickness in different subjects, and project somewhat beyond the surface of the bones, especially behind. An interspace is left between them at the upper part of the articulation, which is larger in the female than in the male, and especially so during pregnancy and parturition. At this point the surfaces of the plates are lined by epithelium. This articulation is strengthened by several ligaments which traverse it in front and behind, above and below. These are termed, respectively, the *anterior* and *posterior pubic ligaments*, and the *superior pubic* and the *sub-pubic ligaments*. Their names are indicative of their positions and associations. The inferior surface of the sub-pubic ligament forms the upper boundary of the pubic arch.

The strength and variety of these ligaments, which combine to strap the pubic bones together in every direction, and in the firmest possible manner, afford sufficient proof of the error of those obstetric writers who have supposed the symphysis pubis was intended to separate for the sake of enlarging the diameter of the pelvis in parturition. Except in cases of serious deformity, the head is capable

of being moulded (elongated) in its descent, so as to accommodate itself to the size and shape of the pelvis. But neither in such cases of serious deformity, nor in any other, does disarticulation of the pubic or sacro-iliac symphysis enable the pelvis to adapt itself to the size of the descending head.

The SACRO-ILIAC SYMPHYSIS, of either side, is formed by the union of the superior, ear-shaped portion of the lateral border of the sacrum with the inferior, auricular portion of the posterior border of the ilium. Each of these articulating surfaces is covered with a layer of cartilage; the sacral layer being much thicker than the iliac. And both the sacral and iliac cartilaginous surfaces are covered by a delicate synovial membrane, which, in the female,—especially in the pregnant state,—secretes a true synovial fluid. Thus, as in the symphysis pubis, so in the sacro-iliac symphysis, a limited motion is provided for.

The sacro-iliac symphysis is strengthened by several important ligaments, which, without entirely preventing the motion just mentioned, assist in enabling these joints to sustain in safety the whole weight of the body. The *anterior sacro-iliac ligament*, composed of numerous thin bands, connects the anterior surfaces of the ilium and sacrum. The *posterior sacro-iliac ligament* occupies the depression between the sacrum and ilium, behind the edges of the cartilaginous surfaces, and forms the most powerful bond of union between these two bones. This ligament consists of numerous short interlacing fasciculi, which pass in every direction from the sacrum to the ilium, and which from their fibrous and elastic nature are admirably fitted to maintain the necessary stability of this important articulation. In this general name of posterior sacro-iliac ligament are included also those which by some writers are described as superior and inferior sacro-iliac ligaments. In addition to these, the *greater* and *lesser sacro-sciatic ligaments*, which change the greater and lesser sciatic notches of either side into foramina, at the same time serve to bind the ilium and ischium still more firmly to the sacrum, and contribute to the construction of the walls of the pelvis.

It is doubtless true, as has been asserted by a number of writers, that during pregnancy there occurs an increased afflux of fluids to all the parts concerned in that process, inclusive of those which constitute the articulations of the pelvis; and these articulations or symphyses become in consequence relaxed during the period of gestation, and do not return to their normal condition for a longer or shorter period after parturition. To so great an extent, indeed, may this relaxation and softening of the tissues and joints occur as to seriously interfere

with locomotion, which can only be performed with great difficulty and at the expense of considerable suffering. Difficult labor, too, may have a damaging effect upon the symphyses of the pelvic bones while in this relaxed condition, to the extent that standing or even sitting up in bed is rendered well-nigh impossible. The treatment of these disordered conditions, and of others arising during pregnancy and after parturition in consequence of the softening and relaxation of the pelvic joints, will be indicated in another chapter of this work.

The Pelvis as a Whole.

Having thus studied the separate bones which compose the pelvis, and examined the manner in which they are united and strengthened, and observed the nature of their articulations, we come to the consideration of the pelvis as a whole.

In general, the pelvis may be divided into an external and an internal surface, each of which needs to be studied by itself.

The External Surface of the pelvis presents four regions. The *anterior region* extends from the symphysis pubis, on the median line, to the edge of the acetabulum on either side, and is principally covered by the obturator externus and adductor muscles laterally, and in front by cellular tissue and the integument of the pubes. The *posterior region* is marked principally by the ridge formed by the spinous processes of the sacrum, the posterior sacral foramina, the inferior opening of the vertebral canal, the union of the sacrum with the coccyx, and the posterior surface of the coccyx itself. Each *lateral region* is formed superiorly by the external iliac fossa, mediately by the acetabulum, and inferiorly by the external surface of the tuberosity of the ischium. In this situation, likewise, is found the great sacro-sciatic notch. In the whole extent of its lateral surfaces the bones of the pelvis are separated from the integument by thick muscles.

On its Internal Surface the pelvis is divided into the upper and larger or false pelvis, and the lower and smaller or true pelvis. The line of division extends on a level with the superior border of the symphysis pubis throughout the extent of the linea ilio-pectinea to the promontory of the sacrum. Thus, the *superior* pelvis is understood to include all that part above, and the *inferior pelvis* all that part below, the ilio-pectineal line. The inferior pelvis is that which is principally concerned in parturition, and which the accoucheur should therefore fully understand in all its parts and relations. Both the superior and inferior pelvic divisions are again divisible into four

distinct regions. In the *superior pelvis* the anterior region is formed in the living subject by the muscular parietes of the abdomen. The posterior presents the sacro-vertebral symphysis and promontory, and extends to the sacro-iliac symphysis on either side. Each lateral region is constituted by the internal iliac fossa, covered by the iliacus internus and psoas muscles.

In the *lower* or *smaller pelvis* the anterior region is composed of the posterior surface of the symphysis pubis; the posterior region consists of the anterior surface of the sacrum and coccyx. Each lateral region of this division of the pelvis may be again divided into an anterior and a posterior portion. The anterior portion is composed of the bony structure of this part of the pelvis, and corresponds to the inner surface or back part of the acetabulum, and to the interior surface of the body and tuberosity of the ischium. The posterior portion is represented by the greater and lesser sacro-sciatic ligaments, and by the inner surface of the greater and lesser sciatic notches, which, by these ligaments, are converted into pelvic walls.

The Inclined Planes of the Pelvis.—Inside the pelvis are found four inclined planes,—one anterior and one posterior on each side. These inclined planes may be demonstrated by dividing the pelvis itself into two lateral halves by vertical section through the symphysis pubis and median line of the sacrum; and by again dividing each of these lateral portions into anterior and posterior quarters by a transverse vertical section on the ilio-pectineal line, a little in front of the sacro-iliac symphysis, and terminating in the spine of the ischium.

Each of the four quarters thus formed of the pelvis will be found to represent an inclined plane. And each of these inclined planes will be found to look in the same general direction. Thus each of the anterior inclined planes,—that is, the right and the left anterior,—will be seen to look from without inward, from above downward, and from behind forward. In like manner both the right and the left posterior inclined planes will look from without inward, from above downward, and from before backward. It was formerly supposed that these several inclined planes, by influencing the rotation of the head of the fœtus, through successive changes of direction, exerted a powerful influence on the mechanism of labor. But, in point of fact, the rotation occurs principally after the head has so far passed through the inferior strait as to engage the soft parts and distend the perineum. And it may be now stated that these inclined planes serve in part to prevent the too rapid descent of the head, and in part to

cause it to assume and maintain the most natural and favorable position in its course.

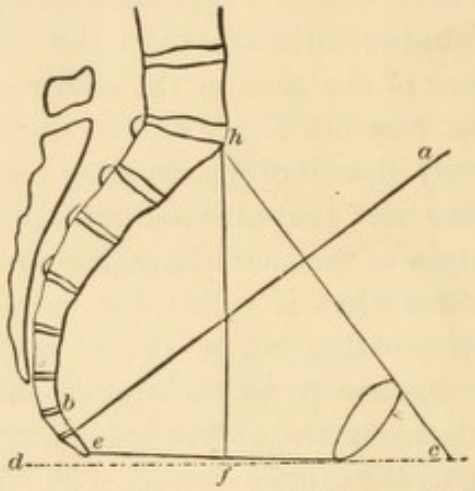
In its general appearance the interior of the pelvis may be said to resemble the inner surface of an irregularly-shaped and truncated cone, tapering downward; although from the strongly-marked depression of the hollow of the sacrum the cavity of the pelvis seems larger than either the entrance above or the outlet below. The ilio-pectineal line—already described as dividing the greater from the lesser pelvis—together with the spine and crest of the pubes in front, and the anterior margin of the base of the sacrum and sacro-vertebral angle behind, constitute what is called the margin of the *superior strait;* and the corresponding border of the apex, bounded by the point of the coccyx posteriorly, by the inferior surfaces of the tuberosities of the ischia laterally and by the pubic arch anteriorly, constitutes what is known as the *inferior strait.* The superior strait corresponds to what is by some termed the *brim,* as the inferior strait corresponds to the *outlet;* while the intervening internal portion of the pelvis is indifferently named its *cavity* or *excavation.* The engagement of the head in the superior strait, its passage through the cavity or excavation, and its subsequent emergence through the inferior strait or outlet, constitute the most important events in the process of parturition. Hence the axes and dimensions, and in fact all the parts and relations of these straits and their intervening cavity, should be thoroughly understood.

THE SUPERIOR STRAIT. The superior strait or brim of the pelvis presents the shape of a curvilinear triangle with rounded angles,—having its base behind and its apex in front. The sacro-vertebral promontory, jutting in, as it were, gives a heart-shaped appearance to what might otherwise have been nearly oval. The psoas muscle on either side, by diminishing the transverse diameter, causes the superior strait to assume a more triangular form in the living subject than it presents in the skeleton; but by flexing the thighs upon the trunk, as during parturition, these muscles are relaxed, and the superior strait thereby becomes more nearly oval in shape and the descent of the fœtal head is facilitated. The boundaries of the superior strait are, the sacro-vertebral angle, the anterior border of the wings of the sacrum, the linea ilio-pectinea, and the spine and crest of the pubes.

The very great obstetric importance of this superior strait arises from the fact that it forms the first part of that bony canal through which the fœtal head must be transmitted, and through the somewhat contracted opening of which it must pass, almost before it acquires

any of that elongated shape which it so often presents on emerging subsequently from the outlet or inferior strait.

Fig. 1.



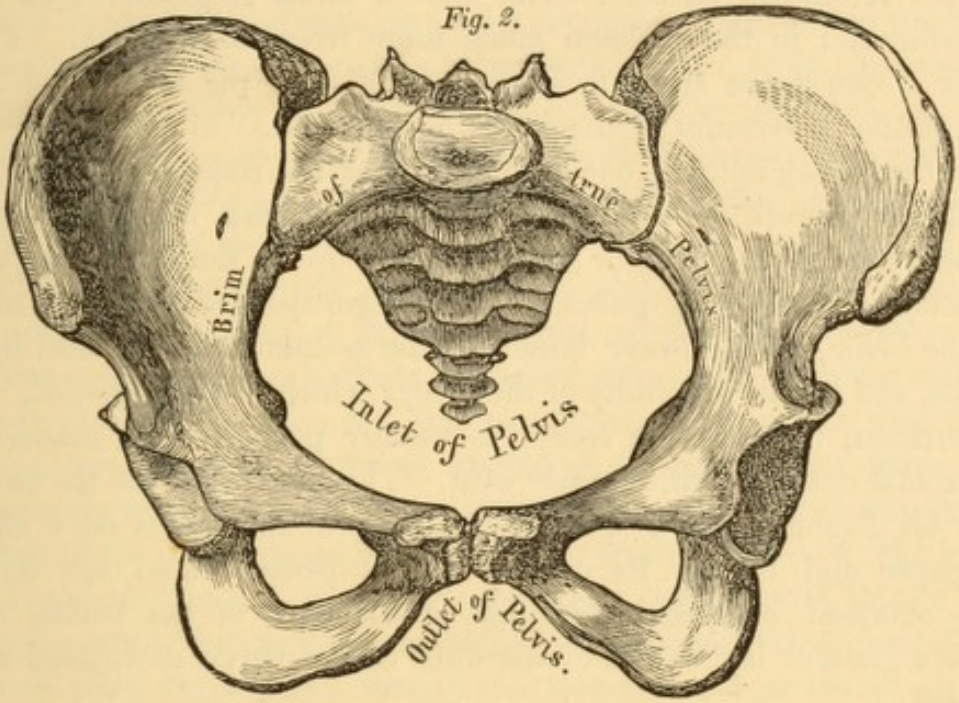
c h, the plane of the superior strait prolonged beyond the pubes; *c e*, the plane of the inferior strait prolonged beyond the pubes; *c d*, shows the departure of this plane from the horizontal line; *a b*, the axis of the superior strait; *h f*, the axis of the inferior strait.

The *plane* of the superior strait, its axis and its dimensions, form the most important points for consideration respecting it. The plane or surface of the superior strait may readily be demonstrated by cutting a piece of paper to fit it, making it extend antero-posteriorly from the sacral promontory to the superior border of the symphysis pubis, and transversely from the ilio-pectineal line of one side to that of the other. And when the female is in the erect position, it will be found that this plane presents an inclination of from fifty-five to sixty degrees to the horizon.

The *axis* of this plane will of course be a line which shall fall at right angles upon its centre. Thus the axis of the superior strait must form the same angle with the vertical line that the plane of the strait forms with the horizontal line. And upon examination it is found that this axis extends from a point on the linea alba a little below the umbilicus to the articulation of the second bone of the os coccyx with the third. The inclination of the plane of the superior strait, and of course the direction of its axis, must vary with the changing position of the female; the inclination being diminished when the trunk is bent forward, as in stooping over, and becoming least in the recumbent position. But it is greatly increased when, in the advanced stages of pregnancy, the female straightens up, and even leans backward as it were, in order to maintain her equilibrium. So in

parturition, as will be more particularly explained subsequently, the position and flexure of the trunk will greatly affect the entrance of the head into and its passage through the superior strait.

Fig. 2.



In the dimensions of the superior strait we note its different *diameters* and its *circumference*. The irregular shape of the figure of this strait renders its various diameters unequal. Different authors have enumerated quite a number; but the three principal diameters are all that are really of practical importance. These are, first, the *antero-posterior diameter*, which extends from the sacro-vertebral angle to the superior border of the symphysis pubis. This, which is also called the *sacro-pubic* or *conjugate* diameter, measures four and a half inches. The second, the *transverse diameter*, or *long diameter*, extends across the pelvis at its widest part, and at right angles with the antero-posterior diameter. This, which is also called the *iliac* or lateral diameter—since it extends from the middle of the rounded border of the iliac fossa of one side to that of the other—measures five inches. The third is the *oblique* or diagonal *diameter*. This extends from the sacro-iliac symphysis to the ilio-pectineal eminence of the opposite side, and measures four inches and three-fourths. In consequence of the space occupied by the soft parts, these dimensions are somewhat less in the living body; and we may allow at least one-quarter of an inch in the antero-posterior diameter, and one-half an inch in the transverse diameter.

The *circumference* of the superior strait—bounded anteriorly by the

inner margin of the horizontal rami of the pubes, laterally by the ilio-pectineal line, posteriorly by the promontory of the sacrum—measures from *thirteen and a half* to *seventeen* inches.

The Inferior Strait.—The inferior strait is smaller than the superior, and in the skeleton much more irregular in form. This latter circumstance arises from the projection of the coccyx behind, and of the tuberosities of the ischia on each side. These projections form three deep notches, one on each side of the coccyx, and one immediately beneath the symphysis pubis. Thus this irregular border or periphery of the inferior strait is made up by the symphysis and descending rami of the pubes, by the tuberosities and ascending rami of the ischia, by the lower border of the posterior sacro-sciatic ligaments, and by the extremity of the coccyx which projects inward. In parturition, however, the coccyx is usually pushed back, rendering the actual obstetric outlet nearly oval. This oval figure of the outlet may be demonstrated by placing the apex of the pelvis on a sheet of paper and tracing its outline with a pencil. And the figure thus obtained, compared with that of the brim of the pelvis, will show a gradual inclination of the walls of the pelvis downward and inward.

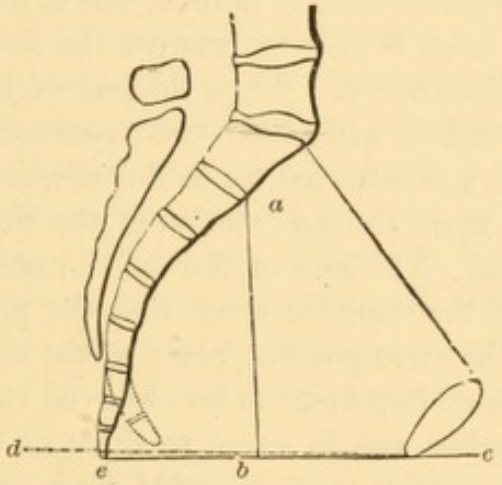
The two lateral projections, the tuberosities of the ischia, extend somewhat beneath the extremity of the coccyx, and, being unyielding, alone support the entire weight of the body in the sitting posture. Hence it happens that transverse contractions of the pelvis at the inferior strait are more common than antero-posterior. The deep notch found anteriorly on the inferior strait corresponds to the summit or inferior margin of the arch of the pubes. This notch forms an important feature in obstetric practice, and it is much broader in the female pelvis than in the male. At its base this arch is from three and a half to three and a quarter inches broad, but only from one and a quarter to one and a half inches wide at its apex; its height is from two to two and a half inches. As will be afterward noticed in describing the process of parturition, this notch has very important relations to the fœtal head, affording to it a more ready exit in the first position.

The still deeper notches which appear posteriorly on each side of the coccyx are subtended by the sciatic ligaments, whose elasticity is capable of materially adding to the pelvic dimensions at the moment of the final passage of the fœtal head. By the combination of double arches, both anteriorly and posteriorly, and from above downward, the greatest possible strength has been preserved to the pelvis, with-

out too much increasing its weight; while at the same time the head is enabled all the sooner to emerge from its bony prison, by reason of these three important notches or arches in the periphery of the inferior strait, while the anterior notch—that of the pubic arch—also affords inestimable advantages to the accoucheur, in the introduction of the hand, the forceps or other instruments, when, from irregularity or contraction of the pelvis, from abnormal size of the head, or from other reasons, manual or mechanical interference becomes indispensable.

The *plane of the inferior strait* may be demonstrated by applying a sheet of paper in the following manner. Upon an inverted pelvis in which the sacro-coccygeal articulation is still flexible, and in which the coccyx is retracted as far as possible, we place a piece of paper narrow enough to pass between the tuberosities of the ischium and be closely fitted to the summit of the pubic arch. This paper, thus resting in front upon the inverted surface of the arch of the pubis and posteriorly upon the retracted extremity of the coccyx, will accurately represent the proper plane of the inferior strait. Hence it will be at once obvious that this plane is by no means parallel with that of the superior strait, the angle of inclination of the latter being from fifty-five to sixty degrees, and that of the former but from ten to eleven degrees. And as the planes of the two straits are not parallel, so neither will their axes be in the same line.

Fig. 3.



c d, the horizontal line; *c e*, the plane of the inferior strait (during labor); *a b*, the axis of the inferior strait.

Thus, as is shown in Fig. 3, the plane of the inferior strait, with the coccyx retracted as it is in the last stage of labor—the only stage in which either the coccyx or in fact the inferior strait itself is particularly involved—inclines backward and downward at a very small angle

below the horizontal line, while, as shown in Fig. 1, the plane of the inferior strait in the ordinary condition of the pelvis—with the coccyx not retracted—inclines at a correspondingly small angle above the horizontal line. And the prolongation of the planes of the superior and inferior straits to their point of union beyond the pubes shows that, instead of being parallel with each other in the human pelvis, they form an angle of not far from 45°, especially when the point of the coccyx is pushed back, as it is by the fœtal head in its passage through the inferior strait.

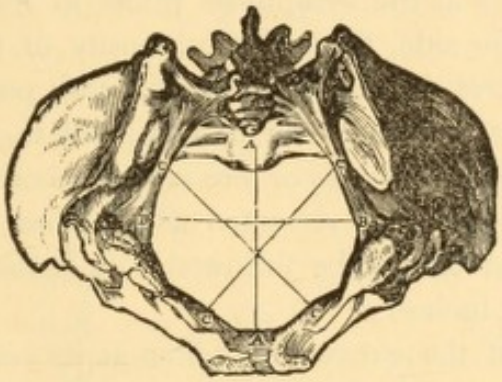
The great advantage which must arise from this apparently irregular arrangement of the pelvic planes and axes, will be evident from a moment's consideration of what must otherwise be the effect of gravity in the upright position, especially in the advanced stages of pregnancy. Even if the head and entire fœtus were not impacted in the cavity of the pelvis, premature delivery must necessarily result from the constant and directly downward tendency of the uterus and its contents. This is still further illustrated by comparison with the almost perfect parallelism which appears in the planes of the superior and inferior pelvic straits of quadrupeds. Here the gravid uterus is entirely supported by the abdominal parietes, and the planes of the superior and inferior—or, more accurately speaking, anterior and posterior—straits are nearly parallel, and their corresponding axes nearly identical with each other and parallel with the trunk itself.

The *axis of the inferior strait* is the line which, drawn perpendicular to its plane, falls upon it midway between the symphysis pubis and the extremity of the coccyx. When the coccyx is in its usual position, this line, extended, will strike the promontory of the sacrum; but when the coccyx is retracted, as in the advanced stages of labor, this line will fall upon the articulation of the first with the second bone of the sacrum. The axis of the inferior strait forms the same angle with that of the superior strait that the plane of the inferior strait forms with the corresponding plane of the superior strait.

The *diameters* most important to be observed in the inferior strait correspond in number and in name to those of the superior strait. First, the *antero-posterior* or coccy-pubal diameter—extending from the extremity of the coccyx to the summit of the pubic arch—measures four and three-quarter inches with the coccyx pushed back in labor, but only four and a quarter inches when it is not thus retracted. For practical purposes, therefore, the antero-posterior diameter of the inferior strait—taken at any period of labor when the head has not so engaged in that strait as to push back the coccyx—must be con

sidered as *half an inch longer* than the measure shows. The only exception to this will be in those cases in which, from complete ossification of the coccygeal and sacro-coccygeal articulations, the coccyx forms one continuous curve and one solid bone with the sacrum.

Fig. 4.



A A, the antero-posterior or coccy-pubal diameter; B B, the transverse or bis-ischiatic diameter; C C, the two oblique diameters.

The second diameter of the inferior strait is the transverse, conjugate, or bis-ischiatic. It extends from the inner margin of one ischiatic tuberosity to the corresponding point on the opposite side, and measures four inches.

The third diameter of the inferior strait is the *oblique*. It extends from the point of junction of the rami of the pubes and ischium to the middle of the great sacro-sciatic ligament of the opposite side, and measures about four inches. As previously stated, from the distension of the ligamentous portions of the pelvic parietes the capacity of the inferior strait may be somewhat enlarged in this direction; and some authorities estimate the oblique diameter as practically equal, therefore, to four and a half inches. Naturally there are two oblique diameters to the inferior strait, the right and left oblique; but it is usually mentioned as one diameter, because—except in some not very common forms of pelvic distortion—the one will be exactly equal to the other.

The circumference of the inferior strait is very irregular, owing to the projections of the coccyx posteriorly and the tubers of the ischia laterally. It measures about twelve inches.

THE CAVITY OF THE PELVIS. That part of the canal of the pelvis which consists of the space between the superior and inferior straits is known as the *cavity of the pelvis*, or the *excavation*. From its situation, and consequent relation to the movements of the fœtal

head during parturition, it will be obvious that a thorough knowledge of this cavity, of its axes, planes and dimensions, is not only important in all ordinary cases of labor, but indispensably necessary to the successful management of all those of serious difficulty. This cavity is irregular in shape, contracted in its superior and inferior orifices, and greatly enlarged posteriorly by the concavity of the sacrum. The depth of the pelvis at the symphysis pubis in front is but *one inch and a half;* at the side, from the tuberosity of the ischium to the linea ilia, it is *three inches and a half;* and posteriorly, from the promontory of the sacrum to the extremity of the coccyx, the depth is *four and three-fourths inches or five inches,* according as the coccyx is in its natural position or retracted as in labor. If the curvature of the sacrum and coccyx be followed, this measurement will equal five and a quarter inches.

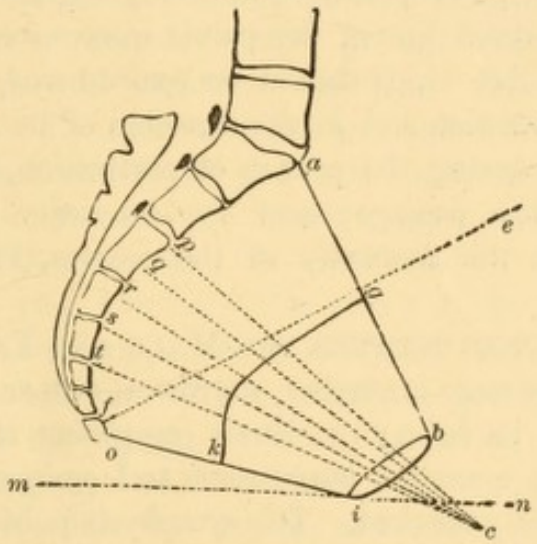
The *diameters* of the excavation, taken at its centre, correspond in number and in name to those of the superior and inferior straits; and they are all of very nearly the same length of *four inches and three-fourths.* The antero-posterior diameter, extending from the sub-pubic ligament,—that is, from the summit or under surface of the pubic arch to the middle of the sacrum,—measures *four inches and three-quarters.* But the line drawn from the sub-pubic ligament to the promontory of the sacrum will be found to measure but *four inches and a half.* The transverse and oblique diameters are each four inches and three-fourths in length. It should be borne in mind that the *long* diameter of the superior strait is the *transverse,* but that the *antero-posterior* is the long diameter of the inferior strait.

The *common plane* and *axis of the pelvic cavity* ought to be well understood, as they represent the gradual change from the primary plane and axis of the superior strait above to the final plane and axis of the inferior strait beneath.

Owing to the concavity of the sacrum, and to the slight convexity of the posterior surface of the pubic wall, the passage through the pelvic excavation represents a curve, which, if continued, would produce a circle. Consequently the plane which commences at the superior strait is constantly changing as we pass from above downward. And as the plane changes, so also must the axis of the plane, to correspond to it. Thus the general plane of the excavation will be represented only by a succession of differently inclined planes. So a corresponding series of axes must represent the general axis of the excavation. This general series of planes, and corresponding series of axes, is well illustrated in Fig. 5: thus *a b* represent the plane

of the superior strait; *i o*, the plane of the inferior strait; *c*, the point of union of these two planes, if prolonged; then *p q r s t*—*c*, will represent the successive planes which must result from the curvature of the sacrum. It being borne in mind that the axis must

Fig. 5.



a b, the plane of the superior strait; *i o*, the plane of the inferior strait; *c*, the point where these two planes would meet, if prolonged; *m n*, the horizontal line; *e f*, the axis of the superior strait; *g k*, the axis of the excavation; *p q r s t*, various points taken on the sacrum to show the plane of the excavation at each point.

always be regarded as perpendicular to (that is, at right angles with) its plane, the axis of the first plane, or that of the superior strait, will therefore be seen to be at right angles with its plane. And since the sacrum at this upper part of the pelvis forms a straight line, so the plane of the superior strait will form a right angle with it; and the axis of this plane will consequently be parallel with the sacrum. And so in fact in each successive instance; the plane of each successive point of the cavity must be at right angles with the opposite point of the sacrum; and the axis of each successive plane must be at right angles with the plane itself, and of course parallel with the corresponding portion of the sacrum. These successive axes, thrown into a single line, will therefore form a curve exactly corresponding to the opposite curve of the sacrum. This general axis of the excavation, *g*, *k*, represents the line of direction which the fœtal head must necessarily pursue in its course through the canal of the pelvis. And as this line, in a geometrical point of view, is the result of a union of successive lines, so in a physiological point of view the course followed by the fœtal head is the result of a combination of various and successive vital forces, whose progressive development

can take place only in the direction rendered possible by the form and construction of the internal surfaces of the pelvic cavity.

It has been remarked elsewhere that a change of position of the individual will effect a change in the direction of the planes and axes of the superior and of the inferior straits; but it is to be borne in mind that no change of position can in any degree affect the general axis or central curved line of the pelvic excavation. This is an important obstetric fact which should be remembered, inasmuch as it is through this excavation and in the direction of its general axis that the fœtus passes during the process of parturition, becoming curved upon itself in the passage; and the convexity of its curvature corresponds with the concavity of the sacrum, its concavity with the pubes.

The Differences between the Male and Female Pelvis.—The pelvis of the male is smaller, narrower, deeper in its cavity, and more circular in its brim; the bones composing it are thicker and stronger, and the muscular impressions and eminences on their surfaces more decidedly marked. The symphysis pubis is nearly double the depth of that of the female; the sacrum is straighter, and the sacro-sciatic notches and foramina smaller; the obturator foramen larger and more oval; the pubic arch is straight, much narrower, triangular in shape; its walls and the tuberosities of the ischia are less widely separated; the coccyx is more immovably attached to the sacrum; and in general the articulations are sooner anchylosed than in the female.

The pelvis of the female is much wider; the acetabula are farther apart, although the knees approach each other even more than in the male, giving to the movement and gait of the female some distinguishing peculiarities. The iliac fossæ are broader than in the male pelvis, and the spinous processes of the ilia more widely separated, hence the greater breadth of the hips in the female; and here Nature seems to have sacrificed the facilities of motion to the advantages of pregnancy and parturition. The superior strait is larger and more elliptical; the curve of the sacrum is deeper and more regular; the symphysis pubis is but half as deep as in the male; and the pubic arch is broader, more rounded, and its lateral walls more widely divided. The entire pelvis is larger and more capacious, and so constructed, in its several arches and ligaments, as to combine the greatest possible lightness, elasticity and strength with the most suitable form and dimensions for sustaining the gravid uterus above its brim, or enabling the full-grown fœtus to be transmitted through its canal.

In early childhood the pelvis seems disproportionably small. It is

narrow and long, and the abdominal protuberance which is seen in the fœtus and in newly-born infants, and even still later in the case of rachitic children, is due to its thus forcing upward some of the parts which should be contained within it. But as the female child advances in life the pelvis becomes gradually, although slowly, developed, until, at the period of puberty, it experiences, within a short time, an alteration so extensive and so strongly marked as to change perceptibly the form and contour of the hips. At nine years of age the antero-posterior diameter measures two inches and seven-eighths, and the transverse diameter, two and three-fourths; while at fourteen years of age the antero-posterior diameter measures three inches and three-fourths, and the transverse, four and a half.

The Uses of the Pelvis.—The pelvis of the female, as in the male, affords a general support to the abdomen and its contents. In the pregnant female it especially supports the gravid uterus upon its anterior arch and iliac wings. Within the cavity of the pelvis the uterus of the unimpregnated female, the ovaries and Fallopian tubes are safely enclosed, while the delicate and sensitive external organs of generation are securely protected beneath. From its relation to the lower portion of the spinal column, and from the manner in which it is placed upon its femoral supporters, the pelvis may be regarded as the structural base or foundation of the human body; while, from the study of the functions which it performs in connection with the organs which it contains, it will no less obviously be seen to be the true physiological centre of the entire human system. From improper management in childhood and youth, from too long and too frequent indulgence in unnatural positions, from habitual over-exertion of a particular kind, from accidental injuries, and especially from disease and softening of the bones, the pelvis may become contracted, strained and distorted in every direction, and so more or less incapable of performing its most important uses in the support of the body and in parturition. So also, from similar and corresponding causes, the organs which it contains may become more or less disordered and incapable of performing their vital functions. In the former case mechanical difficulties and obstructions embarrass the accoucheur. The consideration of these difficulties, and of the appropriate means for overcoming them, we reserve as a sequel to the normal process of parturition. In the latter case the physician has to contend with various forms of functional disorder or structural disease. The consideration of these disorders and of their appropriate remedies we shall take up hereafter.

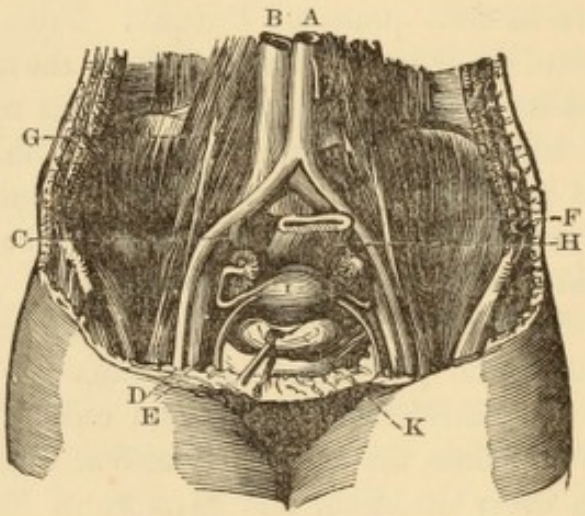
CHAPTER III.

THE MUSCULAR TISSUES OF THE PELVIS.

THE study of the bony skeleton of the pelvis forms the only true basis for understanding this most important part of the body, as it exists in life; and it is only now, as we come to the examination of the pelvis clothed with muscular and other living tissues and supplied with organs, that its real study begins. Occupying the middle ground between the upper and lower part of the body, the pelvis affords attachment to two classes of muscles.

The first class is for completing, enclosing and perfecting the abdomen. The muscles of this class, by their great power of distension, afford every needful facility for the development and support of the fœtus in the pregnant state. These muscles, which form the anterior abdominal parietes, by yielding to the pressure exerted from against

Fig. 6.



PELVIS, WITH SOFT PARTS, SEEN FROM ABOVE.

A, section of the aorta; B, the vena cava inferior; C, the internal iliac artery, arising, together with D, the external iliac, from the primitive iliac trunk; E, external iliac vein; F, the iliacus internus, and G, the psoas magnus muscles; H, the rectum; I, the uterus with its appendages; K, the bladder, the fundus of which is depressed, so as to bring the womb into view.

the rigid posterior walls, cause the gravid uterus to project over the arch of the pubes, and thus hinder it from settling downward through the superior strait.

The muscles of the second class are those which, connecting the pelvis with the lower extremities, are concerned in locomotion. There

are but four sets of these muscles on the inner surface of the pelvis. The principal of these are the iliacus internus and psoas magnus; next in size and relative importance come the pyriformis and obturator internus muscles. The iliacus and psoas magnus, while being themselves protected by the iliac fascia, serve to line and cushion the iliac fossæ and bones of the upper pelvis, thus preventing the uterus from receiving injury in the latter months of gestation from the shocks and concussions inseparable from active exercise. These two muscles, as they become conjoined in passing over the lateral parts of the superior strait to be inserted into the lesser trochanter of the femur, have the effect to change the base of the curvilinear triangle of the pelvis from the rear to the front, and to lessen the transverse diameter half an inch; these two being the only muscles in the pelvis that do lessen any of its diameters. The iliacus, however, from its thinness, neither too much encroaches upon the concavity of the iliac fossæ, nor indeed does it, so much as the psoas, diminish the size of the pelvic cavity. And the shortening of the transverse diameter may be in a great measure obviated by flexing the thighs upon the abdomen in labor, thus relaxing the psoas muscles and reducing the diminution of the pelvic cavity to the smallest possible amount.

The pyriform muscles, which arise principally from the outer margins of the sacrum, pass immediately out of the pelvis through the great sacro-sciatic foramina of either side to be inserted into the great trochanter of the femur. The internal obturator muscles arise from the margin of bone which forms the inner side of the obturator foramen, and from the internal surface of the obturator membrane, and leaving the pelvis through the lesser sacro-sciatic notch, or more properly foramen, are likewise inserted into the great trochanter in front of the pyriformis. These muscles are thin and flattened and project so slightly beyond the bony surface which lies adjacent to them as to encroach but slightly, if at all, upon the capacity of the pelvic cavity. This may be said also of the coccygei muscles, which, arising from the spines of the ischia and lesser sacro-sciatic ligaments and inserted into the margins of the coccyx, do not encroach laterally upon the diameters of the pelvis.

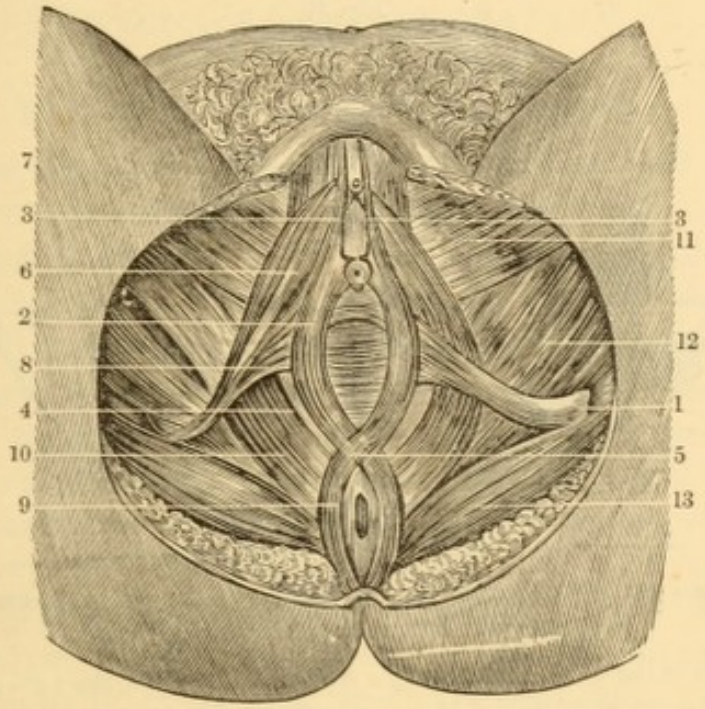
Thus we have the entire pelvic cavity covered by fascia and sufficiently supplied with muscular tissue for all its uses, without so much diminution of its size as to obstruct the fœtus in its descent. Indeed, the obturator internus and pyriformis muscles, covering the obturator and sciatic foramina, afford increase of room by giving way as the head makes pressure upon them in its descent.

The antero-posterior diameter is slightly diminished by the attachment of the bladder to the posterior surface of the arch of the pubes, and the cellular tissue which everywhere lines the pelvic parietes slightly diminishes the general capacity of the pelvis. When this cellular tissue becomes loaded with fat, as is the case with fleshy women, it may offer a serious obstacle in parturition. The rectum, in passing down over the anterior surface of the sacrum and to the left of its promontory, does not materially hinder the process of labor, unless loaded with indurated fecal matter, and the uterus, although occupying a middle ground between the bladder and rectum, does not diminish any diameter of the pelvis in labor, for at such times it is usually entirely above the superior strait.

The PERINEUM may be said to form the floor of the pelvis. It is composed of muscular tissue, fascia, and intervening areolar and adipose tissue, and is exceedingly elastic and distensible. The female perineum extends laterally between the tuberosities of the ischia and antero-posteriorly from the apex of the coccyx to the posterior commissure of the vulva. The anus divides the perineum into two portions; that extending between the coccyx and the anus constituting the posterior perineum; that extending from the anus anteriorly to the vulva being the anterior perineum, or perineum proper. It is larger in the male than in the female. The muscles entering into the composition of the perineum are arranged into two layers, the upper of which is concave superiorly and comprises the levatores ani and coccygeal muscles, while the lower, which has its concavity looking downward, comprises principally the transversus perinei, sphincter ani and constrictor vaginæ muscles. Of these muscles, the *levatores ani* are the most important in an obstetrical point of view. They are broad and thin muscles, which arise anteriorly from the posterior surfaces of the bodies and rami of the pubes; posteriorly from the spine of the ischium; while the intervening portion arises between two layers of the descending pelvic fascia. The posterior fibres are inserted into the sides of the lower portion of the coccyx, while the middle and anterior fibres pass downward, converging toward each other, to be inserted into a central line or raphe at the centre of the perineum. In addition to these points of insertion, numerous fibres are blended with those of the sphincter ani, transversus perinei and constrictor vaginæ muscles. It will be seen, from this description, that these levator muscles exert a powerful influence by their contraction upon the entire perineum, and might very properly be called levatores perinei. In a condition of rigidity they may offer a very

serious obstacle to the descent of the child, the presenting part of which in its passage downward impinges upon this muscular floor, and must push it downward and forward in order to effect delivery. Fortunately, however, these tissues are usually softened and yielding, and admit of enormous prolongation and distension; otherwise laceration would be a common accident.

Fig. 7.



MUSCLES OF THE PERINEUM.

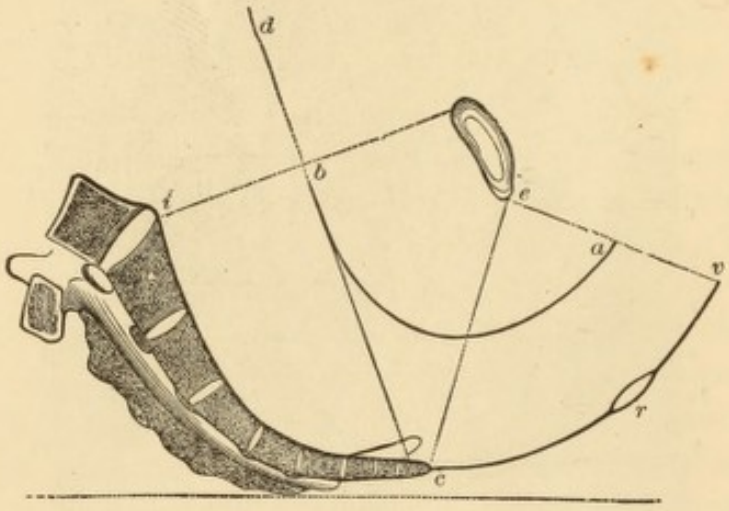
1, tuber ischia; 2, sphincter vaginæ; 3, its origin from the base of the clitoris; 4, vaginal ring of the same muscle, which receives a part of the fibres of the levator ani; 5, intercrossing of the sphincter ani and sphincter vaginæ at the perineal centre; 6, erector clitoridis; 7, clitoris; 8, transversus perinei; 9, sphincter ani; 10, levator ani; 11, gracilis; 12, adductor magnus; 13, posterior part of gluteus magnus.

The extent of the perineum from the point of the coccyx to the anus is about an inch and three-quarters, and from the anus to the vulva about an inch and a quarter; making three inches in all in its ordinary condition. But at the instant of the passage of the child's head into the external world at full term, it becomes so distended and prolonged downward and forward as to measure about five inches and three-fourths.

It must now be evident that the terminal outlet of the obstetric canal in the living subject is not represented by the symphysis pubis and the point of the coccyx, but rather by the symphysis and the anterior commissure of the perineum; and the plane of this outlet

will be represented by a line drawn from the lower part of the symphysis to the commissure. But, in the last moment of labor, as the head is emerging through the vulva, the perineum is prolonged in a forward direction to the extent of passing beyond the lower part of the symphysis pubis, and the plane of the outlet at this moment will be represented by a line drawn from the symphysis to the edge of the distended perineum.

Fig. 8.



POSITION OF THE PELVIS AND THE DIRECTION OF ITS AXIS IN THE DORSAL ATTITUDE ASSUMED BY THE FEMALE DURING LABOR.

a b, total axis of the excavation, being a continuation of *d b*, the axis of the superior strait; *c v*, perineum as distended at the moment of the passage of the head; *r*, anal orifice; *e v*, terminal plane of the obstetric canal.

The direction taken by the fœtal head in its passage through the excavation of the *bony* pelvis is indicated by the axes of the various planes representing the curvature of that osseous canal. Now, if another series of planes be made, commencing at the plane of the bony outlet, and extending from the symphysis to various points upon the curvature of the distended perineum—the final plane extending from the symphysis to the anterior perineal commissure—and the axes of these planes be ascertained, and prolonged so as to form a complete axis continuous with that of the excavation of the bony pelvis, the line thus indicated will represent the axis of the entire obstetrical canal and the course traversed by the fœtus from its entrance into the superior strait until its final emergence at the vulva. This is well represented in Fig. 8.

It will thus be seen that, in the recumbent posture of parturition, the fœtus, in following the axis of the obstetric canal, takes a course

first downward and backward, then downward and forward, then almost directly forward, and finally, at the moment of delivery, upward and forward.

CHAPTER IV.

THE ORGANS OF GENERATION.

The External Organs and Vagina.

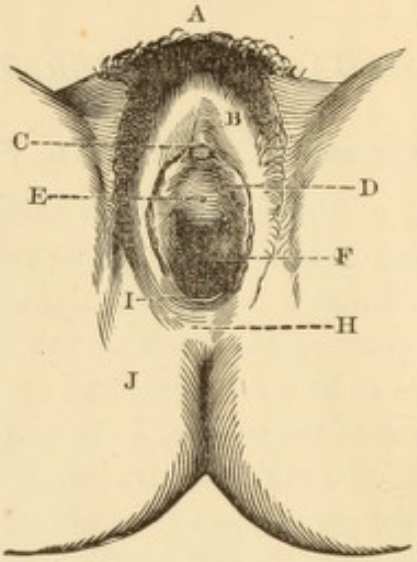
THE genital organs of the female, when closely studied and compared, will be found to bear a very strong resemblance to those of the male. And in addition to this particular similarity in the structure and functions of some of the parts of the female to those of the male, there will be seen to be a universal and essential correspondence of all the sexual organs of the one sex to those of the other. For as all the sexual organs of the male are structurally and physiologically adapted and intended for giving, so all the sexual organs of the female are, in like manner, structurally and physiologically adapted and designed for receiving. Thus they bear to each other the relation of the two halves which are requisite to constitute one complete physiological whole—of two equally indispensable means for the accomplishment, physiologically, of the final end of reproduction. This distinction of structural difference and similarity and of physiological correspondence is the type of the adaptation of the man to the woman in the married state; the highest condition of human life. And this distinction should be steadily borne in mind in all our study of the genital organs and reproductive system of the female.

These genital organs, which as well in structure as in function are much more complicated in the female than in the male, may be divided into *external parts*, or those without the pelvis, and *internal organs*, or those situated within the pelvis. The former are the mons veneris, the perineum and the vulva with its appendages. The latter are the vagina, the uterus, the Fallopian tubes and the ovaries. We will proceed to study their anatomy and physiology in the order in which they have just been named.

The Mons Veneris.—The mons veneris is situated at the lower margin of the abdomen, just on or above the centre of the symphysis pubis. Its diameter is usually about three inches; it is half an inch thick at its centre, and tapers off to a thin edge at its circumference.

It is principally composed of dense cellular or adipose tissue, covered by thick elastic integument, and abundantly supplied with sebaceous follicles. The hair, which makes its appearance at puberty as one of its characteristic signs, is said to diminish in quantity, in many cases, on the cessation of the menses. The growth of the hair varies remark-

Fig. 9.



EXTERNAL GENITALS.

A, mons veneris; B, labia majora; C, clitoris; D, labia minora; E, orifice of urethra; F, orifice of vagina; I, posterior commissure of the vulva; H, perineum; J, anus.

ably in different individuals; and in some cases, where it is very white and scanty, it is supposed to indicate sterility. The excessive growth of the hair is sometimes accompanied by pruritus, and in those who are subject to the plica polonica this disgusting disease attacks also the hair on the mons veneris, which becomes agglutinated and attains an enormous length. The mons veneris may become the seat of inflammation and abscess, which should be treated promptly in the same manner that would be appropriate to similar conditions elsewhere.

The *perineum* has already been described in connection with the soft parts of the pelvis. From its peculiar structural formation it admits of very great distension during labor, but is prompt to resume its usual condition when the pressure of the child has been removed. When the last expulsive pains of labor are very violent and the perineum is from some cause or other unyielding, or when the woman in the throes of these last expulsive pains straightens herself out instead of remaining in a semi-flexed condition, the perineum may undergo laceration. The treatment to be adopted when such an accident occurs will be indicated hereafter.

THE VULVA AND ITS APPENDAGES.—The *vulva* or *pudendum* is the longitudinal opening between the projecting parts of the exter-

Fig. 10.

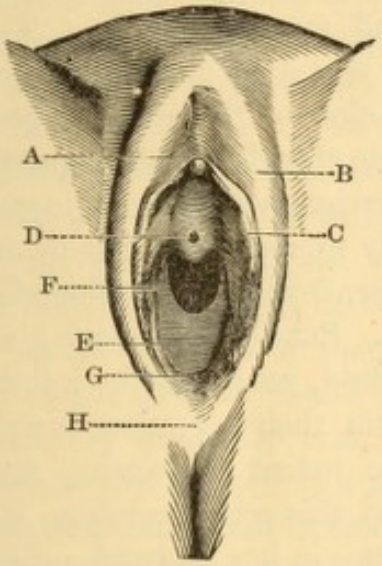


Fig. 11.

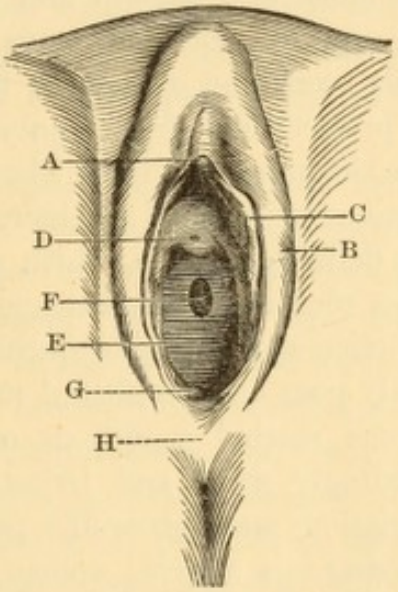


Fig. 10. *Hymen in the form of a crescent.*—A, clitoris; B, labia externa; C, labia interna; D, orifice of the urethra; E, hymen; F, orifice of the vagina; G, posterior commissure of the vulva; H, perineum.

Fig. 11. *This figure exhibits the Hymen in the form of a circle.*—E, the hymen; F, the central opening somewhat enlarged.

nal organs of generation, which, situated immediately beneath the mons veneris, is bounded laterally by the labia majora and terminated posteriorly by the perineum. It constitutes the external opening common to the vagina and to the urinary bladder. A more particular description of the vulva will be involved in that of its appendages. These are the labia majora, the labia minora or nymphæ, the clitoris, hymen, carunculæ myrtiformes, fossa navicularis, fourchette, vestibule and urethra.

The *labia majora* or *labia externa* are two prominent folds consisting externally of integument and internally of mucous membrane, which, commencing immediately beneath the mons veneris, diverge from each other, extending downward and backward to again converge and terminate at the perineum. Their junction at the mons is termed the *anterior commissure*, and that at the perineum the *posterior commissure*. Between the integument which constitutes the outer surface of these folds, and the mucous membrane which forms their inner lining, will be found a large quantity of areolar tissue, fat, glands, an interlacement of vessels and nerves, and a peculiar tissue which resembles the dartos of the scrotum in appearance and general

construction. The skin of the labia majora is usually soft and delicate, and is studded with hair after puberty. The mucous lining is continuous with the mucous lining of the genito-urinary apparatus. It is moist and smooth and of a rose-color in young women, and well supplied with sebaceous glands and mucous follicles. These glands secrete an oleaginous fluid which serves to moisten the parts and protect them from injury by the motion of the adjacent parts; while the mucous follicles likewise provide abundantly their peculiar secretion—stimulated and increased by exercise—which serves to guard these delicate surfaces, which are not only in apposition but in more or less constant movement upon each other, from the irritating effects of friction and from subsequent adhesions. But although these glands usually pour out a healthful and bland fluid, yet under the influence of some morbid conditions of the system their secretions may be exceedingly acrid and irritating, to the extent of causing severe excoriations and unbearable pruritus; and this acrid secretion, when occurring in a married woman, may produce in her husband a disease analogous to gonorrhœa; a circumstance which should be borne in mind. The arteries of the labia majora are derived from the perineal artery, which is usually a branch of the internal pudic. The veins, which are numerous and often become enlarged during pregnancy, generally accompany the arteries. The nerves proceed from branches of the lumbar plexus. The areolar tissue, or cellular structure of the labia majora, is more loose and spongy than in other parts of the body. Thus the labia frequently become the seat of serous infiltration by which they are enormously tumefied. Sanguineous and purulent engorgements, hernial protrusions, varicose veins, and other abnormal conditions may likewise occur in these parts. In girls and unmarried women the external labia are rounded, thicker above than below, and their inner surfaces are closely approximated; but in married women, and especially in those who have borne children, they are more widely separated, irregular, pale and flaccid. The labia majora are usually regarded as analogous to the scrotum of the male. And, indeed, by careful comparison this is readily appreciable. The existence of a tissue in the labia bearing a marked resemblance to the dartos of the scrotum; the termination of the fibrils of the round ligament within its tissues—as the spermatic cord enters within the scrotum—the presence within the labia of a pouch or cul-de-sac between the dartos-like tissue and the inner surface of the labial integument, which admits the passage of hernial protrusions or serous infiltrations resembling scrotal hernia or hydrocele, together with numerous other points

of resemblance which might be cited, all go to prove the striking similarity between the labia majora and the scrotum.

The *fourchette* is a small transverse fold of mucous membrane found just within the posterior commissure of the vulva. It is usually ruptured in the first labor. The small space lying between the fourchette and the posterior commissure is termed the *fossa navicularis*. Its distinctive presence is usually lost by the rupture of the fourchette.

The *labia minora, labia interna*, or *nymphæ*, are two lateral folds of mucous membrane, interior and parallel to the labia majora, by which they are concealed in the virgin. They are continuous externally with the mucous lining of the labia majora; internally with that of the vagina. Superiorly they commence at the clitoris, and extending from thence downward and outward on each side of the orifice of the vagina, are gradually lost. As each labium converges toward the clitoris to join its fellow, it is divided into two folds, the anterior of which unite and pass in front of or superior to the clitoris, forming a minute fold which has been termed præputium clitoridis, while the posterior divisions unite with the clitoris itself and constitute, as it were, its frænum. The nymphæ are composed of mucous membrane having a thin epithelial layer, beneath which are numerous sensitive papillæ. They are likewise supplied with blood-vessels and nerves, and a large number of mucous follicles which secrete an abundance of sebaceous matter. They are very extensive, and after frequent labor are generally found to project beyond the labia externa. Their use appears to be, chiefly, to enfold and protect the clitoris, meatus urinarius and superior part of the vaginal orifice.

The *clitoris* arises from the union beneath the pubic arch of two cavernous bodies which spring from the ischio-pubic rami; and its free extremity appears at the superior part of the vulva, a little beneath the anterior commissure of the labia majora. In its internal structure and erectile nature it resembles the corpora cavernosa of the male penis, to which organ it corresponds in sensational and passional function. At its anterior extremity, almost entirely covered and concealed by the prepuce formed by the folds of the nymphæ, appears a minute gland which is analogous in texture and use to the glans penis. The clitoris is supplied with blood from the perineal artery, and with nerves from the perineal branch of the internal pudic nerve. Like the male penis, the clitoris has a suspensory ligament and an erector muscle. Occasionally it becomes greatly elongated, to the extent, in some instances, of four or five inches, and it then bears

a very marked resemblance to the penis of the male. Most of the cases of so-called hermaphroditism are referable to an extraordinary growth of this organ.

The *vestibule* is a triangular smooth surface situated at the upper part of the vulva. It is bounded laterally by the labia interna, and extends from the clitoris backward to the orifice of the vagina.

The *meatus urinarius*, or *orifice of the urethra*, is situated at the back part of the vestibule, just above the orifice of the vagina and about an inch below the clitoris. It is surrounded by a prominent elevation of the mucous membrane. The determination by touch alone of the exact location of the urethral orifice is important as enabling the physician to *introduce the catheter* in the most delicate manner where this operation is required. It may be effected in this way: the patient being placed upon her back, the point of the forefinger of the right hand should be placed just within the orifice of the vagina, the palmar surface looking upward and resting against the anterior vaginal wall. In this position the finger serves as a guide, along the palmar surface of which the catheter should be slidden until it reaches the tubercle formed by the mucous membrane and which marks the entrance to the urethra; then, by slightly depressing the shaft of the instrument, it may readily be made to pass over the elevation at which it has been arrested and to enter the urethra. Another and very satisfactory method of catheterizing the female is, to find the clitoris with the point of the forefinger, and then to pass the finger from this point downward over the surface of the vestibule until an elevation is met with, which is the urethral orifice, into which the instrument may without difficulty be inserted. It may sometimes happen that where great difficulty is experienced in passing the female catheter the use of the male catheter may be successful. The finger having been introduced as before directed, the instrument, with its concave surface upward, should be slidden along the finger, when the desired object will be accomplished by the point of the instrument dropping, as it were, into the orifice of the canal. Where cystocele exists this is the only method that can be crowned with success; it must be remembered, however, that in these cases as the instrument enters within the orifice it must be turned with its convex surface upward. Sometimes in women who have borne many children, or where great tumefaction of the adjacent parts exists, it is impossible to find the urinary meatus by the sense of touch alone; and in such cases it becomes absolutely necessary to expose the vulva and introduce the catheter guided by sight as well as touch.

The urethra itself is larger than its orifice, and may be described as a membranous canal about an inch and a half in length, slightly curved, with its concavity looking upward, passing obliquely upward and backward beneath the symphysis pubis, to which it is attached by loose cellular tissue. More interiorly it passes between the crura of the clitoris and just beneath their junction. It is susceptible of very great dilatation, and opens interiorly into the urinary bladder. It is composed of three tunics—a muscular coat continuous with that of the bladder and composed of circular fibres; a thin layer of erectile tissue intermixed with numerous elastic fibres; and a mucous coat, which is continuous externally with the vulva and internally with that of the bladder. It is surrounded also by the muscular fibres of the compressor urethræ, which assist in controlling the flow of the urine. In the various displacements of the uterus, the urethra, by reason of its structural connection with the vagina, is liable to be changed from its natural direction. This should be especially borne in mind if called upon to perform catheterism to relieve retention of urine caused by such uterine displacements. It is very distensible, in some cases becoming greatly enlarged. Calculi have been removed from the bladder through the urethra, and large-sized pessaries have been passed through it into the bladder.

Orifice of the Vagina.—Immediately below the meatus urinarius is found the much larger and irregularly shaped opening which constitutes the *orifice of the vagina.* The extent of this opening varies greatly according to the sexual condition of the female. In those who are virgins, and in some exceptional cases in persons who are not, the orifice of the vagina is very small, oval, or crescent-shaped, as represented in Figs. 10 and 11. It is more or less closed in the virgin by a membranous fold called the hymen.

The *hymen* is the delicate membranous structure which covers the greater portion of the orifice of the vagina, and which is usually ruptured at the first successful attempt at sexual intercourse. The rupture of this structure ordinarily occasions a slight flow of blood, and sometimes leads to no inconsiderable hæmorrhage. The minute reddish tubercles found near the orifice of the vagina, and called *carunculæ myrtiformes*, are regarded as the remains of the ruptured hymen. Sometimes this membrane, instead of being thin and easily broken, is dense and firm, requiring to be opened with an instrument before coition can be accomplished. In other instances the hymen is found entirely imperforate in childhood. And in these cases, unless the abnormal condition has been attended to in childhood, when the

period of puberty is reached it may become necessary to resort to operative interference in order to allow of the escape of the menstrual discharge. When it is suspected that the hymen is imperforate and menstrual fluid is retained behind it, an examination should be made, which may be conducted in the following manner: Place the female upon her back, with the shoulders elevated at an angle of 30°, and the thighs flexed and separated. Then, with the index finger well lubricated, carefully explore the vulva. If no entrance into the vagina can be effected with the finger, a very small blunt probe may be substituted and the exploration very carefully continued. If, on this latter attempt, no orifice can be found, and an accumulation of menstrual fluid be suspected, hold the palmar surface of the index finger against the centre of the hymen with gentle force, and with the left hand make sudden and forcible downward pressure upon the abdomen immediately over the region of the womb, and if fluid be present within the vagina, it will be made appreciable to the index finger applied against the hymen. If the presence of the menstrual fluid should be made out, operate at once. But if the patient be unmarried and not in good general health, an effort should be made to restore the general health by careful medical treatment. This done, if the hymen still remains imperforate, and the menses consequently do not flow,* an operation should be resorted to in the following manner: The patient should lie on her back, with the lower limbs well flexed and separated, care being taken that as little of the person is exposed as possible. Then, with the index finger and thumb of the left hand, separate the external labia, and with a bistoury or scalpel make an incision in the mesial line, extending from about one-fourth of an inch below the meatus urinarius downward for about three-fourths of an inch. A suitable vessel should be at hand for receiving the flow which will follow the incision of the hymen and the consequent separation of the vaginal walls.

The hymen is usually crescentic in shape, the concavity looking anteriorly. It occasionally presents a central perforation, or there may be a number of minute holes through it, like those through the top of a pepper-box. It is usually a thin and fragile membrane, and is readily ruptured, as before remarked, during first coition. Sometimes,

* I once examined a young unmarried lady, whose hymen was found perfectly imperforate, but the presence of menstrual fluid could not be detected. She was in bad health, and her symptoms called for the exhibition of silicia, a single dose of which was given in a very high potency. This was followed by a rapid recovery of her general health, and about two months after the administration of the dose of silicia she menstruated freely and regularly.

however, it is dense and thick, and when this occurs and there is an opening through its anterior part immediately posterior to the meatus urinarius, a grooved director should be introduced through this orifice, and carried down behind the hymen to the posterior wall of the vagina; then a probe-pointed bistoury should be carefully introduced until its blunt point lies within the groove of the director, and a careful division of the hymen by cutting downward and outward should follow. Sometimes the hymen lies high up in the vagina. If it be found imperforate in this situation, and section has to be resorted to, the speculum must be used and the cutting instrument introduced through it. When a division of the hymen is necessitated by the presence of menstrual fluid within the vagina, the fluid should be allowed to run off gradually, for fear of shock to the system and subsequent irritative fever. The section of the hymen can be completed when the whole quantity has been evacuated. The presence of the hymen is commonly regarded as the evidence of virginity, but it is well known that the membrane has been found intact by the accoucheur at the setting in of labor, and, on the other hand, that its absence may be attributable to a variety of causes other than coition. Rough nurses may destroy the delicate membrane in the babe, while washing the external genitals.

The FOLLICULAR AND GLANDULAR SYSTEM of the external organs of generation require particular attention. They may be divided into two classes: the first consisting of the *piliferous bulbs, sudoriparous glands, sebaceous glands,* and *muciparous glands and follicles;* the second including the *vulvo-vaginal glands* or *glands of Bartholine.*

The *piliferous bulbs* nourish and support the hair which appears more or less abundantly upon the mons veneris and labia majora.

The *sudoriparous glands* are quite numerous upon the labia majora. They are mingled with the sebaceous glands and surround the piliferous follicles.

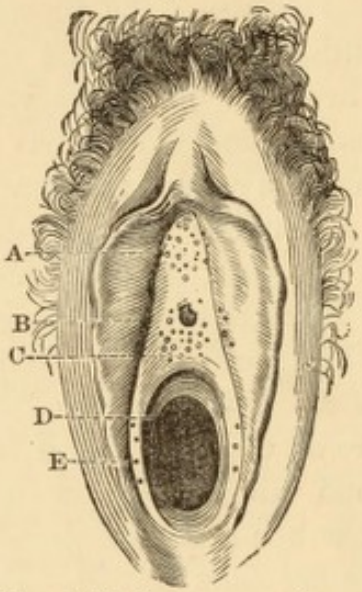
The *sebaceous glands* are more numerous than the rest, and in some situations, as on the mons veneris for instance, are of remarkably large size. They are found on the mons veneris, the external and internal labia, the fourchette, and the glans of the clitoris, but have not been discovered in the vestibule or around the urethral orifice. They secrete an unctuous substance, thinner than that from sebaceous glands situated elsewhere, which shields the delicate organs from cold, keeps them moist and supple, and prevents them from being injured by the perspiration, urine, or vaginal or uterine secretions.

The *muciparous organs* are placed at different situations on the

external parts, and are divided into *isolated* or *agminated follicles* and the *vulvo-vaginal glands.*

The *isolated follicles* appear at several different points about the orifice of the vagina, and are variously named according to their

Fig. 12.



situation. The *vestibular* follicles, some six or eight in number, are found in the vestibule. (Fig. 12, A.) These are very minute; and their small and rounded openings are so oblique to the plane of the mucous membrane as to give them the appearance of being covered by a thin valve.

The *urethral follicles* are situated in the cellulo-vascular tissue of the urethra. They are placed beneath the mucous membrane in a line parallel to the canal of the urethra, and discharge upon the inner margin of its orifice. (Fig. 12, B.) Their function is evidently to prevent the orifice of the urethra from becoming dry, and from being irritated by the streams of hot urine which pass over it.

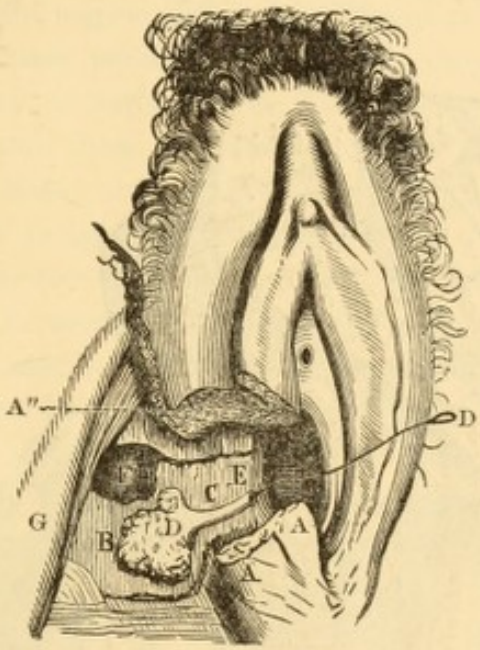
The *lateral urethral follicles* appear on either side, and at some little distance from the orifice of the urethra. They have a common opening at the mouth of a peculiar conical depression. They are not always to be found, and are small and shallow. (Fig. 12, C.)

The *lateral follicles of the orifice of the vagina* (Fig. 12, D, E), three or four in number and comparatively large, are found usually upon the lateral parts of the vaginal orifice immediately below the hymen or carunculæ myrtiformes. They are irregular in their number, situation and arrangement, and are not to be found in all females.

The *vulvo-vaginal glands* or *glands of Bartholine,* one on each side, are true conglomerate glands, having a bulbous body and an excretory

duct. They are situated at about the lower third of the orifice of the vagina, just inside its lateral margins. The bulb (D) and excretory

Fig. 13.



VULVO-VAGINAL GLAND.

A A, section of the labia majora and of the nymphæ, showing the excretory duct and its orifice; B, the gland; C, excretory duct; D, its glandular extremity; E, its vulvar extremity and orifice; F, bulb of the vagina; G, ascending ramus of the ischium.

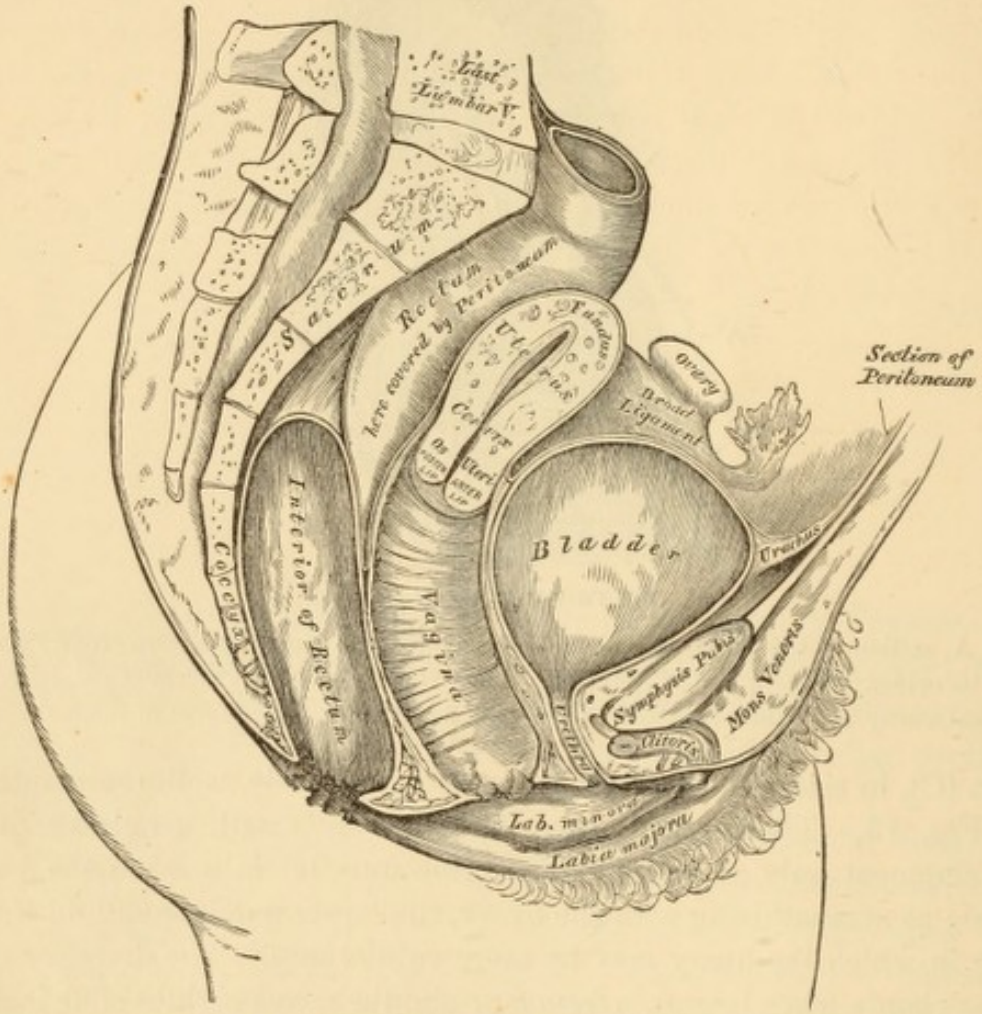
duct (C), in size and exact position, are on one side, well represented in Fig. 13. These glands are comparatively small, acquiring full development only at puberty; are often unequal in size on the two sides; as sympathizing with the ovary, the larger one is found on that side in which the ovary may be more voluminous. The diameter of these glands, when largest, is from four-eighths to five-eighths of an inch. Their secretion is intended principally to lubricate the parts during sexual intercourse, and they are especially active at such times and under the influence of lascivious emotions. During coition the muscles of the perineum and vulva are excited, and the secretion of their glands is discharged in jets. There is a coincidence of action between them and the other muciparous follicles; and the secretion which so abundantly supplies the vulva and vagina, especially during sexual intercourse, is the joint production of both glands and follicles.

The Vagina.

The *vagina* is the membranous canal which leads from the vulva to the uterus. When distended it is cylindrical in shape, and it is

curved in its natural position, with the concavity looking toward the symphysis pubis. Extending from the vulva, or outlet of the inferior strait, to the superior strait, the direction of its curvature is the same as that of the general axis of the pelvis. It is capable of great

Fig. 14.



VERTICAL SECTION OF PELVIS, WITH ORGANS IN SITU.

dilatation, but ordinarily its anterior and posterior walls remain in apposition.

Anteriorly, the vagina is in relation with the base of the bladder and the urethra, with which it is connected by condensed cellular tissue. Posteriorly, it is in relation with the rectum, to which it is attached by a considerable thickness of looser cellular membrane for the lower three-fourths of its extent, its upper fourth being separated from the rectum by the recto-uterine fold of peritoneum. Thus, in displacements of the uterus, which necessarily affect the vagina, the rectum is seldom involved, while the bladder, being more firmly bound to the vagina, is always disturbed by such changes in the posi-

tion of the uterus. Hence the incessant calls to pass water, with painful micturition or more or less complete retention of urine, so often seen in cases of anteversion or prolapsus uteri.

The length of the vagina differs in different persons, and in different states of the same person. It is much longer posteriorly than anteriorly, and may be stated to be from four to five inches long on its anterior wall, and from five to six inches long on its posterior wall. It is very elastic, and is capable of being distended longitudinally, as well as of being laterally dilated. In some instances it appears very much shorter than the natural standard. This shortening of the vagina may be accidental, merely the result of partial prolapsus of the uterus, or it may be congenital and permanent. In the former case the womb may be pressed upward and restored to its natural position, when the shortening of the vagina will at the same time disappear. But in the latter case the uterus cannot be thus pushed up by the finger, and this circumstance conclusively determines the nature of the difficulty.

Extreme shortness of the vagina has been put down by some authors amongst the causes of sterility; but it cannot be regarded as necessarily a cause, inasmuch as there is abundance of testimony to prove that conception has taken place from the semen coming into contact with the mucus lining of the vulva and orifice of the vagina.

The vagina is narrowest at its orifice, most capacious midway in its course, and again contracted at its uterine extremity. In these respects it resembles the superior strait, cavity and outlet of the pelvis. In women who have borne many children its midway capacity is very great; its ordinary circumference is about three inches.

The parietes of the vagina consist of an external or muscular coat, an internal mucous lining, and an intervening layer of erectile tissue enclosed between two layers of fibrous membrane. The muscular layer is composed of longitudinal muscular fibres, which are continuous with the superficial muscular fibres of the uterus. These surround the vagina, and are more abundantly and powerfully developed in some females than in others. The erectile tissue, which appears to be composed mainly of several superposed layers of venous network, is more abundant at the lower than at the upper part of the vagina. The internal or mucous coat is continuous above with the mucous lining of the uterus, and below with that of the vestibule and vulva. This mucous coat of the vagina is thrown into numerous transverse or oblique folds, called *rugæ*, which are more frequent and distinct near the orifice of the vagina, particularly in women who have not borne

children. These folds evidently constitute a provision for the dilatation of the vagina, to allow the passage of the fœtal head. The mucous membrane is covered with conical and filiform papillæ and numerous glands. These latter, which are especially numerous at the upper part of the vagina and around the cervix uteri, pour out a profuse secretion more abundant during coition, and still more in parturition.

The vagina is abundantly supplied with blood-vessels, absorbents and nerves. The arteries are derived from the hypogastric; the veins, which are very numerous and plexiform, communicate with the vesical plexus in front and the hemorrhoidal plexus behind, and its nerve plexus, which contains a large proportion of spinal nerve fibres, arises from the inferior hypogastric or pelvic plexus.

The superior portion of the vagina enfolds the neck of the uterus in a manner similar to the attachment of the Zouave pants to the legs, forming an anterior and a posterior *cul-de-sac*, of which the latter is much the deeper.

In its use the vagina constitutes the chief copulative organ of the female, affords an outlet for the escape of the menstrual fluid, and becomes the channel through which the fœtus passes from the uterus through the cavity of the pelvis into the external world. After parturition it very speedily decreases in calibre and nearly resumes its natural size.

The Uterus.

The *uterus* is the organ of gestation in which the fecundated ovum is received, nourished, and supported till the proper period of its expulsion at parturition. *In its virgin state the uterus*, under the influence of the ovaries, constitutes the pivot around which play all the physical and nervous energies of the female organism; and its functional perfection exercises a powerfully controlling influence upon the physical health and social and moral happiness. The generative organs constitute the grand centre of the female economy. All the other organisms and functions of the woman are more or less in sympathy with these. And from the full, healthy, and harmonious development of the sexual system come the ruddy cheek, the elastic step, the buoyant, womanly spirit, and all that constancy of love and affection which so pre-eminently characterize, beautify and ennoble the female sex. *And the impregnated uterus* becomes at once one of the largest and certainly the most important organ in the body of the female in her highest state of physical development, it being then the

true physiological centre of the most excited vital activity—the reproductive seat of life within life.

This distinction of the virgin from the impregnated uterus not only underlies the whole character and constitution and function of the organ, but affects also the entire physiological, social, moral, and even spiritual, nature and condition of the female herself. Both the organ and the individual in the one case are totally different in structure, function and being from the organ and individual in the other. The virgin or unimpregnated uterus has a structure and functions and disorders peculiar to itself. The impregnated uterus also has structure, functions, disorders, difficulties and dangers peculiar to it.

We give then, in the first instance, an account of the virgin uterus, describing its shape, size, structure, position, relations, appendages and functions, and afterward pursue a similar course with reference to the gravid or impregnated uterus. Subsequently, and in the appropriate place, we will detail the various dangers and disturbances to which the uterus—impregnated and unimpregnated—is liable, together with the chief characteristic indications for the principal remedies required in their treatment.

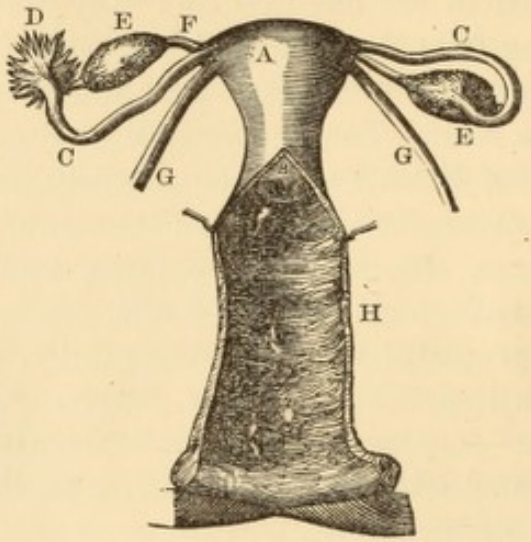
The *virgin uterus* is a hollow, pear-shaped conoid organ, with its base or larger part turned upward and forward, and its apex or smaller extremity looking downward and backward. The great importance of this organ, and the consequent minuteness of description requisite for its thorough study, have caused it to be divided, nominally and externally at least, into five parts. Of these, the base or upper third is called the *fundus;* the middle portion or that part between the fundus and the cervix is called the *body;* the lower third is called the *cervix* or *neck;* the lower extremity of the cervix is called the *apex;* and the orifice or opening of the cervix is called the *os externum, os uteri,* or *mouth of the womb.*

It has also, externally, an anterior and a posterior face; the anterior being more flat and looking toward the bladder and symphysis pubis, while the posterior face is more extensively covered by the peritoneum, more convex, and looks toward the rectum and promontory of the sacrum. There are also three borders or margins—one superior border, which bounds the summit of the fundus, and one right and one left lateral border. To the two latter are attached the broad and round ligaments of the corresponding sides. Finally, the cervix and body of the womb have also an internal surface lined with mucous membrane, which is supplied with numerous follicles and glands.

The *fundus* or base of the womb is convex, looking upward and

forward, ordinarily inclining toward the arch of the pubis, its summit never rising above the margin of the superior strait, while the superior two-thirds of its anterior and the whole of its posterior surface is covered by the reflected folds of the peritoneum. Its superior surface is in apposition with the convolutions of the small intestines.

Fig. 15.



THE INTERNAL GENITAL ORGANS.

A, the uterus, seen on its anterior face; B, the intra-vaginal portion of the neck of the uterus; C C, the Fallopian tubes; D, the pavilion or fimbriated extremity of the tube; E E, the ovaries; F, the ligament of the ovary; G G, the round ligaments; H, the vagina laid open.

On the right, the fimbriated extremity of the tube is seen applied to the ovary.

The *body* of the uterus gradually narrows from above downward to terminate in the cervix. At the points on either side which mark the junction of the body with the fundus an angle is formed, which indicates the positions of the two Fallopian tubes. A third angle is formed at the junction of the body with the cervix, and hence the uterus has been described as being of triangular shape. The anterior surface of the body is somewhat flattened, and is covered by peritoneum in its upper three-fourths, while its lower fourth is connected with the bas fond of the bladder by areolar tissue. This connection of the uterus with the bladder accounts in a great degree for the derangements of the urinary functions almost always attendant on displacements of the uterus; as well as for the change in position of the urethra which attends the enlargement and elevation of the uterus during the progress of pregnancy. Between the upper portion of the body and the bladder some coils of the small intestines are interposed. Posteriorly, the body of the uterus is convex, separated from the rectum by portions

of the small intestines, and covered throughout by peritoneum. Its lateral borders are slightly concave, and give attachment to the Fallopian tubes and the broad and round ligaments.

The *cervix* is about one inch in length, and is slightly constricted at its point of union with the body of the uterus. At this point take place the flexions which sometimes occur in connection with change of position of the body and fundus of the womb. Thus, in cases of anteflexion, retroflexion and lateroflexion the body of the uterus forms nearly a right angle with the neck. The usual position of the virgin uterus is with the fundus inclined toward the symphysis pubis. This causes the cervix to incline toward the superior portion of the coccyx (see Fig. 14), and the os uteri to look posteriorly toward the rectum, instead of looking directly downward in the direction of the axis of the inferior strait.

The vagina embraces the cervix at its upper third, and hence divides it into two portions—an upper or uterine, which lies above the point of junction of the vagina, and a lower or vaginal portion, which projects into the vagina as a free extremity of the womb. The anterior face of this free extremity is somewhat shorter than the posterior face, on account of the oblique manner in which the vagina surrounds the cervix. Before puberty the cervix is small, dense and conical in shape, while at puberty there is a considerable increase in its size and a diminution of its density. Pregnancy and parturition still further and very markedly modify the conditions of the cervix in all particulars.

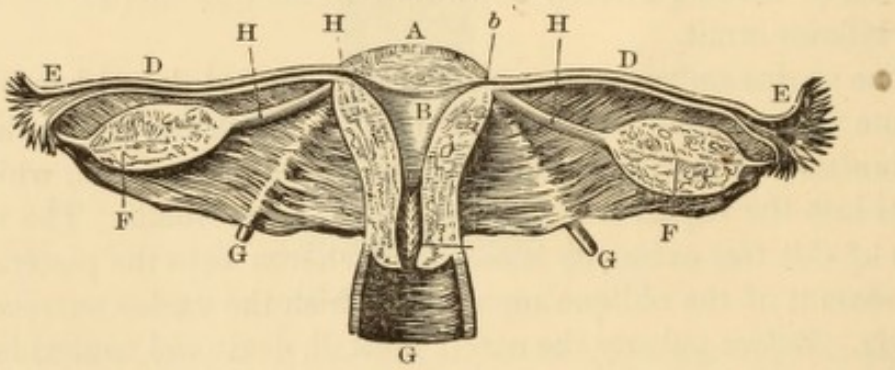
From a description of the outer surface of the uterus we naturally come to a description of its cavity and internal surface. And first the cavity of the cervix engages our attention as the entrance to the greater cavity of the body of the womb. The entrance to the cavity or canal of the cervix is termed the *os uteri*, or, from a fancied resemblance to the mouth of a tench, the *os tincæ*. In the fully-developed virgin uterus the os uteri presents two lips, separated by a transverse fissure. These two lips are of nearly the same length, although the anterior is the thicker and descends a little lower than the other. In young girls the os is quite small, and sometimes almost undiscoverable. But where it thus seems wanting or imperforate, gentle pressure of the finger will detect a slight depression which will indicate its exact situation. In women who have borne children, on the contrary, the os uteri is sufficiently open to admit the point of the finger, while the lips of the os are unequal in size and present a number of irregular depressions or notches.

The *canal of the cervix* is from three-fourths of an inch to an inch

long, extending from the os externum to the os internum which marks the entrance into the cavity proper of the uterus. In its course from the external to the internal os, it first widens and then grows narrower as it merges itself with the os internum, which latter is in a measure a strait or intermediate portion connecting the canal of the cervix with the cavity of the body of the womb. The mucous membrane lining the canal of the cervix is arranged in radiating folds, or *rugæ*, on either side; the united radiations of both sides, having an appearance resembling somewhat the arrangement of the branches of a cedar tree, have been called *arbor vitæ*. (See Fig. 16, C, and Fig. 18, A.)

The *cavity of the body* of the womb, into which that of the cervix

Fig. 16.



CAVITY OF THE UTERUS AND THE FALLOPIAN TUBES.

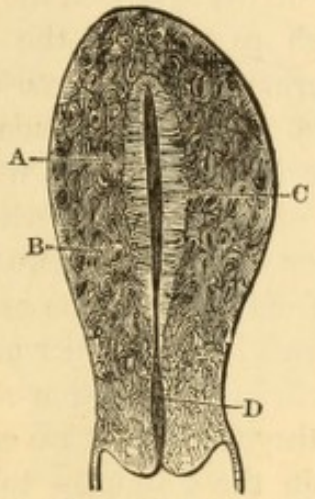
A, superior border or fundus of the womb; B, cavity of the womb; C, cavity of the neck of the womb; D, the canal of the Fallopian tube cut open; E, the fimbriated extremity or pavilion, likewise laid open; F F, the ovaries, one-half of which has been removed so as to bring into view several of the Graafian vesicles; G, the cavity of the vagina; H H, the ligaments of the ovaries; G G, the round ligaments.

leads, and with which it is continuous, is covered with mucous membrane, and abundantly supplied with muciparous follicles, although these are far less numerous in the body than in the cervix. In the virgin womb the walls are nearly in apposition, there being ordinarily but little cavity in the empty womb. At the same time the walls are much more vascular than the parietes of the canal of the cervix. Still, the cavity of the womb, such as it is (Fig. 16, B), is triangular in shape, its inferior angle corresponding to the *os internum*, the two superior and lateral angles being situated at the orifices of the Fallopian tubes. In Fig. 17 appears a profile view, which conveys a more correct idea of the manner in which the walls of the virgin uterus are approximated in their ordinary condition. At the times of the menstrual excitement they are somewhat more distended.

The *external dimensions of the uterus* vary in different persons—be-

ing larger or smaller, to correspond with the totality of their physical constitution. We give what may be considered the average admeasurements of the fully-developed uterus at puberty. The entire length

Fig. 17.



This profile view gives an exact idea of the dimensions of the cavity of the body and of the neck of the womb in a state of vacuity. A, mucous membrane; B, tissue proper; C, cavity of the body; D, cavity of the neck.

of the uterus, from the inferior margin of the cervix to the superior border of the fundus, is about three inches, its greatest breadth is about two inches, and its thickness from the anterior to the posterior face is one inch. As the uterus increases in size from childhood to puberty, so from the cessation of the menses it begins to diminish in volume till it becomes more or less atrophied in the second childhood of advanced age. And as in the impregnated condition the womb becomes very greatly and permanently enlarged—that is, during the continuance of pregnancy—so at the accession of each of the monthly periods, in many females, it becomes temporarily enlarged. The weight of the virgin uterus may be set down as about an ounce to an ounce and a half, but after child-bearing it remains two or three times as heavy.

The *structure of the uterus* forms a very important element in studying its nature and functions. Three distinct tissues, coats or tunics —each possessing a different constitution and performing totally different functions—make up this complicated structure. These are the external or peritoneal coat, the middle or muscular coat, and the internal or mucous coat.

The *external* or *peritoneal coat.*—This membrane is reflected from the posterior surface of the bladder upon the anterior face of the uterus, extends upward, and, covering the fundus, is continued down

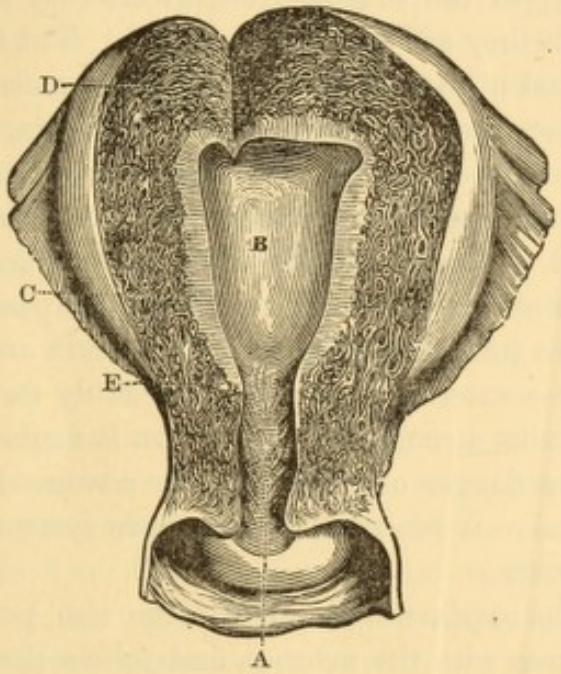
upon the vagina a short distance below the cervix, and is then finally reflected upon the rectum. The peritoneal membrane or serous tissue is thus seen to be identical and continuous with the common lining membrane of the abdomen. The fold of peritoneum reflected from the bladder to the uterus is termed the *vesico-uterine* or *anterior* ligament, and that which passes from the posterior surface of the uterus to the rectum is termed the *recto-uterine* or *posterior* ligament. These, however, are mere subdivisions made for the sake of description, of the *broad ligaments* of the uterus, which are formed by prolongations on either side of the folds of peritoneum which pass from the bladder to the anterior uterine wall, across the fundus and down the posterior wall, and from thence to the rectum. These prolongations are reflected from each lateral border of the uterus to the corresponding side of the pelvis, in the direction of the sacro-iliac symphysis. Taken as a whole, they form what are called the *broad ligaments* of the uterus, and contain the Fallopian tubes, the ovaries and the round ligaments.

The *middle* or *muscular coat* forms the principal part of the substance of the uterus. This tissue is dense, firm, and grayish in color. It is thickest upon the middle of the body and fundus, thinnest at the orifices of the Fallopian tubes. It consists of bundles of unstriped muscular fibres, disposed in three layers, intermingled with areolar tissue, blood-vessels, lymphatics and nerves. The external layer appears principally upon the anterior and posterior surface; its fibres, converging at each superior angle of the uterus, are continued upon the Fallopian tubes, the round ligament and ligaments of the ovary—some few running backward from the cervix uteri to connect with the recto-uterine ligaments. The middle layer of this coat is composed of longitudinal, oblique and transverse muscular fibres. The internal layer consists of circular fibres arranged in the form of hollow cones, whose apices surround the orifices of the Fallopian tubes, their bases meeting and intermingling at the middle of the body of the uterus The fibres of this layer are disposed transversely or circularly in the cervix uteri. The womb is a muscular organ of very great power, and a thorough knowledge of the nature and arrangement of its muscular fibres in the cervix, and especially in the fundus, and of their relation to the broad and other ligaments, is essential to a correct understanding of its wonderful action in parturition.

The *mucous coat* of the uterus is so closely adherent to the subjacent tissue that, from the difficulty of separating and demonstrating it, its existence has been denied by many authors. But by the aid of the

microscope this mucous coat has not only been clearly distinguished, but shown also to consist of epithelium, basement membrane, fibrous tissue, blood-vessels and nerves, like other mucous membranes. This

Fig. 18.



This figure represents the arrangement of the mucous membrane, and of the tissue proper of the uterus, as also their relative dimensions. A, cavity of the neck and arbor vitæ; B, cavity of the body; C, mucous membrane; D, intervening membrane; E represents the marked thinning off of the mucous membrane toward the neck.

internal mucous coat of the uterus is continuous with that of the vagina, and also with the peritoneum above, through the fimbriated extremity of the Fallopian tubes. It abounds in follicles, whose secretion lubricates the interior surface of the uterus. And the abnormal, catarrhal and leucorrhœal secretions and other morbid products, to be subsequently considered as disorders of the cervix and even of the fundus, conclusively show the mucous character of this innermost tissue of the uterus. Numerous follicles, glands and papillæ appear in the mucous lining membrane of the cervix, the secretions from which serve to maintain the mouth of the virgin uterus in a healthy condition. Much the larger portion of the mucous secretion from the womb is in reality the product of the innumerable glands of the cervix. This secretion in its normal state is whitish, very viscid, almost transparent, and gives an alkaline reaction. It adheres to the crypts and rugæ of the cervix, and occupies its canal.

The *blood-vessels* of the womb are numerous, and largely developed in comparison with the size of the organ. This has reference not only

to the nutrition of the womb in its ordinary condition, and to its congested state at the periods of menstrual excitement, but is provisional also for the necessities of that impregnated condition for which it is designed. The *arteries* which supply the womb form two distinct systems, according to the sources from which they are derived and the parts to which they are finally distributed. The first, or superior system, is composed of the ovarian arteries, which correspond with the spermatic arteries of the male, arise from the aorta, and descending along the sides of the womb in a serpentine course are distributed to its upper part, to the Fallopian tubes and to the ovaries. The second, or inferior system, is composed of the *uterine arteries*, which are derived from the internal iliac arteries. These also pass along the sides of the womb, to be finally distributed to the cervix and upper part of the vagina. These arteries pursue a remarkably tortuous course in the substance of the uterus; thus provision is made for their great elongation without danger of rupture in the advanced stages of pregnancy. The numerous branches of these two systems freely anastomose with each other.

The *veins of the virgin uterus* are of large size, possess no valves, correspond in name with the arteries, and follow their course. The right spermatic vein terminates in the inferior vena cava, the left in the renal vein; the uterine veins empty into the internal iliacs. They are capable of very great increase in pregnancy, and are then known as *uterine sinuses*.

The *lymphatic vessels* of the uterus, invested by delicate coverings of peritoneum, are distributed upon all the external surfaces of that organ. They are very numerous, and, in the virgin uterus, very small. Some of these ascend, in a serpentine course, from the cervix to the body and fundus of the uterus. Others pass less tortuously, in various directions, over both these surfaces, communicating with branches ascending from the vagina and with those from the Fallopian tubes and ovaries. The internal as well as the external surfaces of the uterus, Fallopian tubes and ovaries are abundantly supplied with these absorbent vessels. Those of the former, from the interior structure of these organs, communicate with the lumbar ganglia; those of the latter, from their external surfaces, communicate with the pelvic or inguinal ganglia. This latter circumstance is important to be borne in mind, since this anatomical and physiological connection is frequently the index to pathological appearances. In addition to the general division of the lymphatics of these organs to correspond to their external and their internal surfaces, the mode in which they are

originally distributed to follow the course of the arteries, arranges them all in two distinct systems of lymphatic circulation. With the exception of the proper menstrual secretion, there is no discharge from the interior of the female organs of generation in their normal condition, the lymphatics sufficing to reabsorb the natural secretions of their internal surfaces, so that no accumulation occurs.

The *nerves of the uterus* and its connecting structures of the generative system are derived, either directly or indirectly, from all three of the great nervous centres of the body, and by their union and concentration serve to render the sexual system of the female the great physiological centre of her entire organism. The nerves which are distributed to the uterus are, in part, derived from the great sympathetic, and in part from the spinal nervous, system. But these latter, as branches of the third and fourth sacral nerves given off from the cerebro-spinal axis, are, indirectly at least, derived also from the cerebral nervous centre, as well as from the spinal, although they are not under the immediate control of the will.

The nerves which are distributed to the uterus from the sympathetic system are derived from the aortic and from the hypogastric plexus. The former—variously named as the renal, the spermatic or ovarian plexuses, according to their more immediate relations—are all derived from the great solar or epigastric plexus, and are intimately connected with all the other pelvic, abdominal and thoracic nervous centres. Hence the powerful sympathy which exists between the womb itself and all the other great organs of the female. Hence, too, the intense pain felt at the pit of the stomach in cases of uterine neuralgia, and the nausea and vomiting which are so often associated with peculiar conditions of the impregnated womb.

The nerves which are distributed to the uterus from the hypogastric plexus come directly from the pelvic portion of the sympathetic, and have associated with themselves the filaments from the third and fourth sacral nerves, which connect the womb with the general muscular apparatus of the body—the former class of nerves having especial relation to the two great functions of nutrition and reproduction, as in the growth of the womb itself and of the ovum which it may contain in the impregnated state; the latter having relation to those muscular powers of the womb by which it is enabled to exert itself so wonderfully to expel the product of conception at full term, and to combine with its own efforts the muscular powers of all other parts of the body.

Unlike other muscular structures, the nervous filaments penetrate

into the substance of the womb, and during the period of utero-gestation all the uterine nerves are very greatly enlarged.

The uterus appears as if supported or suspended in the midst of the pelvis, and is sustained in this position by certain ligaments, which are processes given off from its own substance or from the enveloping peritoneum, and by the peritoneum itself. The ligaments are arranged in four pairs, and are known as the anterior, the posterior, the round and the broad ligaments. The anterior and posterior, together with the broad ligaments of which they are a part, have already been described. Stretching laterally from the sides of the uterus to those of the pelvis, they form a partition wall or septum in the cavity of the pelvis, which divides it into an anterior portion, containing the bladder, urethra and vagina, and a posterior portion, containing the rectum.

The *round ligaments*, continuous with the proper tissue of the womb, are produced from the anterior and superior part of its body. They are four or five inches long, situated between the layers of the broad ligament, and attached to the superior angles of the uterus, one on each side, a little in front of the Fallopian tube. (Fig. 16, G.) From this point the ligament proceeds outward and forward to pass through the inguinal canal toward the symphysis pubis, where its expanded fibres are distributed to the subcutaneous cellular tissue of the groin, mons veneris and dartoid pouch of the labia. The tubular process in this ligament, called the *canal of Nuck*, is analogous to the peritoneal pouch which accompanies the descent of the testes in the male.

The womb is apparently maintained in its oblique position by the co-operative agency of all its ligaments, assisted by the support furnished by the vagina and the pressure of the intestines. But when we come to consider the subject carefully, it undoubtedly appears that it is to the folds of peritoneum the maintenance of the uterus, in its position between the pubes and the sacrum in the ever-varying movements of the woman, is mainly if not wholly due. For, if we consider that nearly all the viscera within the abdominal cavity are invested and supported in position by the peritoneum, and that this membrane, reflected from the bladder, covers the entire upper and anterior three-fourths of the uterus, and is thence reflected over its fundus and downward upon its entire posterior length, it will be seen that the organ is invested by, and lies between, as it were, two layers of peritoneum, riding upon the anterior and inferior layer, and covered in and held down by the posterior superior layer, the whole being anchored *in situ* to the sides of the pelvis by the reflected broad ligaments. Thus,

while the broad ligaments, the round ligaments, the vaginal walls and the superimposed intestines contribute to keep the uterus in its oblique antero-posterior position, its main support is derived from the investing layers of peritoneal tissue, which almost entirely cover it.

These supports of the uterus are not merely extensible, but possess contractile power, due to the presence of muscular fibres. Thus a large degree of motion is allowed the womb, particularly in an antero-posterior direction. If the bladder be distended, the uterus will be pushed backward toward the rectum, and if, on the contrary, the bladder be empty and the rectum distended, the viscus will be correspondingly pushed forward, the contractile power of its ligaments serving to replace the organ when its normal position has been disturbed. When these circumstances are borne in mind, and it is likewise remembered that displacements of the uterus must frequently occur in consequence of the relaxation of these supporting processes of peritoneum resulting from some constitutional disordered condition, the rationale of their cure by medication alone becomes perfectly obvious.

"*During and after menstruation* the uterus is enlarged and more vascular, its surfaces rounder; the os externum is rounded, its labia swollen, and the lining membrane of the body thickened, softer and of a darker color.

"*During pregnancy* it increases in weight from one pound and a half to three pounds. It becomes enormously enlarged, and projects into the hypogastric and lower part of the umbilical regions. This enlargement, which continues up to the sixth month of gestation, is partially due to increased development of pre-existing and new-formed muscular tissue. The round ligaments are enlarged, and the broad ligaments become encroached upon by the uterus making its way between their laminæ. The mucous membrane becomes more vascular, its mucous follicles and glands enlarged; the rugæ and folds in the canal of the cervix become obliterated; the blood-vessels and lymphatics, as well as the nerves, according to the researches of Dr. Lee, become greatly enlarged.

"*After parturition* the uterus nearly regains its natural size, weighing from two to three ounces, but its cavity is larger than in the virgin state; the external orifice is more marked and assumes a transverse direction; its edges present a fissured surface; its vessels are tortuous, and its muscular layers are more defined.

"*In old age* the uterus becomes atrophied and paler and denser in texture; a more distinct constriction separates the body and cervix.

The ostium internum, and occasionally the vaginal orifice, often becomes obliterated, and its labia almost entirely disappear."—GRAY.

THE FALLOPIAN TUBES.

The *Fallopian tubes* are the oviducts through which the ovum is conveyed from the ovary to the uterus. They are two in number, one on each side, about four inches in length, and extend from the superior lateral angles of the uterus, lying in the free margin of the broad ligament, outward toward the sides of the pelvis, where they terminate in fringed borders or *fimbriated extremities*. The canal of these tubes is exceedingly minute. The internal orifice, that within the cavity of the uterus, is termed the *ostium internum*, or *uterinum*, and is so small as scarcely to admit the introduction of a fine bristle. From this orifice the tube widens until it is finally developed into a trumpet-shaped extremity, the *pavilion*. At the base of the pavilion a contracted circle, the *ostium abdominale*, forms the termination of the tube proper, and from this circle radiate the fringes which compose the pavilion or fimbriated extremity itself.

The Fallopian tubes are composed of three distinct coats or tunics. The outer coat is derived from the peritoneum. The middle coat is muscular, and consists of two layers of fibres, an outer or longitudinal, and an inner or circular layer, both of which are continuous with the muscular fibres of the uterus. The inner coat consists of mucous membrane, which is continuous at the inner extremity of the tube with the mucous lining of the uterus, and at its fimbriated extremity with the peritoneum. Toward the outer extremity of the tube the mucous coat is thrown into folds, which indicates its adaptability for dilatation. It is covered with columnar-ciliated epithelium; the ciliæ being arranged in such a way as to facilitate the passage of ova *from* the ovary *to* the uterus. The ovules discharged at the menstrual periods pass through the tubes to the uterus.

THE OVARIES.

It is only in a practical or obstetric point of view that the uterus can be regarded as the most important of the generative organs. The ovary, though constituting but a small part, anatomically considered, of these organs, is really the part to which all others are subservient, inasmuch as it furnishes the element which is essential to the reproductive act. And not only can it be claimed for the ovary that it is the essential part of the reproductive system, but that in a very great degree it regulates the growth of the whole female organism—as the

testes do in the male—and determines the distinctive characteristics of the sex. "It is the organ upon the presence of which depends the sexual passion and the function of menstruation, whose congenital deficiency is indicated by the absence externally of all signs of a secondary sexual character, whose artificial removal entirely unsexes the individual, and the decline of whose functional activity, as age advances, is the cause of the generative faculty being lost in the female long before the ordinary term of life has expired, and at a much earlier period than that at which the power of procreation ceases in the other sex."* In a physiological sense, therefore, the uterus, as well as every other part of the generative apparatus, must be regarded as an appendage of the ovary, and the common formula, "Uterus and its Appendages," might be superseded most appropriately by the title, "Ovaries and their Appendages."

The ovaries are the analogues in the female of the testes in the male. They are two in number, lying deeply in the lateral and posterior part of the cavity of the true pelvis, one on each side of the uterus, with which they are so intimately connected as necessarily to take part in all changes of position of that organ, whether normal or abnormal. They lie within the folds of the broad ligament, or, more accurately, within a fold of peritoneum derived from the posterior lamina of the broad ligament, and each ovary is in part covered by the Fallopian tube of the same side. In addition to its connection with the uterus by means of the broad ligament, each ovary has another and more direct attachment to that organ by means of its own proper *ligament of the ovary*, which serves as a cord to bind it more securely to the uterus. It is likewise attached by a cord-like process to the fimbriæ of the Fallopian tube. In shape, the ovaries are oval, elongated and flattened from above downward. Each ovary is about an inch and a half in length, three-quarters of an inch in width, and about a third of an inch in thickness. They are not usually fully developed until some time after the establishment of puberty, but vary in size, weight and situation in different conditions of the system, increasing in volume at the monthly periods, and in most instances becoming more or less atrophied after the final cessation of the menses.

The ovary is composed of protecting parts or tunics, of proper secreting structures containing the ova, imbedded in a parenchyma or stroma, and of vessels and nerves. The tunics of the ovary correspond with those of the testicle, and consist of the peritoneal

* Todd's *Cyclopædia of Anatomy and Physiology*, vol. v.

covering derived from the posterior lamina of the broad ligament, and the tunica propria or special covering of the ovary. The *peritoneal* covering of the ovary is intimately connected with the gland, except at its base. It does not in any way differ from the peritoneal covering of the viscera generally. The *tunica albuginea* or *tunica propria* is the covering proper of the ovary, and serves to give it form, as well as to protect the stroma and ova from injury. This tunic, which is very tough, forms a complete investment for the ovary except at its lower border, where the fibres are either few or altogether wanting, leaving a longitudinal space or fissure—the hilum—through which the vessels and nerves are admitted to the gland.

The *parenchyma* or *stroma* of the ovary lies immediately beneath the tunica albuginea, with which it is in contact, and fills up all the intermediate space between the ovisacs, thus giving form to the ovary. It acts as a soft bed for the ovisacs, protects the ova from injury, and serves as a vehicle for the conveyance of the minute blood-vessels to the ova. It is of a pale-pink or bright-red color, owing to the numerous blood-vessels by which it is permeated.

The *Graafian vesicles*, or *ovisacs*, are numerous small, round, transparent vesicles, in various stages of development, imbedded in the stroma, and themselves containing the ova. The number of well-developed vesicles contained within each ovary, and visible to the naked eye, varies in different subjects. They are usually computed to be from twelve to twenty, and it was commonly supposed that when these were exhausted by repeated conceptions the power of procreation of necessity ceased. But a more careful and accurate examination of the contents of the stroma has shown that the number of these vesicles greatly exceeds the above computation. During the early development of the ovary the Graafian vesicles are small, and are deeply seated within the substance of the stroma, but as development progresses they enlarge and approach nearer to the surface; and finally, when mature, they form projections on the surface of the ovary beneath the peritoneal covering. Each Graafian vesicle consists of an external coat, which is fibro-vascular, and which is in connection with the surrounding stroma by means of a vascular network, and an internal tunic, the *ovi capsule*, which is lined by a very delicate membrane, the *membrana granulosa*. Within these walls is contained a transparent albuminous fluid, in which is suspended the *ovum*.

The human ovum is exceedingly minute, measuring from the $\frac{1}{240}$ to $\frac{1}{120}$ of an inch, and is made up as follows: an external transparent capsule or envelope, the *vitelline membrane*, within which, and in con-

tact with it, is the *vitellus* or yelk, and lying in the substance of the yelk is a small vesicular body, the *germinal vesicle*, which contains the *germinal spot*.

The vitelline membrane is thick, colorless and transparent, and corresponds to the chorion of the impregnated ovum. The vitellus consists of granules of various sizes lying in a more or less viscid fluid. The germinal vesicle is about $\frac{1}{720}$ of an inch in diameter, and consists of a delicate transparent membrane containing a watery fluid. The germinal spot is opaque, of a yellow color, and granular in structure, measuring from $\frac{1}{3600}$ to $\frac{1}{2400}$ of an inch. The ovary derives its supply of blood chiefly from the ovarian, but in part also from the uterine arteries, between which vessels there is a very complete and free anastomosis. The veins are very numerous, and form immediately outside the ovary, and between folds of the broad ligament, a plexus termed the pampiniform plexus. The nerves are derived from the spermatic plexus, and enter the ovary through the hilum, along with the blood-vessels.

CHAPTER V.

OVULATION AND MENSTRUATION.

THROUGHOUT the entire scale of creation the ovaries form the *ultima ratio* of generation. The uterus derives its stimulus from the excitation of the external organs of generation, but the *final cause*, the true physiological and vital reason of its existence and action, is to be found in the ovaries. It has been amply shown by the successful experiments of modern observers that the ovaria are the essential organs of reproduction, and that in them originate the greater proportion of those sympathies which have been so long generalized as uterine; and furthermore, that the development of the pelvis, of the uterine system and of the mammæ, the function of menstruation and all the peculiarities of the human female, depend upon the ovaries. These supply the ova which, through the stimulus of the life-imparting principle contained in the semen of the male, may be developed into an individual similar to its progenitors. In fulfilling their appropriate and primary function of ovulation the ovaries determine also that of menstruation, which is secondary and consequent.

The ovaries have already been described as containing at puberty

the germinal vesicles in different states of development. But these ova are discoverable long before the accession of the period of puberty. They may be seen in the ovaries of the new-born babe, and even in those of the fœtus *in utero*. They form, therefore, an integral part of the ovarian tissue. The ante-pubertal life of the female is one of preparation, of growth in stature and in strength, with especial reference to the perfect fulfillment of the function of the ovaries. Many of the lower orders of the animal creation arrive at maturity much earlier than man. The human female is longer in arriving at the full measure of her development, as her being and destiny are higher. The same general principle of greater length of preparation and greater results is seen in the more particular instances of those individuals who commence to menstruate at a period later than the average. Those later in assuming the evidences of maturity are said to be more steadfastly regular in menstruation, and to continue it longer; the converse is still more evidently true. For, as in general all those whose precocious growth, even of the intellectual faculties, attracts so much attention, are seen to become exhausted almost before they enter upon the race of life, so in the particular instance under consideration of premature development of the sexual system, the earlier young people arrive at puberty so much the earlier do they grow old. This also is as manifestly true of nations as of individuals. Those races in which, like the Hindoo, the women arrive at sexual maturity at the earlier periods, as in the twelfth year, are effete, emasculate and doomed to be conquered by those in which the period of puberty is longer delayed. This is true independently of those influences of climate or temperature which may apparently seem to have conduced to such premature development.

Thus the female, after a preparatory period of constitutional incubation, becomes so highly developed in her entire system in general, especially in her sexual organization, and more particularly still in her ovaries, that these minute seminal vesicles, these ova or eggs, mature and begin to burst through the outer covering of the ovary itself. Previous to the final accession of the period of puberty the ova have been but imperfectly developed, and have in consequence remained comparatively dormant. But at this time a new life and vigor spring up in the ovaries, which rapidly develop the external form of the female herself in general, and all the organs of her sexual system in particular. For, as the soul animates the body, so by the interior vital change, and new life and vigor of the ovaries, the lank and lean, awkward and boyish form of the school-girl is transformed into that

full development of neck and bust, that rounded contour of the hips and loveliness of the features which the poet exalts as "beautiful exceedingly."

The period of the accession of puberty varies, according to climate and race and hereditary and social circumstances, from the thirteenth to the sixteenth year. But if we take the fourteenth year for the average, as is probably the case in this country, half as many more years must be spent before the young woman's constitution and sexual organization will have acquired its fullest development—that is, become capable of bearing the most healthy children in the easiest and most healthy manner. Some young women indeed arrive earlier at their highest maturity, as some also do at a still later period; but in general the average age of the first ovulation being at fourteen, we may assume the period of the most perfect and complete development of this function to be at about the twenty-first year.

OVULATION, or the functional action of the ovaries, consists in the maturation of the ova and in their extrusion through the ovarian surfaces. This functional activity occurs in the normal state at regularly recurring periods, usually once in twenty-eight days. And in many women this period returns with great exactness at the same day of the week and even in some instances at the same time of the day. This increased activity of the ovaries is not far removed from a congestion of these organs, and in many cases the entire system sympathizes in this disturbance of the ordinary sanguineous and nervous circulations. The manner in which the process of ovulation takes place is so admirably described by Dalton* that we quote it in full, and copy the accompanying very elegant illustrations.

"In the earlier periods of life, in man and the higher animals, the egg is contained in a Graafian follicle which closely embraces its exterior, and is consequently hardly larger than the egg itself. As puberty approaches, those follicles which are situated near the free surface of the ovary become enlarged by the accumulation of a colorless, serous fluid in their cavity. We then find that the ovary, when cut open, shows a considerable number of globular, transparent vesicles, readily perceptible by the eye, the smaller of which are deep-seated, but which increase in size as they approach the free surface of the organ. These vesicles are the Graafian follicles, which, in consequence of the advancing maturity of the eggs contained in them, gradually enlarge as the period of generation approaches.

"The Graafian follicle at this time consists of a closed globular sac

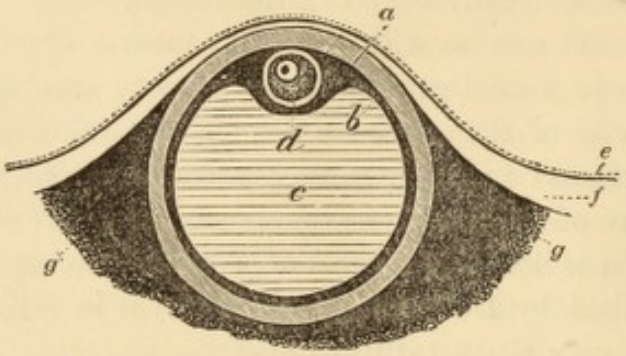
* *Physiology*, p. 567.

or vesicle, the external wall of which, though quite translucent, has a fibrous texture under the microscope, and is well supplied with blood-vessels. This fibrous and vascular wall is distinguished by the name of the 'membrane of the vesicle.' It is not very firm in texture, and if roughly handled is easily ruptured.

"The membrane of the vesicle is lined throughout by a thin layer of minute granular cells, which form for it a kind of epithelium, similar to the epithelium of the pleura, pericardium and other serous membranes. This layer is termed the *membrana granulosa*. It adheres but slightly to the membrane of the vesicle, and may easily be detached by careless manipulation before the vesicle is opened, being then mingled, in the form of light flakes and shreds, with the serous fluid contained in the vesicle.

"At the most superficial part of the Graafian follicle, or that which is nearest the surface of the ovary, the membrana granulosa is thicker than elsewhere. Its cells are here accumulated in a kind of mound or 'heap,' which has received the name *cumulus proligerus*. It is some-

Fig. 19.



GRAAFIAN FOLLICLE NEAR THE PERIOD OF RUPTURE.

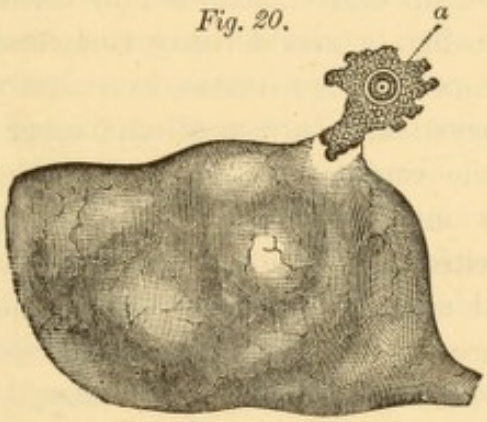
a, membrane of the vesicle; *b*, membrana granulosa; *c*, cavity of follicle; *d*, egg; *e*, peritoneum; *f*, tunica albuginea; *gg*, tissue of the ovary.

times called the *discus proligerus*, because the thickened mass, when viewed from above, has a somewhat circular or disk-like form. In the centre of this thickened portion of the membrana granulosa the egg is embedded. It is accordingly always situated at the most superficial portion of the follicle, and advances in this way toward the surface of the ovary.

"As the period approaches at which the egg is destined to be discharged, the Graafian follicle becomes more vascular, and enlarges by an increased exudation of serum into its cavity. It then begins to project from the surface of the ovary, still covered by the albugineous tunic and the peritoneum. The constant accumulation of

fluid, however, in the follicle, exerts such a steady and increasing pressure from within outward, that the albugineous tunic and the peritoneum successively yield before it, until the Graafian follicle protrudes from the ovary as a tense, rounded translucent vesicle, in which the sense of fluctuation can be readily perceived on applying the fingers to its surface. Finally, the process of effusion and distension still going on, the wall of the vesicle yields at its most prominent portion, and the contained fluid is driven out with a gush by the reaction and elasticity of the neighboring ovarian tissues, carrying with it the egg, still entangled in the cells of the proligerous disk."

Fig. 20.



OVARY WITH GRAAFIAN FOLLICLE RUPTURED.

At *a*, egg just discharged, with a portion of membrana granulosa.

During the earlier life of the female, the ova, or rather their rudimentary and incompletely-developed germs, are formed in the ovaries. But at the full constitutional and sexual development called puberty, with each return of the menstrual period, or *ovarian nisus*, one, or more, of the complete ovules bursts through the enveloping membranes of each ovary in the manner just described, and is received into the upper portion of one of the oviducts, called the Fallopian tubes. The fimbriated extremities of these tubes are applied to the ovaries—not, as is supposed by some, under the stimulus of sexual intercourse, but under the wonderful reflex influence of the process of ovulation itself—by which these extremities are led to apply themselves firmly over the exact portion of the ovaries from which the ova are about making their appearance. This must necessarily be the case, since the ova are conveyed to the uterus whether impregnated or not.

At each menstrual period, it is believed that at least one ovum is transmitted through the Fallopian tubes, which passes off and is lost. At the same time those remaining in the ovaries are advanced in their

development. Of the particular manner and time of the transmission of the impregnated ova we shall speak in treating of conception. Suffice it to say here, in general, that the ripening and discharge of the ovum in menstruation is called *œstruation*.

MENSTRUATION requires to be particularly studied in this connection, since it usually forms an important attendant and consequent portion of the process of ovulation, although it is not always present, even in apparently perfect health.

Ovulation we have found to consist in the maturation of the ova, and in their extrusion from the ovaries. By the Fallopian tubes these ova are taken up and transmitted to the womb. The uterus becomes then immediately and directly connected with the *ovarian nisus*, and at the same time it partakes in a most remarkable manner of the ovarian congestion. In fact, all the other parts of the generative apparatus, the vagina and the external organs, and even the entire sanguineous and nervous circulations, sympathize in this congestion and excitement; although thus involving the whole system, the menstrual orgasm is entirely dependent upon the ovarian nisus. Where there are no ovaries, there are neither sexual desires nor menstrual periods. In a remarkable case, in which both ovaries were extirpated in removing a painful tumor from each groin, a woman who before had always menstruated with great regularity, immediately and permanently ceased to menstruate; while in some other cases in which the womb was either wanting naturally or had been removed on account of disease, the mammary development and sexual desires remained unabated, and the menstrual discharges took place from the vagina. As long as the ovaries remain intact the woman is a woman still in external form and inward desires, although, from absence of the uterus or vagina, she may be incapable of conception or even of sexual intercourse. But let the ovaries be removed, and the woman loses at once all the distinguishing traits of the female character; her breasts diminish in size, and she becomes masculine in features, form and voice.

Relation of Menstruation to Ovulation.—Thus far we have shown that menstruation is essentially dependent upon the functional action of the ovaries; that it is not an original action of the uterus, since it always fails where the ovaries are wanting, but does not necessarily fail where the uterus is absent; and that, although there can be no menstruation except in connection with ovulation, *there may be ovulation without menstruation.* This latter fact may be, and probably is, in consequence of the menstrual fluid being reabsorbed, instead of

passing off as ordinary ovulation occurs and the usual and consequent congestion ensues, but for some occult cause the fluid is again taken up, and this without detriment to the general health. Cases are recorded of women who have conceived and borne children without ever having menstruated.

Let us now examine the physiological relation which menstruation or the quasi function of the womb bears to ovulation or the primary function of the ovaries.

The orgasm of the ovaries at the period of the maturation and extrusion of the ova, and the consequent congestion of the womb and other dependent parts of the sexual apparatus, have already been described as very intense and as involving the entire system. This intense orgasm having accomplished its primary purpose in the maturation and extrusion of the riper ova, and having at the same time also advanced others to a proportionate degree of development, requires a larger basis for its own critical ultimation. The intense congestion of the blood-vessels and the no less intense excitement of the nervous centres must be relieved, and this relief is obtained through the menstrual discharge, which is simply the excessive blood congested in the uterus and in its mucous membrane, and which oozes from the free surface of the membrane and passes down through the canal of the cervix in greater or lesser quantities into the vagina, and finally through the vulva. And not only does the congestion consequent upon ovulation fill the uterine vessels with blood in excess, but the Fallopian tubes likewise partake of the orgasm, in consequence of which their fimbriated extremities approach and are accurately applied over the ovaries, upon that part of the ovarian surface from which the ripened ovules are extruded, and thus receive the ovules, which pass through the Fallopian canals and are discharged into the cavity of the uterus.

The *first menstruation* usually takes place about the fourteenth year. In some individual cases it comes earlier, and in others much later. Delicate and luxurious habits of living, especially in large cities, tend to render the menstrual period earlier in its first occurrence, but less constant and regular in its subsequent appearance. Hereditary constitution exerts a powerful influence in determining the time of the first menstruation. For, while in Calcutta, India, the native females usually begin to menstruate between the twelfth and thirteenth years, the children of British residents, although born in the city, average about the sixteenth year. And different conditions in life, and residence in the country rather than in the city, exert an important influence in determining the period of first menstruation. Thus, in Den-

mark, in the women born in the country, the average period of first menstruation will be found to be at sixteen years and five months; those in the larger towns, fifteen years and four months; those in Copenhagen, the largest city, fifteen years and seven months. So in Russia, in fifty-three cases of the noble and rich the average was found by De Boismont to be thirteen years and eight months. In one hundred and thirty-five women of the well-to-do classes the average was fourteen years and five months. And in one hundred and seventy-one of the poor the average was set down at fourteen years and ten months. In London, of sixty-seven women of the opulent class the average was thirteen years and about six months, while in seven hundred and seventy-five women of the well-to-do working class the average was fourteen years and four months.

The *cessation of the menses* usually takes place between the fortieth and the fiftieth years, about forty-five being considered to be the average time of the change of life. But this may and often does vary in individual cases to a considerable extent. Some women cease to menstruate soon after thirty, especially those who began early, while others have borne children after they were fifty years of age, and regularly menstruated to their sixty-second year. Others again cease to menstruate at the usual period, but experience a return of the periodic flow after some years. In some instances this protracted menstruation or return of the flow may be dependent upon ulceration or other disease of the womb. But in most cases late menstruation, especially if unattended with much suffering or other morbid symptoms, may usually be regarded as evidence of remarkable constitutional strength and longevity; since, in general, life is longest and the health most assured in those females who commence to menstruate later, and who continue in the exercise of this function later than the ordinary term. In many cases the cessation of the menses does not occur at once, but is arrived at gradually through from one to three or even more years of menstrual irregularities. And the cessation may be by a gradual diminution of the flow, by alternate copious and scanty menstruation, or by changes in the character of the discharge itself. The general average duration of the function of menstruation may be stated at about thirty-two years.

Symptoms.—"The menstrual discharge consists of an abundant secretion of mucus mingled with blood. When the expected period is about to come on, the female is affected with a certain degree of discomfort and lassitude, and sense of weight in the pelvis, and more or less disinclination to society." In some instances these symp-

toms are but slightly pronounced, while in others they are more decided. If the individual be in a state of perfect general health, there will be, most likely, no premonitory symptoms whatever, and but slight derangement during the continuance of the period; but when the general organism is in an unsound condition, the premonitory and the concurrent symptoms of menstruation may be very severe, and to these may be superadded the suffering arising from obstruction of the canal of the uterine cervix or other abnormality of the uterus.

"An unusual discharge of vaginal mucus then begins to take place, which soon becomes yellowish or nearly brown in color, from the admixture of a certain proportion of blood, and by the second or third day the discharge has the appearance of nearly pure blood. The unpleasant sensations which were at first manifested then usually subside, and the discharge, after continuing for a certain period, begins to grow more scanty. Its color changes from a pure red to a brownish or rusty tinge, until it finally disappears altogether, and the female returns to her ordinary condition."—DALTON.

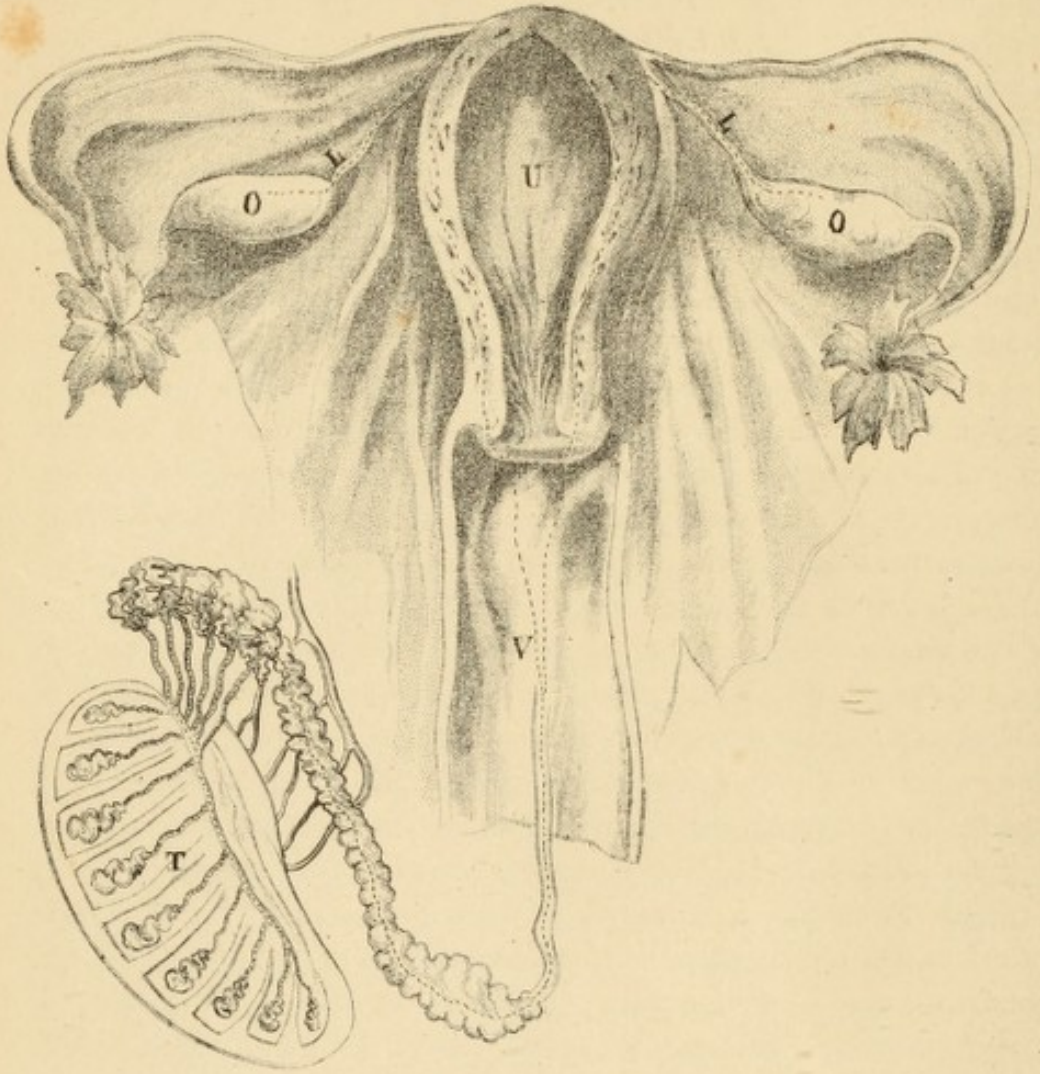
The original menstrual flux, as it issues from the uterus, is nearly pure blood; but in its passage through the vagina it becomes mingled with the acid mucous secretion from the vaginal surface, which changes its quality and appearance. The menstrual discharge returns with great regularity in perfectly healthy women, but varies in quantity in different individuals, being quite free in some and scanty in others. Each menstrual period occupies from two or three to five or six days, and the whole amount of the flow may vary from three ounces to eight, according to the temperament and idiosyncrasy of the individual; some plethoric persons having a very scanty flow, while in others, who seem to have no blood to spare, the discharge is much more free; and in some exceptional cases of persons apparently enjoying good health the catamenia may differ from the normal standard in every respect. Those irregularities which are properly termed morbid will be considered in a separate chapter. During utero-gestation and lactation the menses are usually wanting; there are, however, exceptions, some women menstruating with their usual regularity while *enceinte* and while nursing; in many others the menses return after the first few months of lactation.

The *causes of menstruation* must be identical with those of ovulation, from the intimate connection of these two functions, and from the essential dependence of the former upon the latter. The causes of ovulation must be found in the nerves which supply the ovaries. These form part of the ganglionic system, and are immediately de-

rived from the solar plexus, which is the great centre of vegetative life.

All the actions of the human body may be considered as voluntary, as involuntary, or as partaking of the nature of both these conditions. Thus the bodily actions may be distinctly referred either to the cerebral or voluntary nervous system, to the ganglionic or involuntary nervous system, or to the spinal nervous centre, which is more or less influenced and controlled by each of the others. The involuntary functions, with which alone we are at present concerned, may all be classified as belonging either to the *nutrition* of the individual or to the *reproduction* of the species. Thus the ante-pubertal period is almost exclusively devoted to the nutrition of the individual, but not without reference to future reproduction, as is seen in the existence and even extrusion of the premature ova during all this period. During the child-bearing period the nutrition of the individual is rendered unusually active and vigorous in order that it may subserve the reproduction of the species, and when both cannot be at the same time provided for, it is the former which gives way to the latter. This is seen in cases of consumptive women who become *enceinte;* the child flourishes at the expense of the mother and is born comparatively healthy, while the mother dies from inanition.

Thus menstruation, as dependent upon the action of the ovaries, must find its immediate cause in the ganglionic nerves which supply these organs. And as forming, with ovulation, one of the important processes preparatory to conception, menstruation must find its *final cause* in that grand function of reproduction of the species, to the perfect accomplishment of which all the energies of the individual life are devoted.



The above engraving, an improvement upon one found in the *Anatomia* of *Thomas Bartholiniana* 1677, Plate 46, page 273, represents the union of the extremes of the sexes.

The male, in all respects, is created for giving, even from his very inmost, the female, for receiving, even into her inmost. Hence the fecundating principle, secreted in the testicle from the bosom of his blood is transmitted,—as shown by the dotted line,—to her ovary; where it is received into the ovule, and becomes conjoined with that which is secreted from the bosom of her blood. Thus the extremes meet in the ovule, within the ovary; and the male and the female principles which are immediately concerned in the first act of reproduction, thus conjointly united, become at once and forever a new creation, a new human being in embryo.

U.—The Uterus.
T.—The Testicle and Appendages.
O O.—The Ovaries.
L L.—The Ovarian Ligaments.
V.—The Vagina.

The dotted line represents the passage of the fecundating principle—not the visible material semen, but the semen's invisible *fecundating principle*, on its way from the testicle, through the vagina, uterine walls and ovarian ligaments, to the ovaries. The material semen is merely a vehicle for placing the electrifying life-force of the male within the reach of the ovule, by a continuous route.

CHAPTER VI.

REPRODUCTION.

REPRODUCTION forms one of the three most general divisions of the functions of organic life, nutrition and innervation constituting the others. It includes therefore the aggregate of the more particular functions which concur in organized beings for the reproduction of their kind. Provision is made in the constitution of the individuals of the human race, as in other orders of the animate creation, for the perpetuation of the species. This is effected by means of *generation*, which results from the union of the male and female sexes. The act by which this union is effected is termed *copulation*. The two sexes are differently constituted in the various characteristics of their mental and moral being, and this difference of interior constitution becomes the foundation of corresponding differences in external form and in sexual organization. The respective mental and moral characteristics of the male and of the female are so constituted as to correspond to each other, so that from the conjunction of man with woman in the married state there results a perfect union, a complete man. Apart, each represents an incomplete moiety—together, they form a whole. In like manner, the sexual organs of the man and of the woman are adapted to each other, and through their conjunction the spiritual and affectional union of man with woman is confirmed and consummated. And through this conjunction, in the holy state of matrimony, is accomplished the procreation of offspring, the perpetuation of the race.

In their mutual adaptation to each other, in general and in particular, the male is formed for giving and the female for receiving. Thus the male and the female are seen to correspond, to be adapted and yet opposite to each other. During the act of copulation the male deposits, in the vagina of the female, the semen from which the fecundating principle arises; and this principle, entering certain ducts specially arranged for that purpose, passes up through the walls of the uterus, out through the ovarian ligament to the ovary, and there impregnates an ovule.

In the plate opposite this page the fecundating principle is represented as passing from the testicle through the penis into the vagina, and from thence upward through the uterine parietes and ovarian ligaments to the ovary of either side.

It will here be observed that it is claimed that the vitalizing principle of the male semen finds its way to the ovary of the female through the uterine walls and ovarian ligaments—a *route* not generally acknowledged as the true one by physiologists; and that impregnation of the ovule occurs within the ovary, which is a point yet in dispute, and by no means agreed to even by a majority of writers. Having prepared an article on the subject of reproduction, as an elaboration of views concisely set forth in the first edition of this work, and which was published in the *Hahnemannian Monthly*, December, 1868, I take occasion to transfer from that article such arguments as were in it adduced as evidence of the truth of both of the above propositions:

"Many years ago Jean Bohn published a work on physiology, in which he defended De Graaf. He was decidedly of opinion that the *aura seminalis transmitted through the porous structure of the uterus reached the ovary* and fertilized the ovum, which then descended through the Fallopian tube. . . . .

"Another position assumed by De Graaf, which had been maintained previously by Warton, and afterward supported by Haller and almost all preceding physiologists, was that *impregnation was accomplished always in the ovaries.**

"Under the head of 'Impregnation of the Ovum while still in the Ovary,' J. Müller says: 'This is the place of impregnation, at all events in man and mammiferous animals. In all cases of extra-uterine pregnancy, in which the ovum is developed in the ovary itself, or escaping into the abdominal cavity is developed there, it cannot be doubted that the ovum was in these instances impregnated in the ovary.'†

"A constriction (of a Fallopian tube) may prevent the arrival of the fecundated ovule into the uterus, and may thus give rise to a pregnancy of the tube.‡

"Haller found it possible to produce artificially an extra-uterine gestation, by tying the corona of the womb of a mammalian animal three days after conception. The result of this operation was that two fœtuses were discovered in the tube between the uterus and the ovary.§

"Cazeaux, referring to the experiments of Nuck and Hoighton, and

* Ritchie's *Ovarian Physiology and Pathology*, pp. 4, 97; London, 1865.

† Müller's *Elements of Physiology*, London, 1842, Vol. II., p. 1491.

‡ Scanzoni, *Diseases of Females*, New York, 1868, p. 370.

§ Ritchie, Op. cit., p. 165.

the later observations of Bischoff, says: 'Such results evidently prove that fecundation sometimes takes place in the ovary.' *

"Ritchie—already quoted—mentions cases of ovarian pregnancy. Mr. Stanley has published an account of a case of ovarian pregnancy [*British Med. Trans.*, Vol. VI., Art. 16]; and Dr. Granville a more extraordinary example, the fœtus being perfect and four months old [*Phil. Trans.*, 1820]. The celebrated Tyler Smith says: 'Of the occasional occurrence of ovarian pregnancy, there can be no doubt.' . . . In the admitted cases the entire fœtus has been found within the (ovarian) sac, or escaped from a perforation of the ovarian cyst.†

"The instances adduced from these authorities amply prove the fact of the occasional occurrence of true ovarian conception. Now, while no cases can be brought forward to show that conception ever occurs in any other place than in the ovary, I offer the following reasons, among others, for believing that *it never does occur anywhere else.*

"I. Extra-uterine pregnancies, whether ovarian, tubal, or interstitial, all show that the ovule must have been impregnated within the ovary, but *failed to be transmitted* by the Fallopian tube to the uterus.

"II. No embryologist has ever yet found either the germinal spot or the germinal vesicle in an impregnated ovule, even at its first entrance into the Fallopian tube. Both must have been obliterated, as the effects of impregnation, before leaving the ovary; while its gradual and progressive course down through the tube is always marked by a corresponding development looking toward the production of a new human being.

"III. The length of time occurring after conception before the ovule can be found in the uterus becomes a still more convincing proof. 'In the present record of our science,' says Cazeaux, 'there is no one conclusive fact that proves the ovule to have ever been seen in the womb of a woman prior to the tenth or twelfth day after her conception.'

"IV. The preparation made in the uterus itself, in the shape of the decidua, for the reception of the impregnated ovule, becomes additional proof when considered from the true physiological point of view. In accordance with the most beautiful economy of nature, this preparation commences immediately and only upon the completion of the impregnation in conception, and occupies the entire time consumed by the product of conception in passing from the

* *Midwifery*, Philadelphia, 1857, p. 97. † *Lectures on Obstetrics*, Am. ed., p. 343.

ovary to the uterus. Thus the impregnated ovule is preparing for the decidua, and at the same time the decidua for the impregnated ovule, each vital process being influenced by the other.

"V. It is well known at the present day [see Cazeaux, third American edition, foot-note, p. 98] that the ovule which causes the menstrual flux is never impregnated. After the cessation of the menses, at any time prior to the succeeding *nisus*, impregnation of an ovule now lying within the stroma of the ovary may be effected. This is proven from the preparation made within the uterine cavity, as stated in IV. This preparation could not be effected otherwise than by the evolution of the impregnated ovule. The attendant physiological process proves the event, and the whole is confirmed when we consider the length of time occupied by the ovule in passing from the ovary to the uterus after *effective* coitus.

"These considerations will, perhaps, suffice to convince the unbiased mind that *the ovary is the seat of conception.*

"An answer is now demanded to the second question—viz.: What is the course of the fecundating principle in its passage to the ovary?

"I am aware that, according to the opinion commonly entertained and supported by the greater weight of authority, this course is through the Fallopian tubes. But while the positive determination of this question is at once impossible, yet, as I have felt entirely dissatisfied with the solutions of the vexed question already offered in obstetrical authorities, I have been led to believe, as above stated, that the fecundating principle passes through the walls of the uterus and out through the ovarian ligament to the ovary. And if the following reasons for *this* belief appear less convincing to others than to myself, it should be remembered that the whole question is still a matter of opinion rather than of actual demonstration.

"I. In numerous cases of extra-uterine pregnancy the cause of the non-transmission of the impregnated ovule into the uterus has been found to be an imperforate condition of the Fallopian tubes. In these cases there could be discovered no sign of an opening ever having existed through which the semen might have passed to the ovary. The only natural channel which otherwise appears is that through the ovarian ligament.

"II. Normal uterine pregnancies have been found where the *os uteri* was entirely wanting,* and where not the slightest trace of its ever having existed could be detected. In these instances, as well as

* The records of obstetric science furnish several cases of complete absence or occlusion of the os (congenital). The following paragraph, from a source readily

in those of an imperforate condition of the tubes, the semen certainly could not pass up to impregnate the ovum through the Fallopian tubes.

"III. This modified doctrine of absorption is descriptive of the most simple process that nature could adopt for conveying the fecundating principle to the ovary; and while it is true that the assertion that the fecundating principle is conveyed 'through the walls of the uterus and out through the ovarian ligament to the ovary' is not predicated upon any anatomical discoveries of ducts or passages that have been made in the human uterus, such ducts or passages—being smaller than the smallest capillaries—are probably quite invisible.

"IV. The correspondence of the general affection of the whole female organism to that of the male requires that, even as the fecundating principle is given from the *inmost* of the male, so it shall be received into the *inmost* of the female, even into the ovaries, and there perform its vitalizing function. And here I wish to remark, that while it is admitted that the actual reception of some portion of the semen into the ovule is necessary in order to impregnate it, still this portion need be no more than the *minutest particle*, which in organized bodies corresponds to the elementary or primary atom of the inorganic world; and that, in addition to this, the old doctrine of the universal impregnation of the blood of the female by means of the seminal *aura* of the male seems to be confirmed rather than refuted by the later discoveries of modern physiological science. The entire system of the female is influenced most powerfully, and in a direction highly favorable to reproduction, both by the general magnetic sphere of the male, and by that richly-endowed secretion which is given off as the representative of his energetic vitality.

"V. It is to be remembered that the ovaries are encompassed by, first, the serous *peritoneum*, and secondly, by the *tunica albuginea*, a highly-organized and dense fibrous tissue, impervious in a much greater degree than the comparatively porous textures of the uterine

accessible to all [Churchill, *Theory and Practice of Midwifery*, Philadelphia, 1851, p. 256], places beyond cavil the existence of such instances.

"Lastly, a few cases are on record of total absence of the os uteri, as in a case which came under the care of my friend, Dr. Ashwell, and which he has described in Guy's Hospital Reports: 'it was found necessary to make an artificial opening with the knife; the labor terminated favorably.'

A single well-authenticated instance of pregnancy occurring with an absent or occluded os entirely uproots the theory of the passage of the semen to the ovary *via* the Fallopian tube.

walls and the ovarian ligaments. Thus, though it may be true, as is claimed, that spermatozoa have been observed *on* the ovary, it does not follow that impregnation of the contained ovule is effected through the passage of these spermatozoa through the Fallopian tube. The ovules are *within* the ovary, at one end of an uninterrupted porous chain, and it is reasonable to argue that the vivifying principle is conducted to the ovule by that way.

"Again, it is to be remembered that the Fallopian tubes (*oviducts*), being lined by *ciliated epithelium*, have the ciliæ in a direction to *aid* movement *from* the ovary and *toward* the uterus, and to retard movement in the opposite direction."

The semen of the male is principally and in the first instance secreted by the testes. In its passage it is commingled with the secretions of the corpus Highmorianum, the epididymis and vasa deferentia. To this are superadded the secretions of the prostate, of Cowper's glands and of the vesiculæ seminales. The latter additions appear to protect, and perhaps modify, the original product of the testes. In its mature condition, semen principally consists of an extremely small quantity of a viscid fluid, and of innumerable minute linear corpuscles having a peculiar movement, which are termed the spermatic filaments, or *spermatozoa*. As the semen is found in the vas deferens—that is, before admixture with the secretions of the above-mentioned glands and follicles, which give it its peculiar odor—it is whitish, viscid and inodorous, and consists almost entirely of spermatozoa and connective fluid. In the pure semen these spermatozoa exhibit no movements, or scarcely any when it is concentrated. A peculiar lashing motion of the tail of the spermatozoa is visible in the semen found in the vesiculæ seminales. But these bodies, once deemed essential to the procreative function of semen, are now believed to be the products of the formative action of the organs in which they are found, and cannot therefore be ranked in the same category with animalcules.

The semen, as finally imparted to the female in copulation, consists, then, of three distinct portions: first, the original vital secretion of the superior portion of the testes; secondly, of the delicate fluids which are associated with this secretion as it passes through the secondary structures of the epididymis and vasa deferentia; and thirdly, of the more voluminous mucous secretions of the subsequent glands and follicles, which envelop the whole as with a natural body. These three diverse and yet harmonizing elements are essential to

the healthy condition of the semen; for neither the spermatozoa nor the delicate secretions of the vas deferens, nor the grosser products of the various glands, can accomplish fecundation of the ovum separately. Nor is it to be regarded that the semen, viewed according to its physical qualities or chemical constituents as a liquor seminis, can, as such, effect fecundation and the primitive organization of a distinct and vitalized being. But it is upon the vital essence or spirit, so to speak, of the semen that its power to impart life depends. The gross liquor carries with it a part of the essential life of its giver, which, meeting a similar vital essence of the female organism in the ovum of the ovary, the conjunction of these two vital essences or principles is the process of fecundation by and through which a new being results which partakes of the life of the man and woman, and which is in that instant made a living soul.

The three constituent elements of the semen correspond to the body, soul and spirit. Within the inmost of each seminal nucleus is contained the very highest soul and life of the parent; the delicate fluids which immediately surround it are inspired by the animal spirits, while the more gross and exterior mucous envelopments correspond to the animal body.

This organization of the seminal globule, which makes it correspond to a representative of the body, soul and spirit of the parent, finds in the female ova a corresponding threefold organization, equally representative of the female constitution. And the semen of the male therefore unites and combines with the ovum of the female, in each one of these three constituent and representative forms, in more or less perfect harmony, according to the more or less perfect adaptability of the male parent to the female. And as in the mingling of different races the stronger takes the lead and predominates in the offspring, so in the union of the seed of the different individuals, the stronger predominates in the moral, mental and physical characteristics impressed upon the child. Thus as the lower, more gross and material portion of the male semen meets its counterpart in the grosser organization of the ovum, with which it unites and which it vitalizes with its degree of life, so each of the other constituent forms of the semen necessarily unite with and inspire the corresponding representative organization of the ovum. The ovum then receives, cherishes and nourishes the vitality imparted to it by the male semen, and the living form which is the result of such reception partakes of the qualities of the ovum on the one part and of the semen on the other, even as these are but faithful representatives of the various qualities, whether

orderly or disorderly, of the male and female individuals from which they spring.

And even as it was stated in general at the beginning of this chapter, that all the sexual organs of the male were for giving and all those of the female were for receiving, so here now it is particularly seen how the female ovum becomes receptive of the semen of the male. And at the moment of this vital reception the entire female organism feels its influence, and prepares forthwith to provide for the protection, sustenance, growth and development of the new creation. This impregnation and fecundation of the ovum is called *Conception*. And this product of conception usually remains quiet within the ovary for about the space of five days. During this time the first initial stages of subtle and mysterious vital organization and growth are taking place—processes too minutely recondite for successful exploration by the eye of man. Wonderful arcana of nature! in which, after all our profoundest scrutiny into the mystery of life, we can discern only the means and the ends, but not the manner. We see the minute representative forms of two lives combined to produce a third, in which shall appear, during all the possible threescore years and ten of its subsequent life, the general characteristics of the human race as distinguished from those of other forms of animate nature; the general characteristics of the nation or tribe to which its progenitors belong; the characteristics of the family as distinguished from those of other families in the vicinity; and lastly the personal peculiarities of each of the immediate parents,—all of which are impressed upon the embryonic germ, grow with its growth and strengthen with its strength.

During this time, in which the fecundated ovum remains quiet in the ovary, the interior surface of the uterus is being prepared for its reception. Under the influence of the impetus imparted to the entire system by this event of conception, the mucous lining membrane of the uterus becomes deeply congested, as in spontaneous ovulation. This congested uterine condition is due to the natural evolution of the fecundated ovule, and while the physio-pathological congestive condition is similar to that occurring with spontaneous ovulation, yet a different evolvement is now to be effected, and, instead of the congestion being relieved or carried off in the form of a menstrual flux, the *decidua* is formed as a step in the process of prospective utero-gestation. Very rarely indeed does the congestion after fecundation result in the discharge of the menstrual blood.

Thus, by the time the fecundated ovum bursts through its original

seat in the ovary and reaches the uterus, it finds prepared for it a thick, rich, soft, vascular and velvety lining, quite different from that which is to be found in the unimpregnated uterus. This hypertrophied development of the mucous coat of the uterus forms a sort of bed, into which the impregnated ovule is received immediately upon its escape from the Fallopian tube. This, which is the original mucous lining membrane of the uterus, forms what is termed the *decidua vera*, while the subsequent extension of the same growth, which completely envelopes the ovum, is called the *decidua reflexa*. The decidua thus constituted and developed form a sort of nidus or nutritious nest, in which the villi of the ovum take root, and from which the development of the ovum itself, already quite advanced, now progresses still more rapidly.

Here, then, will appear the contrast between spontaneous ovulation and that which occurs in connection with impregnation. In the former instance the disengaged ovum passes from the ovary through the Fallopian tube, only to be swept away by the menstrual flood, which forms the crisis of the menstrual molimen. In the latter instance the fecundated ovum, reposing for a few days in its original bed in the ovary, emerges at length from the ovary, and passes into the uterus, to find, as the result of the uterine congestion attendant upon its fecundation, the beautiful provision already described for its reception under the name of decidua vera. Under the influence of this same congestion the Fallopian tubes become erect, and fix their fimbriated extremities upon the exact portion of the ovaries from which the ova are about to issue. The stimulus which arouses these tubes to their almost instinctive action is to be found not in the orgasm of copulation, as is alleged by many authors, but in the reflex action of the emergence and escape of the ovum itself. The same reflex action of the *first birth* of the ovum, of its escape from the ovary, causes the exact and timely application of the fimbriæ of the Fallopian tubes to the ovaries; and in the case of spontaneous ovulation results only in the critical discharge of the menses, which relieves the uterine congestion; while in the case of impregnated ovulation, conception, it ultimates itself in that congestion of the mucous membrane of the uterus which forms the *alma mater* of the descending ovum.

Hitherto we have attempted to explain the nature of generation, or the reproduction of the species; the nature of the semen of the male and of the ova of the female; their representative character; the mode of their union in copulation; the results of that union in con-

ception; and the natural history of the product of conception from its first development and brief stay in the ovary to its arrival at its more permanent but still temporary resting-place in the uterus. There will be seen an analogy between the repose and primary growth of the impregnated ovum in the ovary and its much longer residence and final development in the uterus. The first is the era of conception, the latter is the period of gestation or utero-gestation, to which we now invite your attention.

GESTATION, the act of bearing the product of conception, strictly speaking, begins at the moment of conception. As already explained, during a very small portion of this period the fecundated ovum is still retained within the ovary. But after a few days consumed in the vital organization of the ovum itself and in preparing the uterus for its reception, the ovum usually descends into the uterus through the Fallopian tube of that side. From this moment the general term gestation is replaced by the more particular one of *utero-gestation*. The cases of the so-called extra-uterine pregnancy occur from the failure of the impregnated ova to be properly transmitted through the Fallopian tubes to the uterus. In such cases the ovum may increase in size and development, being nourished in a manner to be subsequently described, wherever it may finally be deposited, whether in the Fallopian tube, in the adjacent folds of the peritoneum, or even in the ovary itself.

The more general term of *gestation* will, however, continue to be used here, since it is more convenient, and more applicable in some respects, such as in speaking of its period, which, reckoning from its commencement at the moment of conception to its close at parturition, is *two hundred and seventy days*, or *nine solar months*. This period is, however, by no means invariable. For, not to speak in this place of those abortions, miscarriages and premature deliveries which are the results of accident or of disease more or less palpably developed, there are many instances recorded of persons who from some individual peculiarity have much prolonged this period; while in other instances there seems to have been a disposition to shorten it, independent of any apparent morbid condition. Generally speaking, the shorter the period of gestation the less viability has the child after birth.

As already explained, conception always takes place within the ovary; and where the embryo, the product of conception, descends regularly into the uterus and there becomes developed, it constitutes what is termed a *good*, *normal* or *uterine pregnancy*. But when it

does not thus descend and become developed in the womb, if it remain and is developed in the ovary, if it fall into the cavity of the peritoneum, stop in the Fallopian tube, or become engaged in the substance of the womb itself, it forms a *bad, extraordinary* or *extra-uterine* pregnancy.

Uterine Pregnancy may be *simple* when the uterus contains but a single ovum; *double, triple, quadruple* or *compound*, according as there are two, three, four or more fœtuses; and *complicated* where, in addition to the fœtus, there is also found a tumor, polypus, dropsy or other pathological formation in the abdomen.

Extra-Uterine Pregnancy may consist of one or the other of the four following varieties, according to the location of the fecundated ovum: 1. Ovarian, where the ovum continues its growth in the ovary itself; 2. Peritoneal, where the ovum fails to be received by the fimbria of the Fallopian tube, and thus becomes lodged in the folds of the surrounding peritoneum; 3. Tubal, where the ovum is arrested in its passage through the Fallopian tube, and is there developed; 4. Interstitial, where the ovum penetrates the parietes of the uterus instead of attaching itself to its interior surface. In either of these varieties extra-uterine pregnancy must sooner or later terminate disastrously, unless relieved by the Cæsarean section, since normal parturition is impossible, except perhaps in the last.

What, by some authors, is termed *false pregnancy*, consists in an enlargement of the abdomen from the presence of hydatids or other tumors, when in reality no living fœtus is present.

Simple Uterine Pregnancy.—Upon the occurrence of pregnancy we have to do with two different living beings, which although still united, the one within the other, present two different subjects for our consideration and two different classes of phenomena for our study. The woman, the prospective mother, represents one of these, and the embryo, the future child, represents the other. We will first study the influence of pregnancy upon the woman, and observe the various changes which it introduces into the entire economy. The manner in which the anatomical structure, the physiological functions and the intellectual and moral states and sensibilities are affected by this new condition of pregnancy must be carefully explained. This account of the natural history of pregnancy will be succeeded, in a subsequent chapter, by a description of the disorders incident to pregnancy, and a detail of the principal remedies required for their successful treatment.

CHAPTER VII.

PREGNANCY.

Physiological and Anatomical Changes.

WHEN fecundation follows copulation, the congestion and turgescence of the uterus and Fallopian tubes become continuous, and numerous physiological and anatomical changes are established. Some of these are local, some more general; some are transient, while others endure throughout the whole period of gestation; some affect the physical economy only, others in a remarkable degree disturb the mental states and moral sensibilities; and finally, some of these changes are purely healthy and normal. These we shall consider in the present chapter, while others, being accidental morbid conditions, or the developments of inherent morbid predispositions, will be subsequently described.

The Uterus becomes the seat of the most remarkable and first apparent of these changes, in which both the cervix and fundus partake. Those which occur in the neck are separate from, although simultaneous with, those occurring in the body; the former also resulting from the latter. Thus, the cervix softens and enlarges from below upward, as the body softens and enlarges from above downward, during almost the entire period of pregnancy. And the alterations affect this organ in every respect—principally in its volume, form, situation, structure and functions. Let us first examine the changes in the *body* of the uterus.

As explained in a previous chapter, the congestion attendant upon a menstrual crisis produces a temporary increase in the uterine parietes. A similar and more permanent result attends fecundation; the congestion attendant on the evolution of the ovum in that case is in some measure perpetuated, and a permanently hypertrophied condition of the uterine walls becomes established.

Volume, Size.—The mucous lining membrane becomes congested and almost double in thickness; and in consequence of this development of its vessels, as described by Cazeaux, and especially of the minute glands of which it is partly composed, it has its thickness so much increased in proportion to the size of the uterine cavity as to be thrown, in a great many subjects, into soft, projecting folds or circumvolutions, which are so pressed together as to leave no vacant place in the cavity of the uterus. This, as will be subsequently explained, constitutes the *decidua* or enveloping membrane into which the fecundated ovule is received upon its entrance into the uterus

from the Fallopian tube of the side corresponding to that of its ovarian birthplace.

Immediately upon its reception of the embryo, the uterus commences to increase in size—not uniformly, but in a ratio proportioned to the larger development of the fœtus—that is, the larger the fœtus the more rapid the enlargement of the uterus. This growth of the uterus takes place in every direction, and is not a mere mechanical distension, as if arising from the outward pressure of the increasing ovum, but it is proved to be a true physiological development, in which both ovum and uterus partake simultaneously and in unison.

Form.—The uterus, instead of remaining flattened on its two surfaces, becomes rounded and then pyriform in the earlier stages of pregnancy, while in the later months it becomes spheroidal, and finally assumes the form of an ovoid which is slightly flattened from before backward, and has its point looking downward. "Of dimensions nearly equal in every direction, about the fifth or sixth month the uterus exhibits the figure of a spheroidal vase terminated by a very short neck; it might be compared to a hog's bladder, with the urethral extremity surrounded with thread for an inch or two; supposing some one should unwind the thread by degrees, from above downward, while another blows into the bladder from the fundus, so as to distend it, we should acquire a pretty clear idea of the gradual effacement of the cervix of the womb."—VELPEAU.

In the latter months of utero-gestation the shape of the uterus is modified by the exact relative position of the fœtus. That side of the fundus which is occupied by one of its extremities is sometimes more elevated than the other. And since in the most usual presentations the trunk of the fœtus is found to incline to the right side, this portion of the fundus of the womb will often be found most elevated. These general statements as to the shape of the gravid uterus are, however, liable to exceptions, which may arise from the number of the fœtuses, or from the varieties in the original shape of the uterus itself.

In its *situation* the gravid uterus is subject to important changes. These changes arise in the first instance from the change in size of the organ itself. Remaining in the pelvic cavity during the first three months of gestation, the uterus sometimes becomes at first slightly depressed, so that its cervix approaches nearer to the vulva. This is especially the case in those in whom the pelvis is large. Still, this depression of the uterus, when it does occur, is but temporary, and at

three months the position is in all respects almost exactly the same as before impregnation.

From the third and a half to the fourth month, the uterus, finding itself more and more incommoded as it increases in size, gradually forces itself upward from the excavation of the pelvis, rises above the superior strait, then to the level of the umbilicus, and toward the close of pregnancy it reaches the epigastric region. But during the last two weeks of gestation the uterus commences to sink down somewhat; and this, which is regarded as one of the earliest signs of approaching parturition, is in fact almost the commencement of this process, since in most instances it results from the approximation of the fœtal head toward the cavity of the pelvis, and in some cases from its actual entrance into the cavity itself.

Direction.—The changes in the direction of the womb in pregnancy are no less remarkable than those of size and form. While still remaining within the pelvic cavity, the uterus, from the greater weight of the posterior portion of the fundus or upper portion, inclines backward, as in partial retroversion, and the os uteri looks forward toward the pubic arch. But this is not always the case in the earlier or first three months of gestation. In many such cases the fundus will be found inclining forward more in its natural position, while the os tincæ will be reached only by the farthest extension of the finger toward the hollow of the sacrum.

As the uterus in the fourth and fifth months rises above the level of the superior strait, two remarkable directions are assumed and maintained, usually till the close of gestation. These are—the inclination forward, as if leaning over the arch of the pubes, and the inclination to one side, usually the right side. The forward inclination of the gravid uterus is the necessary result of the hard, unyielding nature of the lumbar vertebræ behind, and of the less rigid structure of the abdominal parietes in front, in combination with the constant pressure from above of the contents of the abdomen itself. The line of motion which alone is possible for the gravid uterus on emerging from the pelvic cavity being the axis of the superior strait, as guided by the projecting promontory of the sacrum, will even from the first have given it a decided inclination forward. The lateral inclination to one side or the other is the necessary result of the projecting ridge of the lumbar vertebræ, as it would be little less than impossible to balance the uterus on this high-raised median line. The proportion of cases in which the uterus is found inclining to the right side is stated by various authorities to be as high as eight out

of ten. But there is less unanimity of opinion as to the causes which produce such a result. Among the various causes proposed to account for this general tendency, no one seems entirely sufficient, nor do many of them unite with any degree of constancy in a given number of cases. Thus, if the inclination is to be attributed to the greater weight from the attachment of the placenta, it is found that the placenta is far from being always on the side toward which the uterus is inclined. The same is true of the relation of the colon loaded with fecal matter—of the position of the female while at rest on the right or left side. For the present, the most plausible opinion appears to be that of Madame Boivin—that the round ligament of the right side is shorter, stronger and contains more muscular fibres than that of the left, and that to the more powerful action of this ligament is to be attributed the usual inclination of the uterus to the right side. Still, there is no doubt that the more active physiological influences do much to determine this matter of the lateral inclination of the gravid uterus; and in confirmation of what is here implied it may be sufficient to state that, according to the observations of some authors, *the uterus inclines to the left in women who are left-handed.*

The *thickness and density* of the uterine parietes form two of the most remarkable changes of pregnancy. The non-gravid uterus has already been described as having very thick walls. After fecundation these walls maintain usually the same relative thickness, although, as the uterus itself increases in size, its parietes become less dense, and instead of being hard and fibrous, are said by Cazeaux to have a clammy softness closely resembling that of caoutchouc softened by ebullition, or that of an œdematous limb. "It is now known that the womb preserves nearly the same thickness during the whole course of pregnancy as it had when unimpregnated. This thickness, which is greater at the insertion of the placenta, generally diminishes from the fundus toward the cervix, where it is frequently found to be not more than two or three lines or even less. It increases a little in all parts of the organ at the same time, until the third or fourth month, and then remains rather below its primitive limits, to exceed them again in the last stages of pregnancy, except the cervix, which at that period especially grows thinner."

Structure.—The immense enlargement of the womb, from its non-gravid size up to that capable of enclosing one fœtus or even more at full term, can only be the result of a very great increase in its entire mass. But this great development in substance—in which the weight of the uterus comes to be reckoned by pounds instead of by ounces—

is accompanied with a corresponding development of its proper organization. In its non-gravid condition the uterus exhibits only the type of the wonderful development which it acquires in pregnancy, and which is essential to the proper performance of the important functions with which it then becomes charged. "Its fibres, which were pale, dense and inextricably tangled, soften, become redder and soon represent layers and bundles easy to detect and to follow. The cellular tissue, which was before so firm, dense and elastic, relaxes, becomes supple, and indeed resembles the common cellular tissue, and in this way permits the other elements which it held in bondage, as it were, to follow the impulse that animates the whole womb. The arterial branches, folded upon each other like the vas deferens, and bridled in this condition by dense elastic laminæ, yield to the general relaxation, and gradually become lengthened; their angles, at first so sharp, with their doublings, grow blunter, enlarge, and at last exhibit only certain zigzags of greater or less depth—tortuosities which do not impede the circulation.

"The *veins* undergo the same metamorphosis: already in the natural state larger and less tortuous, they are enlarged and developed still more rapidly than the arteries; afterward they are observed to furrow the fleshy layer in every direction, and form a network which in some measure separates it into two planes. They are large enough to admit a goose-quill, and in some instances the end of the little finger; near the mucous membrane they dilate so as to constitute cones with inverted bases, which were first termed *uterine sinuses*, but which are now called *venous sinuses*."—VELPEAU.

The *lymphatic* vessels and the nerves are also enlarged in a corresponding manner in pregnancy. The great change in the texture of the mucous lining membrane of the uterus has already been referred to in describing the formation of the decidua. All the component tissues of the body of the uterus receive accessions both in structure, size and physiological activity, to correspond with the new and most important functions which this organ is called upon to discharge in pregnancy and gestation.

THE CERVIX UTERI is also subject to certain changes during the period of gestation. These occur simultaneously with those already described as affecting the body of the womb, and are the results of the physiological action by which the entire uterus becomes adapted to its new functions. In the consistence of its tissue, in its volume, form, situation and direction, the cervix uteri becomes changed in a remarkable manner; and these changes, so far as they are appreciable,

afford valuable indications for determining the fact and the stage of pregnancy.

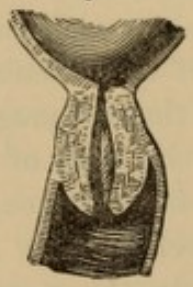
Softening of the tissue constitutes the principal modification of the actual structure of the cervix uteri. The change from a firm, fibrous structure to that of a soft, fungus-like substance begins at the lower border of the interior surface of the os tincæ in the first month of pregnancy, and increases from within outward, and from below upward, till at the sixth month this softening embraces the whole thickness of the lips of the os tincæ and the lower half of the sub-vaginal portion of the cervix. This softening of the tissue is always from below upward, and proceeds also *pari passu* with the development of the fundus. And so exactly is this proportion maintained that an experienced examiner can always determine with very great accuracy the advancement of the pregnancy by noting the extent of this upward softening in the cervix uteri. It must be borne in mind, however, that in those who have had several children the sub-vaginal portion of the neck of the uterus loses a considerable portion of its length; otherwise the briefer extent of the softening in such cases might mislead the examiner to conclude that the pregnancy was less far advanced than it really was. So also in cases of first pregnancy, since this softening of the cervix uteri is less strongly marked and more slow in its development, and therefore more difficult of detection, these circumstances should always be taken into consideration in forming a conclusion in such cases.

The *increase in volume* of the cervix uteri goes on in equal ratio with the decrease in the density of its substance. But the cervix does not shorten: the description given from Velpeau, on a previous page, of the development of the fundus at the expense of the cervix, is applicable only to the last fortnight of utero-gestation. On the contrary, the length of the cervix may begin to increase a little after the commencement of the fifth month; and this elongation, which previously had been rather apparent than real, is continued till the final absorption of the cervix itself in the fortnight immediately preceding parturition. At this period the whole neck, having become softened and thickened, becomes more easily distensible, and the development of the body of the uterus from above downward meets the softening and development of the neck from below upward at this juncture, which is at the *os internum*, and the complete fusion of the fundus with the cervix takes place, and the cavity of the womb is one from the fundus to the os tincæ or *os externum*. This fusion causes the sinking down of the fundus from the pit of the stomach

so often observed in the last weeks of gestation; the fundus must sink as the walls and lower segment of the uterus are expanded. And upon the occurrence of this depression the female breathes freer and feels better in all respects.

The *form* of the cervix uteri differs in the multiparæ from what is observed in the primiparæ; this difference is principally to be noted in the varying size and shape of the os tincæ and of the cavity of the cervix itself. In the primiparæ the os tincæ changes from a simple transverse fissure to a circular depression. The cavity, from being conical, becomes spindle-shaped, and the softening of the externally constricted os will not allow the finger to penetrate into the cavity. The os tincæ never having been ruptured by parturition, its mucous lining membrane rounds it off very nicely, and none of the inequalities, fissures or puckerings so common in the multiparæ are to be found here.

Fig. 21.



A section showing the neck of the uterus; the anterior and posterior lips are seen *in situ*, being separated from each other by the fusiform cavity in the neck.

In the multiparæ the numerous cicatrices and indentations render the os tincæ more originally patulous; and the most noticeable effect of the pregnancy upon the orifice in such cases is to cause it to be more easily dilatable. And as the gestation progresses this dilatability of the os tincæ becomes an actual spreading out of the inferior portion of the cervix, until it reaches the middle part of the cervix uteri about the seventh month, and nearly gains the internal orifice by the ninth month. The cavity of the cervix goes on enlarging simultaneously with the softening of its walls and the advance of pregnancy, and the opening and cavity become thimble-shaped, admitting the finger farther and farther into it as the pregnancy advances.

The gradual change in the opening of the os tincæ and dilatation of the cavity of the cervix may be seen in the accompanying cuts upon the next page. In the preceding account of the changes in the neck of the uterus incidental to pregnancy we have principally

followed the very excellent and in some respects entirely original account given by Cazeaux; and for the following summary of these changes we are indebted to the same author.

Summary.—From the statements made in the preceding sections we may draw the following conclusions:

I. The tissue of the neck begins to soften at the very commencement of pregnancy, and the softening, although not very apparent in the early months, and limited to the most inferior part, gradually ascends, so as to invade successively the whole neck from below upward, though it is much less marked and less rapid in its progress in primiparæ than in other women.

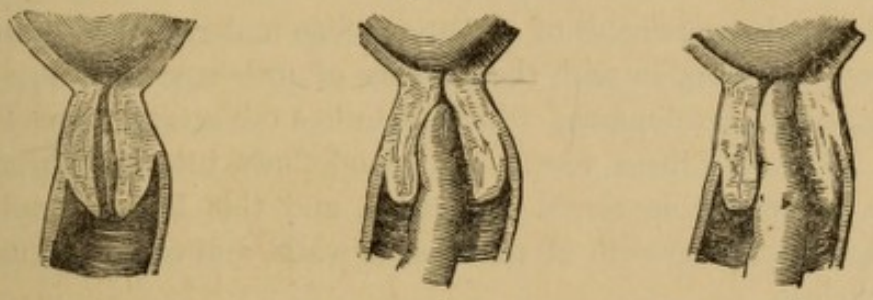
II. The cavity of the neck dilates simultaneously with the softening of its walls; and, further, this enlargement causes it to be spindle-shaped in primiparæ, and in women who have already borne children to resemble a thimble, the finger of a glove, or a funnel with its base below.

III. The external orifice remains either closed, or else very slightly open, in primiparæ up to the very term of pregnancy, whilst in others it is widely open, and constitutes the base of the funnel.

IV. The whole length of the neck disappears in the last fortnight, being lost in the cavity of the body.

V. Contrary to the opinions hitherto generally adopted, the neck preserves its whole length until the last fortnight; it does not shorten from above downward during the last four months, but the fusion of the neck with the body takes place only within the last few weeks of gestation.

Fig. 22. *Fig. 23.* *Fig. 24.*



These three figures give an idea of the gradual dilatation which the cavity of the neck undergoes at various periods of pregnancy.

This final fusion of the cervix with the body of the uterus causes or is accompanied by a manifest sinking downward of the uterine tumor from the epigastric region, and a corresponding expansion laterally of the abdomen; which phenomena are usually accompanied

with greater freedom of respiration and other evidences of relief from pressure upon the stomach, diaphragm and thoracic contents.

THE TEXTURE AND PROPERTIES OF THE UTERUS are also greatly modified by the condition of pregnancy. These changes affect the different tissues and structures of which the uterus is composed.

The *serous coat* or peritoneum, which constitutes the external tissue of the uterus, like the entire substance of the uterine walls, is extended without being diminished in thickness. Just as the uterus itself grows with the growth of the ovum it contains, so its peritoneal covering absolutely grows, and in proportion to the whole growth of the uterus which it envelops.

The *mucous coat* of the uterus, as already stated in speaking of the formation of the decidua, becomes much more highly developed in pregnancy, and this development belongs to the glands as well as to the mucous tissue itself. This is also the case with the mucous glands of the cervix; these secrete a peculiar dense, semi-transparent, almost insoluble mass of mucus, which fills and closes the entire cavity of the neck during pregnancy.

The *muscular coat* of the uterus also becomes developed in a corresponding manner during pregnancy; so that the various layers of muscular fibres are much more easily demonstrable at this time than in the unimpregnated condition, and the actual muscular character of this middle coat of the uterus is positively ascertained. The various muscular fibres are now seen to cross and intercross in such a manner as to secure the greatest possible amount of strength; and the arrangement of the layers and fibres is such that at every orderly contraction they all act upon one common centre, the centre of the womb itself.

The vascular apparatus of the uterus also undergoes very important changes in connection with the advance of pregnancy. These consist in augmented development, which embraces the arteries as well as the veins. Through these vessels the blood flows into and through the uterus in greatly increased quantities, and this blood supplies the nutrition for the growth of the uterine walls, and of the fœtus which they enclose.

"The augmentation in the size of the arteries only becomes considerable as they approach the uterus. Whilst advancing between the peritoneum and the external face of the organ, and before giving off their first divisions, they dilate and swell up, and then they furnish branches to the anterior and lateral parts, which ramify *ad infinitum*; they are not situated immediately below the peritoneum, but are sepa-

rated from it by a delicate layer of muscular tissue. All these ramifications anastomose freely, and penetrate through to the internal surface, where they generally terminate; but a large number of those corresponding to the placental insertion traverse the mucous membrane and enter the placental deciduous membrane."—JACQUEMIER. Through these enlarged arteries is conveyed the blood requisite for the growth of the uterine parietes and appendages, and for the supply of the placenta, and consequently of the fœtus. The arterial branches become lengthened with the increasing size of the uterus, but do not lose their original tortuosities, which, however, do not appear to impede the circulation through them. The veins undergo similar and no less extensive changes. This will be evident from examining them as they emerge from the uterus; the ovarian veins are nearly as large as the external iliacs, and the uterine veins are but little less in size. In the original state, before pregnancy, they are larger and less tortuous than the arteries; during gestation they become enlarged and developed still more rapidly; and at term they furrow the muscular tissue in every direction, and form a network which lies intermediate between its external and internal face. This muscular tissue or coat of the uterus is traversed by a great number of venous branches running in every direction, which anastomose and form large sinuses at their junction. Some of the canals of this plexus or network are large enough to admit a goose-quill, or in some instances even the end of the little finger.

This is particularly the case at that part of the interior surface of the uterus to which the placenta becomes adherent. Opposite the insertion of the placenta these venous trunks are largest, and they diminish in size as they recede from this vicinity; and in the substance of the mucous membrane, immediately beneath which the placenta is situated, these vessels form, through an enormous dilatation of their branches, the long sinuses which exist at the adherent surface of the placenta. These sinuses communicate freely with each other, so as to form a reservoir of blood divided and kept in place by numerous partitions. At intervals may be found a small number of orifices through which this mass of blood communicates with corresponding sinuses in the muscular walls of the uterus. The veins as well as the arteries are lengthened, growing thus with the growth of the uterus, since even in their greatest extent, in the last months of pregnancy, they still maintain their tortuosities. The areolar tissue which envelops the uterine arteries is not found on the veins, these latter being placed in immediate relation with the muscular tissue

through which they pass. Neither are there any valves to be found in these veins; probably their numerous convolutions and sinuosities may serve to answer the purposes secured by the valves in other venous trunks.

The lymphatic vessels of the uterus also acquire an extraordinary development in pregnancy and gestation. These vessels form several distinct layers or planes in the uterine walls, the superficial being the most fully developed; and, as previously described, they belong to two distinct groups, those of the cervix communicating with the pelvic ganglia, and those of the body of the womb terminating in the lumbar ganglia. The lymphatic system forms, with the arteries and veins, a third and no less indispensable set of vessels; and the necessities of the circulation, of the nutrition (reparation and growth) of the uterine tissues and their contents, require that the augmentation of the lymphatic vessels should be in some proportion to the increase of those of the arterial and venous systems.

The *nerves* of the uterus during the period of gestation necessarily partake of the same increased activity as the other uterine structures, and it was once supposed that they received also a corresponding augmentation in development. But the more recent researches of physiologists have shown that the proper nerve-tissue itself remained unaltered during pregnancy, and that the apparent increase in size of the nerves is due to the augmentation of the tissue composing the neurilemma—a tissue which is almost entirely fibrous, and exhibits no structure specially nervous, its office being to support, protect and bind together the nerve-tubules and ganglionic nerve-corpuscles. Those arising from the ovarian plexus are distributed to the angles of the fundus; those arising from the hypogastric plexus are distributed to the cervix and lower portion of the body, these, by branches from the third and fourth sacral nerves, being connected with the spinal nerves; and finally, those arising from the great sympathetic accompany the uterine arteries, and are lost upon the neck and lateral parts of the womb. Thus the entire structure of the uterus is sure to be supplied with nerves from the nervous system of organic life, a portion only of the nervous filaments distributed to the cervix being in immediate relation with the spinal nervous system.

The complicated arrangement of the various tissues and organized structures which make up the substance of the womb renders it exceedingly difficult to demonstrate the full development of the nervous system of this organ. But there can be no doubt of the fact that the uterus is so abundantly supplied with nervous substance in itself, and

so intimately connected with the great ganglia in its vicinity, that it is endowed, especially in the gravid state, with a vitality peculiarly its own, through which it is enabled not only to support the nutrition of the embryo, but also to exert a controlling influence upon the entire economy of the woman herself.

These changes in the structures composing the uterus must occasion corresponding changes in the physiological and sensitive conditions of this organ.

The *physiological properties* of the gravid uterus, as to sensibility, irritability and contractility, are very different from those exhibited in the non-gravid condition. The common sensibility of the uterus in the non-gravid state is but slight, but in consequence of the more active development of the nerves of organic life and of their connection, in the cervix, with the spinal nerves, this sensibility is much increased during pregnancy. And yet in many individuals the uterus shows in this respect a most astonishing power of endurance—a wonderful tenacity which enables it to retain and preserve the embryo in the midst of the greatest dangers. Near akin to this increased sensibility appears the peculiar irritability of the uterus. This may be defined as a certain morbid sensibility, or a sensibility attended with weakness rather than with strength. In the former instance the woman can bear with impunity the active movements of the fœtus in utero; in the latter, these movements induce the most poignant anguish, or may even threaten a premature delivery.

Contractility is but a still farther advance in the direction of sensibility and irritability, or, rather, the former is the crisis or reaction which results from the latter. The most important function of contractility is, of course, peculiar to the gravid as contrasted with the non-gravid uterus. It belongs to the increased muscular development of the uterine parietes, nourished as they are by the augmented blood-vessels, and inspired by the more active influences of the nerves. This contractility may be excited by the reflex action, from irritation, of the cervix; thus, a common cause of abortion is to be found in repeated and violent coition, and in other disturbances of the os and cervix uteri. The menstrual molimen, in the unimpregnated condition, seems to have the power of exciting all the contractility of which the womb is then capable. And even in the impregnated state the same influence is still to be traced in the remarkable tendency to abort at menstrual periods, especially at the third. And it is thus that many drugs which are capable of so irritating the uterus or the adjacent sympathizing structures as to produce a congestion which may simu-

late that of menstruation, are also capable of directly producing abortion. But the grand physiological functional contractility of the gravid uterus is seen only at full term. Then this organ arises in its might in the fullness of time, spontaneously casts off in the most violent manner, even at the blind risk of destroying the mother where deformity may be present, the ovum which it has cherished, protected, nourished and vivified through nine long months. And to the accomplishment of this contractility the nerves of the uterus summon not only all the various curiously-arranged and powerful muscular tissues pertaining to that organ, but through their connections with the cerebro-spinal nervous system they compel the co-operation of all the involuntary and voluntary muscular apparatus of the entire body, and of all the determined energies of the mind.

The efforts of the will, co-operating with the involuntary muscular contractions, exert no small influence in maintaining the labor-pain. In some rare instances the contrary has been observed. Mrs. C., living five miles from the city, at a time when the traveling was very bad, was taken in labor, and felt as if she would be confined before her physician could reach her. Her pains were frequent and vigorous, but by a determined effort of her will she had entirely suppressed them, and her physician was obliged, after waiting in vain for some time, to restore them by exhibiting the appropriate remedies. This was not a case of fear, but the lady said she exerted herself all she could to suppress the pains. The favorable influence of good hope of a speedy delivery is so well known that the physician instinctively encourages his patient all he possibly can. In the state of nature in animals and among the savage tribes this function of contractility, even at its final result in the expulsion of the fœtus at full term, is attended with little or no pain. But this is very far from being the case usually in civilized life.

That function of the uterine tissues by which the womb, after being thus emptied, is restored to its original state, is by some authors considered to be distinct from contractility, and termed elasticity. But this seems nothing more than a continuation, into the minute structure, of the same contraction which, in the first instance, had affected the entire organ. In the latter instance, the minutest filaments of the muscular and other tissues seem affected, as in the former the entire muscles and muscular parietes.

This identity of contractility with what is termed elasticity will be more certainly demonstrated by the consideration of the very similar effects of the same physical and even moral agents in producing or in

arresting their development. Thus, ergot, which is one of the most efficient agents in producing powerful contraction of the muscular parietes, is no less active in arresting the hemorrhage subsequent to parturition which arises in consequence of a want of the proper interstitial contractility or elasticity which should close the open mouths of the blood-vessels. In the same manner, fright, from being told there was "something wrong" about the presentation, has been known instantly to arrest the labor-pains and change the labor itself from a natural to an instrumental one. So fear has been seen to stop the normal contraction of the uterus after child-birth, and thus admit alarming hemorrhage. The reflex stimulus of friction to the abdomen may indifferently produce the pains of labor, or those after-pains by which the continued contraction and final restoration of the womb to near its original size are secured. The uterus may be so worn out in the actual labor, even if its involuntary contractions have not already ceased before delivery, that it has no longer any tone, and, like an overstretched piece of india-rubber, appears incapable of resuming its natural form. Such also may easily be imagined to be the case in those in whom, whether from failure of the vital forces in general or from organic exhaustion, the fœtus has to be removed by force. Nor is it unknown for the last, most violent and successful expulsive efforts of the womb to be followed by entire paralysis of the organ.

But, in general, the interstitial contraction would seem to keep pace with the organic, and as the fundus closes in upon the fœtus as the head emerges from the os uteri, so the minute interstitial contractility (elasticity) of the tissues already follows on and aids the organic contractility in separating and expelling the placenta.

Position.—The changes in position of the gravid uterus have already been referred to under the head of direction. But it will not be amiss to again refer to them here, and it will be interesting to note in what way the addition of so large a body as the uterus to the already occupied abdomen is provided for, without any of the viscera suffering injurious pressure, and without that impediment to the circulatory and respiratory systems, which, in the absence of such a provision, must inevitably take place.

"The oblique direction of the uterus upward and forward is determined, firstly, by the corresponding obliquity of the pelvis, the plane of whose brim forms with the horizon an angle of 60°. But as the fundus gradually, after three months, emerges from the pelvic cavity, the oblique direction of the uterus is maintained by the symphysis

pubis in front and the sacral promontory behind. Between these, the superior portion of the uterus continues to ascend, supported most by the abdominal walls anteriorly and the spine posteriorly. The intestines, being bound down by the mesentery, cannot be displaced, and will therefore occupy a position midway between the spinal column and the posterior uterine wall. The pressure of the sacral promontory and of the lumbar vertebræ will still give to the uterus a forward tendency, which, on the other hand, will be prevented from becoming excessive by the elasticity of the front walls of the abdomen. If these have not been previously much distended, the fundus glides upward, and ultimately fills the epigastric hollow; but if the abdominal walls have been much relaxed, as by frequent child-bearing, or if the pelvis is much deformed, the fundus uteri is usually turned directly forward, or even downward.

"At the end of pregnancy the whole of the fore part of the abdomen is occupied by the uterus; on either side lie the ascending and descending colon; the transverse arch, together with the omentum and stomach, fill the space between the fundus of the uterus and the diaphragm, while the rest of the abdominal viscera lie laterally and posteriorly to its hinder wall.

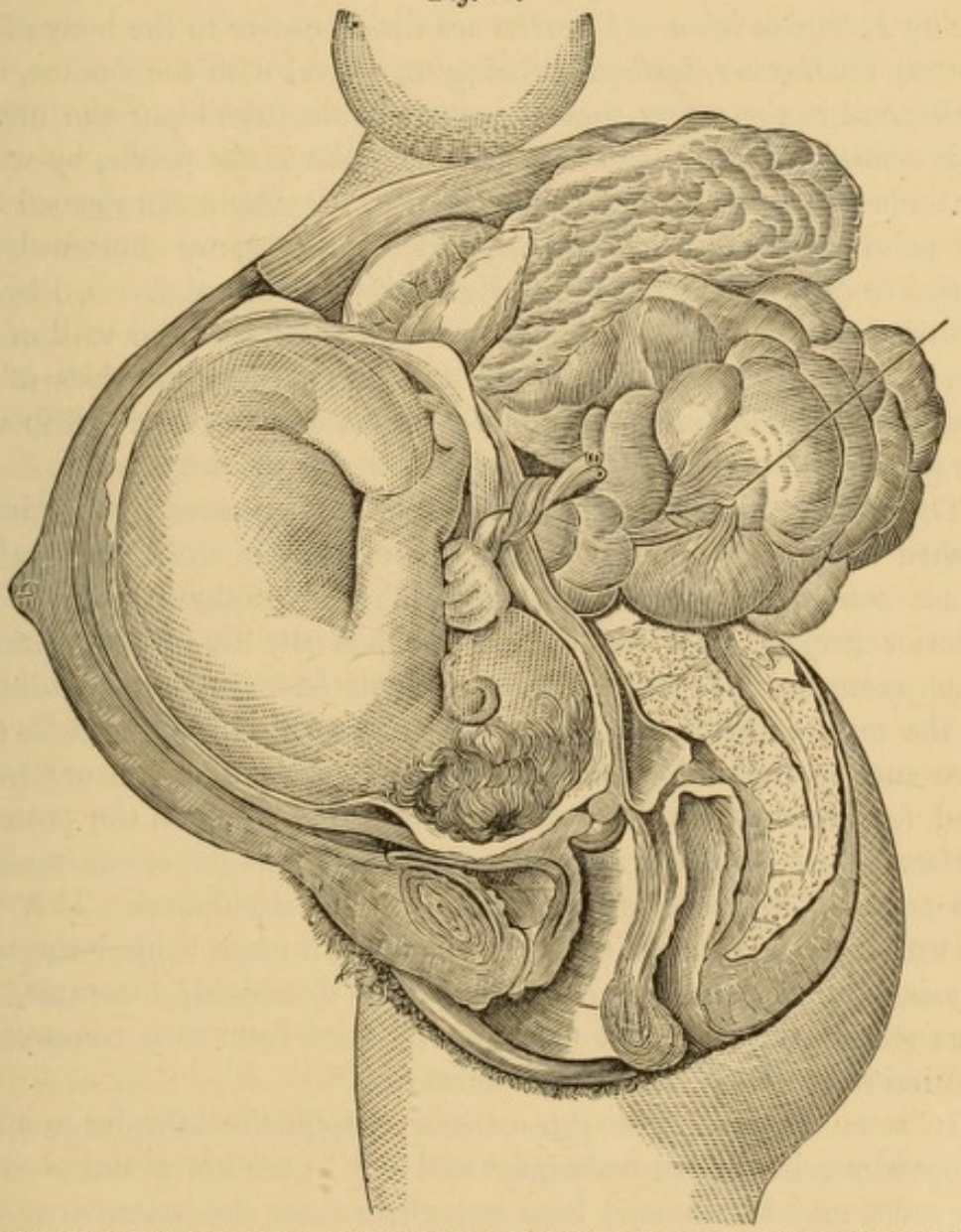
"Thus it results that in pregnancy, and especially in its last stages, no injurious pressure is exercised either upon the great vessels, the aorta and vena cava, or upon the intestines, liver or stomach, whilst the descent of the diaphragm, and consequently the act of respiration, is not materially impeded, and space is left for the bladder and rectum to perform their appropriate acts."—Dr. Farre, in *Todd's Cyclopædia*.

Changes in the Uterine Appendages and Adjacent Organs.—Next to the changes which are induced by pregnancy in the neck and body of the uterus, those which are wrought in the uterine appendages and adjacent organs need to be considered. The vagina, Fallopian tubes, round and broad ligaments, the bladder, the rectum, various parts of the trunk, and, finally, the mammæ, are all more or less affected in structure or in development during the period of utero-gestation.

The *vagina* becomes shortened with the descent of the uterus in the earlier stages of pregnancy, and lengthened as the uterus subsequently arises above the superior strait. The veins of the vagina experience an enlargement somewhat corresponding, although less in extent, with the dilatation of the uterine veins; and these veins sometimes become varicose. Toward the end of pregnancy the finger will often encounter

these varicose enlargements, and certain nodosities described by French authors under the name of *thrombus*. On the superior portion of the vagina, and especially on the infra-vaginal part of the uterus, arterial pulsations may also be detected. This vaginal pulse has been considered an important diagnostic sign of pregnancy. The mucous membrane of the vagina also experiences an extraordinary development

Fig. 25.



POSITION OF THE UTERUS AT THE END OF PREGNANCY (AFTER MAYGRIER).

in pregnancy, analogous to the hypertrophy of the mucous lining membrane of the uterus. This is shown by the innumerable granules or enlargements of the mucous follicles, which about the seventh or eighth month are found covering the interior surface of the vagina, and which are also to be found upon the exterior and interior surface

of the cervix uteri. An increased mucous secretion accompanies this follicular development. This increased secretion of mucus is the normal condition in pregnancy, especially in its advanced stages; and it should never be suppressed by injections. In such cases even cold water injection does harm, since, from the suppression of these vaginal mucosities, the labor is rendered more lingering and severe; what is called dry labor may result.

The *Fallopian tubes* and *ovaries* are drawn nearer to the body of the uterus; the former, instead of being on a level with the fundus, now correspond to the upper fourth, or even to the middle, of the uterus. This results from the ascent of the womb above the pelvis, by which the folds of the peritoneum, called the broad ligaments, prolonged into the pelvic cavity to reach and support the uterus, are shortened and caused to disappear. The round ligaments are carried forward by the greater development of the anterior than of the posterior wall of the uterus, so that their insertions, instead of being at the sides of the womb, are now found at the point of union of the anterior fifth with the posterior four-fifths of the antero-posterior diameter.

The *bladder*, during the early months of pregnancy, is gradually pushed above the superior strait; the urethra is elongated, and its orifice concealed behind the border of the symphysis pubis. The anterior projection of the bladder renders the line of the urethra much more curved; so that its course will be more readily followed by the male catheter, with its convex surface backward and its concave surface forward, than with the nearly straight one ordinarily used for females. The gravid uterus rests down upon the posterior surface of the urethra, and by compressing it against the arch of the pubis often causes an obstruction in its circulation. This may be known by the tumor to be found in such cases behind the symphysis, and by the severe and painfully distressing tenesmus, and even strangury, which not unfrequently arise from such compression and irritation of the meatus urinarius.

In some of these cases the catheter is requisite in order to afford temporary relief, until, from quiet and rest in the horizontal position, the cause may be removed long enough to allow the irritation to subside or the proper medicines to be applied for its relief.

As pregnancy advances, and the bladder is gradually encroached and pressed upon by the increasing gravid uterus, it becomes more and more flattened, and its capacity for containing the urine is considerably lessened; hence the more frequent and more urgent calls to urinate.

The *rectum* is pressed upon in a similar manner posteriorly; hence, in part from the mechanical obstruction, there results the constipation so common in pregnancy. A similar obstruction of the blood-vessels and lymphatics in some cases tends to develop hemorrhoids and œdema of the vulva and of the lower extremities. These deviations, partaking of a pathological nature, will be more particularly considered, with the other morbid conditions of pregnancy, in a succeeding chapter.

The *relaxation* of the various pelvic symphyses, especially that of the pubes, which during pregnancy occurs in some peculiar constitutions, and which renders locomotion difficult, if not impossible, also results from a morbid condition subsequently to be considered.

The *abdomen* becomes very much enlarged as pregnancy advances, its parietes being thinned, and on the inferior portion often marked by broad or bluish streaks, which form parallel curved lines, with the convexity toward the pubes. On the median line, from the pubes to the umbilicus, may be observed a brownish streak, which in primiparæ has been deemed a certain sign of pregnancy; a similar dark-colored line has been seen, however, in non-gravid females and in males. After delivery an oblong tumor is sometimes seen on the median line, especially during any severe exertion. This results from the projection of the bowels where the abdominal parietes have been permanently thinned and weakened by the separation of the aponeurotic fibres. With each subsequent pregnancy this enlargement becomes greater, until, in some instances, it becomes necessary to bandage it.

The *thorax*, with the upward ascent of the large volume of the gravid uterus, experiences important changes. Its base is enlarged, the diaphragm is pressed upward and distended by the stomach and contents of the abdomen; sometimes the crowding together obstructs the circulation of the heart and great vessels, respiration is visibly affected in such cases, and sometimes the irritability of the distended diaphragm occasions a more or less constant cough.

The *mammæ*, both from original sympathy with the genital organs and in preparation for the performance of their own future function, exhibit remarkable changes during gestation, which may also become diagnostic of the pregnancy itself. These changes are of two kinds—those relating to increase in size, and those which affect the color of the areola surrounding the nipple. Very soon after the commencement of pregnancy in many women, the breasts become more full and somewhat tender; they have evidently assumed a more vigorous

physiological activity. This increase in the volume of the mammæ will sometimes diminish toward the fourth or fifth month, but to return again and become still greater toward the close of gestation. The nipples also become turgid and more prominent; the same increased activity already mentioned as apparent in the mammæ in general is particularly evident in the nipples; their erectile tissue becomes more permanently developed, as if in sympathy with the corresponding hypertrophy of the mucous coat of the uterus.

The areola around the nipples becomes much darker. And in the centre of the areola, immediately surrounding the base of the nipple, may be seen quite a number of minute glands, from which may be squeezed a serous, and in the advanced stages of pregnancy a serolactescent, liquid. These changes in the size of the nipples, in the color of the areola and in the development of the glandules make their appearance in the course of the third month.

About the same time with these, blue veins begin to make their appearance over the surface of the bosom, from which numerous branches are given off to the areola. In connection with these venous trunks may sometimes be seen certain shining silvery lines, *linea albicantes;* both the enlarged veins and the silvery streaks are more prominent in the breasts of primiparæ. The change of the areola from the delicate pink tinge of the virgin to a more or less darker shade in the first pregnancy remains permanent thereafter, the color becoming darker at the accession of each subsequent pregnancy. But a more particular statement of the changes in the structure and appearance of the mammæ will be given when we come to study them in the chapter on the Diagnosis of Pregnancy.

Generally speaking, these changes in the external form of the woman in pregnancy but partially disappear after parturition. Where the abdomen has been so greatly distended, certain folds or wrinkles will still remain as consequences. So the hernia-like protrusion of the bowels along the median line below the umbilicus, which has been mentioned as resulting from the separation of the fibres of the aponeurosis on that line, unless remedied by appropriate treatment, will tend to increase rather than to diminish. Neither does the discoloration of the areola ever entirely fade away; it always remains as evidence that pregnancy has existed; and yet not as of itself affording conclusive evidence, for this discoloration may be the result of uterine irritation in women who have never been *enceinte*, just as the breasts may enlarge from sympathy with enlargements of the uterus which are caused by the development of tumors or other morbid growths.

CHAPTER VIII.

THE DIAGNOSIS OF PREGNANCY.

THE determination of pregnancy at the earliest possible period forms one of the most frequent, difficult and important problems in the practice of medicine. The physician will often be called upon to decide this question where strong feelings are awakened and great interests are at stake of the most opposite character. "The honor, and therefore the happiness, of a female may depend upon his decision; the peace of families may rest upon it, and the inheritance of property be controlled by it." For some to be *enceinte* is the gratification of their highest hopes and most ardent desires; by others it is regarded as a most serious inconvenience—as something to be dreaded on account of health, or, in the unmarried, as threatening a disgraceful exposure of their want of chastity. All these different states of mind and various social relations must always be considered in estimating the value of evidence for or against a supposed pregnancy, since those earnestly desirous of children will naturally magnify every new sensation, while in some other cases there may be a disposition to suppress or overlook the signs of an actual pregnancy. "In all such cases the physician must remember that he may not merely be requested to investigate a case of doubtful pregnancy where no shame is involved, but that he may be consulted in cases where pregnancy is concealed by unmarried women, or by married women under certain circumstances, to avoid disgrace, and on the other hand, where it is pretended in order to secure an inheritance, to extort money or to delay punishment." And the very circumstances which tend to render the question more difficult to decide, at the same time seriously increase the responsibility attached to such decision. Hence, the physician can never be too cautious or too discreet in these matters, especially where the question relates to the unmarried; his acknowledging himself to have been mistaken will afford but a poor reparation for shocking the feelings and insulting the virtue of the pure-minded and the innocent. Such a blunder were worse than a crime, and its consequences might be irreparable as well for the physician himself as for his patient.

The signs of pregnancy may be divided into two classes—those earliest observed, which are called *rational* or *presumptive* signs, and those subsequently appreciable, which are termed *sensible* or *positive*

signs. From one or more of the first class a presumption of pregnancy may arise, and from all that the case affords in its early stage a rational conclusion may be drawn; but this is not positive knowledge: this can be derived from the positive or sensible signs alone, and of all these there is but a single one that is entirely incapable of being mistaken, and that is the beating of the fœtal heart. The signs of pregnancy increase in number and become accumulative in value as the case advances. Thus, the diagnosis which in the first instance had been possible pregnancy becomes presumptive, probable, and, finally, certain or demonstrable pregnancy. We will study, therefore, these signs as they arise in order of succession, proceeding from the rational to the sensible.

Rational Signs are derived from the circumstantial history of the case, from the related experience and sensations of the woman, and from our own observations of such changes as may appear. Among these may be classed the general effects observed in the female economy—such as greater rapidity of pulse and of respiration; greater activity of the circulation and secretions, especially those of the genital organs; greater sensibility of the nervous system. But from indications so general as these no rational inference can be drawn; they are only important when taken in connection with other more particular signs.

Suspension of the catamenia is generally the first indication which leads the woman in whom impregnation has been possible, to consider herself *enceinte*. But the importance of this symptom will very greatly depend upon the attendant circumstances: if the woman has been very regular, and if the cessation of the menses promptly occur after some particular sexual intercourse, the presumption of pregnancy will be very strong indeed. But if she has always been very irregular, the mere fact of the menses failing to make their appearance at a particular monthly period will carry with it but little weight. Where the entire absence of the menses for two or three months occurs from no other assignable cause, and where this suspension is attended with good health and appetite, and some perceptible increase in the size of the abdomen, the rational conclusion of pregnancy may be considered to be well founded. And yet even these circumstances are far from affording infallible evidences of pregnancy, since they have been known to arise in this combination from other causes. In newly-married women the catamenia are sometimes suspended from irritation of the sexual organs where no conception has taken place; and at the same time there may be an increase in the size of the

abdomen and in the sensibility of the breasts; so that even this very strong combination of symptoms cannot be positively relied upon.

The attendant circumstances must be borne in mind in other respects; for while conception may take place in women who have never apparently menstruated, so the catamenia may still continue even after conception and through all the months of utero-gestation. Cases have been recorded in which menstruation appeared only during pregnancy; but such cases are anomalous. Thus while the cessation of the menses, under favorable circumstances, becomes the first and one of the most important signs of pregnancy, it is by no means decisive, since on the one hand the catamenia may be suspended without pregnancy, and on the other pregnancy may occur without the suspension of the catamenia. The general rule will be all the more valuable, if we constantly bear in mind the possibility of the exceptions which, though far from being common, may occur in any given case.

Morning sickness forms in very many women the next sign of pregnancy. As its name indicates, it is a morbid symptom, but on that account none the less valuable as a diagnostic sign. It arises from sympathy of the cœliac or solar plexus with the organic nervous system of the uterus. This morbid irritability may commence immediately after conception, but it generally sets in about the fifth or sixth week, and ceases soon after the third month. It may become in individuals a positive indication of their being pregnant, since these persons learn by experience that these symptoms occur with certainty and regularity at a particular time after conception. Thus in different persons the presence or absence of morning sickness will have a very different diagnostic value. In those who have had it in former pregnancies, its non-appearance will be tolerably conclusive evidence against the existence of pregnancy; while in primiparæ its non-appearance would scarcely be considered worth noticing as an evidence that they were not *enceinte*. Still, where morning sickness makes its appearance persistently attended by suppression of the catamenia, and in circumstances where there is a liability to impregnation, it can scarcely be attributed to any other more probable cause than pregnancy. And this indication will be strengthened by the character of the sickness itself. The appetite improves and is good through the day, in spite of the nausea, vomiting of a peculiar watery fluid and sinking at the pit of the stomach, which occur and continue for a short time only on first rising in the morning. The sickness and the fluids vomited up are different from those accompanying any other disorder, such as gastric or bilious fevers, for example. While morn-

ing sickness, from its peculiar character, brief daily appearance, usual temporary continuance and final sudden and perhaps unexpected disappearance, becomes, where it occurs, a valuable indication of pregnancy, its absence is hardly to be regarded as a negative sign, as functional or organic disturbances of the uterus apart from pregnancy may occasion it, and it sometimes follows suppression of the monthly flux from other causes than conception. The morning sickness which exists during the earlier months of pregnancy is a physiological occurrence, whereas that which occurs during the latter months is due to mechanical causes.

Certain other *derangements of the digestive organs*, such as eructations, heartburn, remarkable longings for some particular article of food or other substances not used as food, and corresponding aversion to some one or more of the common varieties of food, which occur separately or in connection with morning sickness, or even subsequently to it, may also be regarded as among the rational signs of pregnancy.

The same may be said of *salivation*, which occurs in some women about the fourth or sixth week; in such cases the frequent spitting will be equally diagnostic whether the quantity be large or small. This salivation, differing from that which results from mercurial influences by the absence of the fetid breath, sore gums, and great prostration, becomes truly characteristic of pregnancy, just as the morning sickness above described does, by reason of its being a sympathetic rather than a primary and idiopathic affection. Spitting of "feathers" or "fippenny bits" is with some women a marked signal of the existence of pregnancy, and with such women is of course of greater diagnostic value than with others. There is in some cases an irresistible impulse to spit at any time and under any circumstances when pregnancy is advancing.

The *abdomen*, by its changes in size and form, affords some rational signs of pregnancy even in the early stages. The enlargement of the abdomen may indeed occur from many other causes; but no other cause can simulate the shape and manner of development of the enlargement of pregnancy. A careful study of all the successive appearances of the abdomen in pregnancy will therefore enable the practitioner to estimate at their proper value the changes which may present in any given case. Sometimes even in the first month the abdomen will seem larger than it does in the second, which arises from the co-operation of two distinct causes. First the abdomen seems larger because it is rendered tympanitic by the reflex influence

of the newly-begun pregnancy itself. After three or four weeks this tympanitic condition passes off, and the abdomen loses its apparent increase in size. In cases in which this tympanitic condition has disappeared, as well as in those in which it had not occurred, the abdomen becomes flattened. This flattening of the abdomen is usually attended with a drawing inward and downward of the umbilicus. These appearances, the very opposite to what might naturally be expected, are due to the sinking of the uterus a little lower down in the pelvis, as described in the preceding chapter. And in connection with these changes there may be more frequent calls to urinate. But after the second month the uterus begins to rise within the cavity of the pelvis, and the abdomen soon recovers from this depressed condition. About the third month the abdomen is seen to be visibly enlarged, and the enlargement steadily goes on till toward the close of pregnancy, the uterus still continuing to ascend within the pelvis. After the third, fourth or fourth and a half month, according to the capacity of the pelvis to give it room, it rises above the superior strait, either suddenly or gradually, according as it has been more or less impacted in the pelvis.

This rising out of the cavity of the pelvis into the abdominal cavity constitutes what is called *quickening*, and sometimes it occurs so suddenly as to quite alarm the mother. It was at one time erroneously supposed that no life was present in the fœtus till the occurrence of quickening, but it is now well known that at the very earliest moment of conception a living human soul is there. Motion probably takes place at a much earlier period than it is perceptible to the mother, but it is not usually sensibly recognized till the uterus has finally risen from the smaller into the larger or abdominal pelvis. Usually after the beginning of the third month the enlargement begins to show itself just above and behind the symphysis pubis, being always more considerable on the median line. After the commencement of the fourth month, if the woman be not too corpulent, by placing her upon her back with her thighs flexed upon the abdomen, the enlarged uterus can be felt like a half moon rising behind the symphysis pubis; and this ascent of the uterus goes on regularly, and usually at the rate of about two fingers' breadth per month, until within two weeks of the full term. But this enlargement is not always so regular in its development, since it may be varied by dropsical accumulations, multiple pregnancies, a greater or less projection of the spinal column, breadth of the pelvis or other individual peculiarities.

An important means of distinguishing the enlargement of the abdo-

men which results from pregnancy from that caused by dropsies, tumors or other morbid conditions, will be found in observing the manner in which this enlargement is developed, very nearly *on the median line* and always proceeding *from below upward.* Just above the symphysis pubis the tumefaction begins to show itself, at first being more considerable on the median line than elsewhere; the sides are flattened and the middle portion projects considerably. And the constant, steady and uniform enlargement of the abdomen, in the manner just described, and under favorable attendant circumstances as to health, appetite, etc., affords substantial ground for a conclusion in favor of the existence of pregnancy.

The *umbilicus* also affords some indications of value among the rational signs of pregnancy, since the changes which occur here are almost always present and can always be observed. During the first two months of pregnancy the depression of the umbilicus is greater than usual, owing to the descent of the uterus into the pelvis and to its dragging down the fundus of the bladder, by which tension is made upon the urachus. This umbilical depression continues and gradually increases during the continuance of the descent of the uterus, and during this period the woman may be seen to walk stooping, in order to relieve the dragging sensation experienced by this strain upon the umbilicus. This descent of the uterus upon the bladder occasions frequent micturition, and the dragging upon the urachus sometimes gives rise to a distressing pain at the umbilicus, which disappears, together with the too frequent urination, when the uterus commences its ascent. As soon as this sinking downward is arrested, and the uterus begins to rise again, the umbilicus is gradually restored to its normal condition. It next begins to lose its depression, growing decidedly superficial during the fifth and sixth months, becoming entirely flattened out in the seventh month and on a level with the surrounding integuments, and during the last two months the umbilicus really pouts or protrudes beyond the general surface of the abdomen. This course of changes in the umbilicus during pregnancy is the general rule; there may be some deviations, but usually the phenomena afforded by the umbilicus are regular and of great value. Tumors or ascites may cause appearances somewhat similar, but these do not arise in the same regular order of time. When the three successive and well-defined stages of umbilical depression, restoration and projection occur as above described, they constitute a rational sign of pregnancy very easily observed and of very great value.

The *mammæ,* about two months after conception, begin to afford

indications of much value. Although from various causes some of these indications, except in primiparous women, are less reliable in the early stages than many others, still, taken in connection with other signs, they cannot but have some weight. As described by Tyler Smith, these indications consist in a certain sense of fullness and weight and shooting pains in the breast; subsequently the circulation becomes more active, and there is an actual increase of volume; the gland becomes hard, knotty and tender to the touch, and large blue veins may be seen meandering over its surface just beneath the integument. About the end of the second month the nipple swells, becomes more erectile, sensitive and projecting; its color is also deeper. The surrounding skin assumes an emphysematous appearance, and becomes also a little darker. By the end of the fourth month a dark-brown areola is seen to surround the nipple in every direction, at a distance of three-quarters of an inch from its base. In blondes, or in feeble, delicate women, this appearance is not so well marked as in those who have black hair and eyes and in brunettes. "As pregnancy advances, especially if it be a first pregnancy, the deposit of pigment in the areolæ increases, the areolæ themselves become moister, and the follicles studding their surface are prominent, distended and bedewed with transuded fluid. These follicles or little glandules which appear near the base of the nipple within the areola attain an elevation of one or two lines above the surface of the skin. Each little gland has an excretory duct, and by pressing upon its base a little serous or sero-lactescent fluid is made to escape. In several instances I have seen this fluid flow in considerable quantities during lactation." Sometimes these glandules become very sore, when Calendula will effect a speedy cure. About the fifth month a sort of shadow of the first areola makes its appearance outside the first, very pale, although quite similar to the first; and outside of these again, somewhat later, or about the seventh month, are often seen dark veins running across the breasts in various directions. Minute streaks, glistening like silver threads, are also observed running near these darker vessels.

These appearances of the mammæ, occurring in regular order, particularly when taken in connection with other rational signs, afford almost conclusive evidence of the existence of pregnancy. But it should be borne in mind that the discoloration of the areolæ, from never entirely disappearing when it has once taken place, is of little value as a sign of pregnancy except in primiparæ, and also that both the enlargement of the mammæ and the discoloration of the areolæ

may be occasioned by distension of the uterus from other causes than pregnancy.

Quickening, where it can be distinctly recognized, becomes of course a conclusive evidence of pregnancy; but it cannot be thus positively determined except in those whose previous experience leads them to interpret aright the sensations which compose it. The term was originally applied to the supposed period at which the fœtus in utero first became possessed of the living principle, or was united to its physical soul, which "quickening" of the fœtus was believed to be the cause of the changes and unusual sensations experienced by the mother at that time; but not only is it true that from the moment of conception the embyro is "a living soul," but equally a fact that it may move within a few hours after the conception has taken place. It is curious to note how the advance in physical science is equaled by that in psychical knowledge—how physiology and psychology go hand in hand. Thirty years ago Davis wrote, in this connection, "It is now well known that the fœtus in utero possesses some of the most important attributes of life from the earliest pulsations of the first speck of organization called the punctum saliens."

By quickening, therefore, we merely understand those sensations which indicate the escape of the gravid uterus from the pelvic into the abdominal cavity. It is not the result, as formerly supposed, of movements of the fœtus itself, but rather of the intrusion of the uterus itself among the other organs of the abdomen, and perhaps of the removal of the pressure hitherto exerted by the uterus upon the large vessels in the pelvis. "The sudden intrusion of the volume of the uterus among the abdominal viscera, organs of high sensibility, accompanied by a sudden removal of pressure from the iliac vessels, is quite equal to the production of the sensation called quickening. The sensation is felt in the transit at the moment when the uterus, upon quitting its residence in the pelvis, enters the abdominal cavity." —Davis. This sensation, which occurs at various periods in various women, is to be distinguished from those arising from the actual movements of the fœtus in utero, which are only subsequently experienced. Quickening may occur as early as the tenth week, or it may not be observed till the sixteenth, the eighteenth or even the twentieth week; the average period is probably about the sixteenth week.

Changes in the Urine. Much valuable time and a great amount of labor have been spent in attempting to render the alterations of the urine useful as a rational sign of pregnancy; and while, for reasons subsequently to be stated, we attach even less importance to these

changes in the urine than do the Allopathic writers, we will briefly describe them, following principally the account given by the celebrated Dr. Elisha Kent Kane.*

These changes consist briefly in the formation of a gelatino-albuminous product in the urine of pregnant females subsequent to the first month of gestation, which is separated from the other elements of that fluid by rest alone, and to which is given the name of *Kiesteine.* This consists of certain globules held in suspension in the urine when secreted, and which rise to the surface and there form a pellicle which resembles in appearance the thin scum of fatty substance covering soup as it cools. When thick this pellicle is said to give off a strong cheesy odor. This pellicle usually makes its appearance upon the second day, or in the course of the third; though it is sometimes not observed till the urine has stood longer, even till the eighth day. The experiments of Dr. Kane and others prove that the Kiesteine is by no means peculiar to pregnancy, but that it has more especial relation to *lactation*, either prospective or actually present; since it makes its appearance either where the milk is but imperfectly withdrawn from the breasts, or in those cases in which, as in pregnancy, nature is preparing for the future function of lactation. Finally, Kiesteine cannot be regarded as an unerring diagnostic of pregnancy, since it may occur under other conditions of the system, and is not always observable where pregnancy actually exists; but its presence in the urine of an otherwise healthy woman is stated by Cazeaux to be an important rational sign.

It remains now to state why we attach little or no importance to this phenomenon as an indication of pregnancy in the homœopathic practice; and this is from the fact that those changes of the urine which ultimate in the formation of this peculiar pellicle, if not purely pathological, are at least but the consequences of the imperfectly performed physiological processes. These imperfections are also manifested in other more positive morbid symptoms, which being cured by appropriate homœopathic medication, the pellicle entirely fails to make its appearance. Still in cases of supposed pregnancy the experiment could easily be made as a matter of curiosity.

Sensible Signs.—The sensible signs of pregnancy are observed through the medium of the senses of touch and hearing. By the touch we examine the condition and position of the uterus and its relations to the adjacent parts, externally, through the vagina, and, if necessary, through the rectum. By auscultation we ascertain the

* See *American Journal of the Medical Sciences*, New Series, vol. iv., July, 1842.

probable existence of pregnancy from hearing the *bruit de souffle*, or bellows murmur, and, at a little later period, its positive existence by detecting the pulsations of the fœtal heart.

The term "*touch*" signifies the means whereby knowledge is obtained of the condition of the woman as to health or disease, or whether she be pregnant or otherwise—by vaginal or anal examination with the finger, or by external examination with the hand, called palpation. By vaginal touch we may be able to diagnose the stage of gestation, the stage of parturition, or whether the woman is in that state, the progress of labor, the presentation and position of the child; in fact all normal and abnormal conditions which have ultimated themselves in material products. In order to be able to use the touch with certainty and advantage, the finger must be educated to recognize all the normal conditions, then it will be able to readily detect disease or any important change in material or structural manifestations. The vaginal touch may be practiced with the woman standing, lying upon her back or upon either side.

If she be standing the physician should place himself toward her left and upon his right knee, his left hand upon her abdomen externally, and his right hand, the index finger being well lubricated with oil, should be carried under her clothes and directly between her limbs, —great care being taken not to touch her skin—the back of the hand upward, with all but the index finger closed. The index finger should be slightly flexed, and if carried directly between the limbs without shocking her by touching the skin, the back of the finger will come directly in contact with the hairy portion of the vulva; now press with a little firmness and straighten the finger and its point will pass directly into the vagina. Now drop the wrist and pass the finger upward and forward and it will exactly trace the canal of the vagina, and by rotating the hand on the wrist the interior cavity of the smaller pelvis can be explored and all the abnormities and deviations in that vicinity may be noted.

If the woman be lying upon her left side, with her thighs flexed upon her abdomen, which is the most usual position for the examination, the physician will sit at her back and use his right hand. In this case also the thumb and all the fingers should be closed except the index, which should be well lubricated and slightly curved, as before directed. The hand should be carried to the parts with great care to avoid touching the bare skin unnecessarily. As the back of the finger comes in contact with the vulva, press firmly though carefully, straighten the finger and its point at once enters the vagina.

Let the finger now be carried backward and upward and the canal of the vagina will be traced, and by rotating the hand as before, all parts of the canal can be well examined. If the patient be lying upon her *right side*, the physician will seat himself at her back as before, but will touch with the finger of the *left hand*. Anointing the finger with lard or oil not only facilitates its introduction into the vagina, but serves to protect it from any disease that the woman may have.

The physician should accustom himself to examine with both hands; since it may be necessary sometimes to use the left hand from the peculiar condition of the patient herself, or from experiencing a temporary injury to his right. In like manner it may be desirable to examine both in the erect and in the horizontal position. In the earlier months the recumbent position, with the extremities flexed and separated, will give a greater degree of relaxation of the abdominal muscles and render the uterus more completely accessible. In the standing position, *ballottement* may be more readily accomplished. But in all doubtful or difficult cases, the woman should be examined in both positions. When about to be examined standing, the patient should be placed with her back against the wall, a chair should be placed at each side to support her hands, and the upper part of her body should be a little bent over and forward.

When it becomes necessary to make an examination *per vaginam*, all the parts of the perineum, vulva, vagina and cavity of the pelvis should be carefully explored, in order to detect any existing abnormities or diagnostic indications. If the patient be a supposed primipara, the condition of the vagina as constricted and presenting the evidences of increased activity of the circulation will be carefully noted.

The position and direction of the os uteri will then be ascertained. If in the early weeks of pregnancy, the uterus may be found somewhat settled down in the pelvis, and the os looking toward the hollow of the sacrum. Or the supposed greater advance in the pregnancy will prepare him to find the uterus in its usual position when unimpregnated, or still higher, above the superior strait. Thus, on the one hand, the indications given by the rational signs will be either confirmed or invalidated by these sensible evidences; and on the other, the rational signs and history of the case will direct the physical exploration. The impregnated uterus is heavier than in the ordinary state; and its lower segment, at about the third month, will be found so distended as to occupy nearly the whole cavity of the lesser pelvis.

Its mobility is very slight; when, if unimpregnated, it would be very movable in every direction and much easier to raise on the point of the finger.

One of the surest of the sensible signs of pregnancy at this stage consists in the softening of the extreme point of the neck. The sensation is that of a sort of velvety softness, only deeper, beyond which may be felt a certain hardness, as of a board. No other state than pregnancy can either produce or simulate this feeling of softness. And this softening, as well as a corresponding dilatability of the neck, increases from below upward, from month to month, in almost exact proportion to the development of the pregnancy.

Palpation is a means of obtaining knowledge of the condition of the womb by placing the hands upon the abdomen externally; and this method is much pleasanter to the woman than the former, although not so satisfactory. If the abdominal integuments are not too thick and fleshy, by placing the patient upon her back, with her head raised and her thighs flexed, and pressing the points of the fingers gently downward and backward above the pubes, a hard, round tumor will be found on the median line rising out of the pelvis. This can be felt as early as the third month, if the walls of the abdomen are not too thick. In two or four weeks later the increase is much more strongly marked and the true state of the case more certainly announced. We must bear in mind that, as pregnancy advances, the tumor loses more and more of its hardness and becomes more and more elastic, like a cyst filled with water.

Percussion is also useful in deciding as to the existence of pregnancy. In such cases the uterine tumor will invariably afford a dull sound, unless a mass of intestines should intervene, while all around may be distinguished the usual clear abdominal resonance. But, in pursuing this method of examination, care must be taken not to confuse all the indications by percussing over a full bladder. Tumors of the abdomen or womb would also give a similar dullness on percussion; but such tumors are irregular as to the time of their development.

In doubtful cases, where decided enlargement of the abdomen is present, the exploration per vaginam becomes of very great importance, since the softening of the os uteri and even of the lower end of the neck does not occur from any other cause than pregnancy. By the end of the sixth week this softening can be detected, like a piece of velvet drawn over a table. But where tumors occur in the abdominal cavity, unconnected with pregnancy, they may be more easily detected by simultaneous palpation and vaginal touch. This

is accomplished with the finger applied to the cervix uteri, and the other hand placed upon the abdomen externally, in order to find the fundus uteri. The finger may be brought in direct apposition with the lower portion of the uterus, while the other hand presses down its upper portion, so that, with the exception of the abdominal walls, nothing but the uterus itself intervenes between the two hands. In this manner a judgment may be formed as to the size of the organ, as well as of its relations to the surrounding parts. And thus, any tumor which may have occasioned the abdominal enlargement may be distinguished from the uterus. If unconnected with this organ, the tumor will remain stationary when the uterus is moved; if it is attached to the uterus, moving the latter will, of course, be attended with corresponding movement of the former. And, in addition to any other tumor in the pelvis or rising above it, the actual size of the womb will also be ascertained, since the presence of any adventitious growth in the pelvis, whether connected with the uterus or not, by no means precludes the possibility of pregnancy also. The greatest caution should be observed, as well in making the examination as in giving a final opinion. It is not many years since the profession, in a certain city in New England, were greatly amused at the *denouement* of a case of uterine tumor in the wife of a well-known practitioner. The poor woman, who had sons grown up, and was supposed to have passed the change of life, during a course of several months endured all the severities of the most orthodox allopathic treatment at the hands of her anxious husband, assisted by a much older and more eminent practitioner than himself, in which injections of solution of nitrate of silver and large and frequent doses of the most powerful drugs performed an active part. The case advanced in spite of the treatment; and, the symptoms becoming more urgent, a third physician was called in consultation, who presently relieved the patient from her dangerous condition by delivering her of a full-grown child, which had finally succumbed to the *tours de force* of the latest injections. The patient had had no other disease than this tumor (pregnancy); but it required many months for her to recover from the effects of the protracted treatment she had undergone.*

During the first three or four months it is a difficult matter to determine the existence of pregnancy; up to this time the most certain

* This statement is simple fact; the circumstances were well known at the time to the public, as well as to the profession, and are by no means forgotten now. The account is given here simply to show how men of the largest experience may not only be mistaken, but remain so.

sign is the unmistakable softening of the cervix or os tincæ. By taking into consideration, together, all the rational and sensible signs and the time of their appearance, we may in most cases be able to announce pretty confidently the existence of pregnancy by the third or fourth month, but not with absolute certainty. On the other hand, from being able to ascertain that the uterus still retains its natural size we can with much more positiveness determine that pregnancy does not exist in a given case. The uterus may, indeed, be enlarged or distended by some other cause than pregnancy; but if it is not found enlarged at what should be the third month, we may be sure there is no pregnancy.

During the last five months the active and passive movements of the child reveal the fact of pregnancy with sufficient certainty. The *active movements* are felt by the woman at about four and a half months, sometimes earlier. In accordance with the strength of the child they are at first very slight and uncertain. We can easily imagine how delicate must be the sensations experienced by the woman from the motions of a fœtus of four months, and trace them to the bounding and springing of a viable child of eight or nine months. It might be imagined that these sensations experienced by the mother would be quite infallible as indications of pregnancy. But other sensations, the result even of morbid changes in the abdomen, have been mistaken by women for those occasioned by a fœtus in utero. Instances are given by writers in which the sensations produced by an incipient dropsy, in connection with the enlargement of the abdomen from the same cause, have been mistaken in this manner, to the serious disappointment of all concerned. But the physician is not liable to such misinterpretation of sensations. By placing his open hand upon the abdomen the motions of the child may easily be perceived if the woman be pregnant, and these movements are unmistakable, since no pathological conditions can simulate them, although cases are recorded in which fœtal movements were simulated by persons who had acquired complete control over the abdominal muscles. When from the inactivity of the child it becomes desirable to provoke its movement, this may be done by placing one hand upon one side of the abdomen and with the other hand gently striking the opposite side; the child will move quickly as if to get out of the way. By some women the motions of the fœtus are felt about the end of the third month, usually at about four months and a half. Some are conscious of these movements only after six, seven, or eight months, and some do not experience them at all. This, which is owing to the

great passiveness of the child, is particularly apparent in women of an inactive, sluggish temperament. After the motions have been distinctly recognized for some days, if they then evidently become weaker and weaker, or entirely fail, the physician should at once understand that there is danger. All the mother's symptoms should be at once sought out, for some condition threatens the destruction of the life of the child. The proper remedy will remove this abnormal condition of the mother and restore the motions of the child. In plethoric women *aconite* will often do this, but we must be guided here, as elsewhere, by the symptoms.

The *passive movement*, or *ballottement*, is obtained by the manipulations of the examiner. The fœtus swimming in the amniotic fluid is nearly of the same specific gravity; being a little heavier, it just swims in the fluid, touching the lower internal surface of the amnion at intervals. Consequently, if we suddenly press upon the most dependent portion of the uterus, and then retain the finger steadily at that point, the fœtus, having been forced to rise in the fluid by the sudden pressure, will soon return, and its weight will be felt as it again strikes the finger of the operator. The proper method of performing this operation by the vaginal touch is to place the woman either in the sitting or the erect posture, then with the finger upon the wall of the uterus, either in front or behind the cervix, curve the finger suddenly upward and forward, hold it there for a moment, when the fœtus, having been displaced and made to rise in the fluid, will rebound and impinge upon the finger which displaced it. There results an unmistakable downward shock, and a sensation upon the finger which no other condition of the woman can possibly produce. The same experiment with a stone in the bladder might seem to simulate this, but the sharp, strong blow which would be given by a stone would convey a very different impression from that of the gentle, momentary touch of the fœtus rebounding in the amniotic fluid.

The accoucheur should be careful, in the effort to detect ballottement, to press from *below upward*, and at the same time from *behind forward*. Pressure simply from below upward may not be sufficient to cause the desired momentary ascent of the fœtus, and the experiment may therefore fail. The force exerted upon the floating fœtus in utero should be in the direction, as nearly as possible, of the axis of the uterine cavity.

The same *ballottement* sensation may also be obtained by placing the woman upon her side, with the palmar surface of all the fingers applied to the most dependent part of the abdomen, forcibly flex them against

the abdomen and hold them there; the fœtus, thus suddenly displaced, will rebound from the upper side of the uterine cavity, where its movement may be felt against the other hand there applied, and settle down again upon the fingers with a certain gentle, subdued, unmistakable shock. The most favorable time for obtaining this sign of pregnancy is at any time after the period of quickening and before the first of the ninth month, for then the child becomes too large to be easily displaced or to descend upon the finger. At six months and a half or seven months is the most satisfactory time for making this diagnostic experiment.

Where, from the presence of the hymen or the partial obliteration of the vagina, the examination per vaginam is inexpedient or impossible, it may be made through the rectum. But the unpleasantness of the operation to the physician, as well as to the woman herself, would prevent resort to the rectal examination, except in cases where no other method was available, or where there existed an urgent necessity for a positively correct diagnosis, and the conjunction of all other means failed to afford a satisfactory result.

Auscultation as applied to pregnancy consists in listening for the beating of the fœtal heart. If the stethoscope be applied to the abdomen with care at any time after the period of quickening, the heart of the fœtus may be heard to beat nearly twice as fast as that of the mother, with a sound faint indeed, and muffled, but still unmistakable. These pulsations generally become perceptible in the course of the fourth or fifth month, and they range from one hundred and thirty to one hundred and sixty per minute. They are sometimes faster and sometimes slower without any assignable cause, apparently not in the least influenced by the changes in the pulse of the mother. The fœtal pulsations will be most distinctly perceptible in that region of the abdomen which corresponds to the dorsal surface of the fœtus. They are more frequently heard over the left iliac fossa than over the right, less frequently on the median line above the symphysis pubis. There is always a point over which these sounds are most distinct, and they diminish in intensity as we recede from this point. In their intensity these pulsations vary with the age of the fœtus, increasing in strength usually up to the full term. But the number of the pulsations is very much the same from the period of their being first distinguished up to the full term, except in some anomalous cases. When in the progress of labor the membranes are ruptured, the escape of the liquor amnii, by bringing the ear still nearer the fœtus, renders the beating of the heart more distinct. The pulsations be-

come less regular as the labor advances, and they are more slow and feeble during the contractions. Hence it becomes evident that the health of the child must always be more or less seriously compromised during difficult and protracted labors.

When the dorsal surface of the fœtus is toward the abdomen of the mother, the pulsations are more distinctly heard; but after the sixth month they may be heard in any position of the fœtus.

There are two distinct sounds observable in the beating of the fœtal heart, corresponding to those of the adult heart—a first and a second sound, of which the first is more distinct. In those cases where at first but a single sound is heard, the other may often be distinguished by examining in some different position.

As a sign of pregnancy the *beating of the fœtal heart* is conclusive, since no other conditions can produce a similar sound.

Aneurisms or other abnormal pulsations of the mother must be synchronous with the pulse at the wrist, which is never the case with the pulsations of the fœtal heart.

Double or twin pregnancies may be detected by hearing the pulsations of the fœtal heart at two distinct parts of the abdomen, the sound becoming more and more distinct as you approach each part; while at the same time there is a perceptible want of harmony between the two sounds. Still, the apparent absence of the sounds of two hearts does not preclude the possibility of a twin pregnancy, since one fœtus may be so directly behind the other as to mask its sounds.

The position of the fœtus in the uterus can be determined to a limited extent only by auscultation. The pulsations heard most distinctly on the left of the median line, low down, just above the horizontal ramus of the pubis, indicate the first position. When they are heard in the same situation on the right side, they indicate the second position. The sounds being heard on either side on a level with or even above the umbilicus indicate a breech presentation. If there be any truth at all in the statement that Pulsatilla, by reason of its action upon the muscular fibres of the uterus, can produce a change in the position of the fœtus from an unfavorable to a favorable one, then the ascertaining of the position of the fœtus by means of the stethescope becomes a matter of moment in all cases of pregnancy, as touching the welfare of both mother and child during parturition.

A careful study of the sounds of the fœtal heart, both during the continuance of utero-gestation and at its period in labor, enables us to determine the health of the child. Thus, after the sixth month, when we have had sufficient evidence of the existence of pregnancy,

the absence of the sound produced by the pulsations of the fœtal heart, ascertained by repeated examinations made at different times, will prove the death of the fœtus. And during labor, if after the rupture of the membranes the pulsations of the fœtal heart become irregular, more and more feeble and more and more rapid, with irregularity of rhythm, absence of the second stroke, complete cessation of the beats during the pains and slowness of their return after these have ceased, the life of the child is evidently threatened by further delay, and the labor should be terminated as promptly as possible. Still, it should be remembered that just in proportion as from auscultation we have reason to conclude that the child is no longer living or viable, we should give our principal attention to the mother and govern our conduct by indications derived from her condition. For in many cases of protracted labor, in which the pulsations can still be distinguished at the moment of birth, the child has already suffered so much that respiration cannot be established. While the positive evidence of the death of the fœtus *in utero* which may be afforded by auscultation, leaves us at liberty to resort to craniotomy under circumstances in which it might not be justifiable if the child were still living.

The *bellows murmur*, *bruit de souffle*, although capable of being distinguished before any of the other intra-uterine sounds, before the beating of the fœtal heart can be heard, is here mentioned in the second place, since it possesses little or no diagnostic value. This sound may generally be heard as soon as the uterus has risen out of the pelvic cavity—that is, a little earlier than the sound of the fœtal heart can be made out. From the supposition that it was produced in the utero-placental circulation, it has been called the *placental murmur*. From being supposed by others to be produced by pressure of the developed uterus upon the iliac arteries and aorta, in the posterior plane of the abdomen, it has been termed the *abdominal souffle*. From being supposed to originate in the enlarged vessels which ramify in the walls of the uterus, it has received from others the name of *uterine souffle*. The fact that this sound has been distinctly heard for a short time after delivery is conclusive against the placental theory. The double fact that this sound is heard as distinctly in the same position, when the pressure of the gravid uterus must be supposed to be removed from the posterior abdominal arteries, and that it disappears under pressure made upon the anterior of the uterus directly toward the spine, proves no less conclusively that it is not caused by obstruction of or pressure upon the iliacs and the aorta. There remains only the hypothesis of the uterine sinuses; and here the following circumstances

may be considered as decisive of the question: the *bruit* is heard in the earlier part of the second moiety of utero-gestation, nearer the pubes, and it gradually ascends with the upward advance of the uterus; it is most distinctly heard in that portion of the uterus where its vessels are largest; and finally it may be heard through an instrument (the metroscope of M. Nauche) applied to the cervix uteri, when it cannot be distinguished by the ordinary abdominal examination.

The *bruit de souffle*, uterine murmur, then, is produced in the walls of the uterus itself and is synchronous with the radial pulse. It can be heard in chlorotic women in whom no pregnancy exists, in cases of fibrous tumor and vascular tumor of the uterus, and in males. As a sign of pregnancy its value is very differently estimated by different authors, some giving it much more importance than others do. It can only serve to render probable the existence of pregnancy, since it may exist independently of pregnancy and does not always accompany it. No proof of the life or death or position of the child can be obtained from the uterine murmur, nor whether the uterus contains one or more than one fœtus. Where we are certain the woman has no disease, the *bruit de souffle* becomes of some importance as a sign of pregnancy.

In auscultating the abdomen for the purpose of discovering the signs of pregnancy, it should be remembered that the uterine murmur may be first distinguished at about the fourth or fifth month, or at whatever time the uterus rises out of the pelvic cavity, and that the beating of the fœtal heart may be discerned in the course of the fifth month, so that in most cases the examiner may expect to meet with both classes of sounds. The *bruit de souffle*, coming first in order of time, may serve to render pregnancy probable, while the clearly distinguished beating of the fœtal heart not only renders absolutely certain the presence of a living fœtus, but affords some indications as to its position in the womb and its healthy condition.

Auscultation in the earlier months of pregnancy can only be accomplished by placing the woman upon her back; later she may lie on her side, sit, or be examined standing. It is always best to use the stethoscope, which should be placed at once, first on the left side, low down, then in the same region on the right side if necessary. Thus by applying directly to the place where the pulsations are most usually to be found, we escape annoying the woman by searching at random. It is important for the physician to avoid stooping too much, which in many cases will cause such a pressure of blood in his head as to prevent him from hearing at all. By using the stethoscope the exam-

iner will avoid all danger of confusing the uterine sounds by the friction of his ear upon the abdomen, and at the same time relieve his patient from the close personal contact which to many women is a very serious annoyance. In cases in which the mother has already recognized the fœtal movements, the stethoscope should be applied exactly opposite to the side where these are most distinctly felt. For the upper and lower extremities of the fœtus which cause the "motions" being folded upon the abdomen, and the pulsations of the fœtal heart being most distinctly perceived from the back, it will be evident that if the motions are felt in the left side of the abdomen of the mother, the sounds of the fœtal heart will be plainest on the right side, and vice versa. Before the fifth month, however, the pulsations are usually most plainly discernible on the median line, from the pubes to the umbilicus.

In addition to the uterine murmur, or *uterine souffle*, as it is more properly termed, and the beating of the fœtal heart, certain "sounds of the displacement of the fœtus" have been distinguished by auscultation, and at a period even prior to the uterine murmur. These sounds consist of shocks, sometimes quick, like a light tap, and at other times more like a heavy plunge, and there are also friction-sounds which are evidently produced by the gliding of the surface of the fœtus over the inner surface of the uterus. Some have even believed they could distinguish the pulsations over the funis itself—in cases where the parietes of the abdomen were extremely thin. But both these classes of sounds, while they possess at the least very little of practical diagnostic value, require for their successful discovery more protracted opportunities for auscultating the particular case, and greater skill and more extended experience in auscultation in general, than usually fall to the lot of the young physician, at least in private practice.

Statement of the Principal Signs in Pregnancy,

Showing the time and order of their appearance; condensed from Cazeaux.

First and Second Months.—Suppression of the menses, usually from the first of conception, some exceptions, which however are less numerous in the later months. *Morning sickness, nausea and vomiting*, and other gastric disturbances, sometimes flattening of the hypogastric region, depression of the umbilical ring. Enlargement and tenderness of the breasts, increase in the size of the uterus. It slightly descends and becomes less movable.

Third and Fourth Months.—Toward the close of the third

month the fundus uteri rises to the level of the superior strait. About the end of the fourth month it reaches midway in the space between the umbilicus and the pubes. *Vomiting* and other gastric derangements. A small protuberance in the hypogastric region. By abdominal palpation a round tumor may be detected of the size of a child's head. Less depression of the umbilical cicatrix. Increased enlargement of the breasts; the nipple appears more prominent and the areola slightly discolored, especially in primiparæ. In the fourth month the cervix uteri appears elevated and directed backward and to the left side. The orifice of the os tincæ is more softened; in multiparæ it is patulous, admitting the finger; in primiparæ it is closed and rounded. *Kiesteine* in the urine.

Fifth and Sixth Months.—Toward the close of the fifth month the fundus uteri is one finger's breadth below the umbilicus, and the same distance above at the end of the sixth month. The gastric disturbances generally disappear. The sensation of "quickening" may be experienced about the sixteenth or eighteenth week—that is, about the beginning or middle of the fifth month. Then the movements of the fœtus itself begin to be noticed. The abdomen becomes still more enlarged. The umbilical depression is nearly effaced. The uterine murmur may be heard, and soon after the beating of the fœtal heart may be distinguished. Ballottement may be detected. The discoloration of the areola becomes deeper. Kiesteine in the urine. The inferior half of the intra-vaginal portions of the cervix uteri is softened. In multiparæ the finger can penetrate the cavity of the neck, which in primiparæ remains closed at its orifice, though softened.

Seventh and Eighth Months.—Increased size of the abdomen. The fundus uteri is four fingers' breadth above the umbilicus at the seventh month, and five or six at the eighth. Dilatation of the umbilical ring, pouting of the navel. The movements of the fœtus are more sensibly felt. The sounds of the fœtal heart are more clearly distinguished. Ballottement, which is easily detected in the seventh month, becomes somewhat more obscure in the eighth. The softening of the cervix uteri extends above the vaginal insertion; in primiparæ the cervix is ovoid and shortening; in multiparæ it is conoidal, and so patulous as to admit the whole of the first phalanx of the finger, while at the upper portion of the neck it still remains closed. The mammary areolæ become darker. The breasts become more fully developed, and there is a show of milk. Kiesteine still appears in the urine.

Ninth Month.—*First Fortnight.*—The fundus uteri reaches the

epigastric region and (on the right side) presses the inferior margin of the false ribs. Difficulty of respiration. The abdomen is still more enlarged, the skin is stretched and very tense. The fœtal movements are active. The sounds of the fœtal heart are heard. In primiparæ the cervix is softened and its external orifice slightly opened. In multiparæ the finger may penetrate its entire cavity to the os internum, which remains closed. Ballottement indistinct.

Second Fortnight.—The fundus uteri sinks down a little, in consequence of the body and neck becoming one and constituting the uterus one rotund cavity. Vomiting is less troublesome and the respiration easier. Walking becomes difficult. Frequent and sometimes ineffectual efforts to urinate. In multiparæ the internal orifice is dilated, and the finger may reach the naked membranes. In primiparæ the entire cervix is expanded, the os externum remaining closed. Hemorrhoids, varices and œdema of the lower limbs, and even of the vulva.

CHAPTER IX.

DEVELOPMENT OF THE OVUM.

The Unimpregnated Ovum.

THE ovary is principally composed of Graafian vesicles or follicles imbedded in areolar tissue and abundantly supplied with blood-vessels. Each vesicle contains a single ovule and consists of two membranes, the outer of which is in contact with the stroma of the ovary, while the inner tunic, or *membrana granulosa*, forms the immediate covering of the ovule and of the liquid in which it floats. For the ovule occupies but a very small part of the cavity of the Graafian vesicle, the remainder being filled with albuminous fluid, granules and oil globules, which, from their greater gravity, support the ovule upon its surface near the upper portion of the vesicle. Here the ovule comes in close relation with the inner surface of the membrana granulosa, and at this point there is found collected upon the ovule a zone of granules called the *discus proligerus*.

The *ovule* is composed externally of an envelope, the *vitelline membrane*, sometimes called the zona pellucida, which after fecundation is known as the chorion; internally the ovule is composed of the *vitellus*, or yolk, a spherical, semi-solid mass, or granular, organized liquid.

The ovule is very small, measuring from the two hundred and fortieth to the one hundred and twentieth of an inch in diameter.

Within the vitellus, and situated almost immediately beneath the vitelline membrane, is found a clear, colorless, transparent vesicle of a rounded form, called the *germinal vesicle*. This may measure from the eight-hundredth to the five-hundredth part of an inch in diameter. Whether this vesicle is developed from the ovisac or exists before the ovisac is formed is a point not yet decided.

Upon the surface of the germinal vesicle may be seen a dark spot, like a nucleus, called the *germinal spot*. While the rest of the contents of the vesicle is transparent, this is opaque; and its diameter may be stated to be not more than the two-hundredth or three-hundredth part of a line.*

Such is a succinct description of the human ovum in its unimpregnated condition. But if we examine the same ovum some three weeks after it has become fecundated, we shall find it so wonderfully changed that, were it not for the fact that all the various steps and stages of this remarkable transformation may be traced in the development of the ova of fishes, of birds and of the lower orders of the mammalia, we might entirely fail of being able to recognize and prove the identity of the one with the other. In fact, as the human ovum corresponds with that of the chick, ovology may be conveniently studied comparatively. By carefully breaking the egg of a chicken, it will be found that there exists a delicate transparent membrane which contains the fluid parts of the egg, and which constitutes the vitelline membrane, while the yellow portion or yolk is the vitellus. Upon this may be observed a whitish vesicle—the germinal vesicle; and in the centre of this the dark germinal spot. The albuminous fluid surrounding the vitellus or yolk is similar in quality, though greater in quantity, to that found in the human ovum. The external tunic becomes the *chorion*, whose cellular surface is extended into a number of villous prolongations, which form the channel through which the embryo is nourished by the fluids of the parent, until a more perfect communication is subsequently formed. The internal tunic, above described as the membrana granulosa, becomes separate and distinct from the outer one, and is called the amnion. Between these two membranes now intervenes some considerable space, which is occupied by an albuminous liquid, in the midst of which is situated the umbilical vesicle.

* For a more complete elucidation of this interesting subject, see Dr. Arthur Farre's article on the "Uterus and its Appendages," and Dr. Allen Thomson's article on the "Ovum," in Vol. v., *Cyclopædia of Anatomy and Physiology*.

Within the amnion is found another fluid, the *liquor amnii*, in which is supported the ovum. In the ovule itself the germinal vesicle disappears, and a new cell, the embryo cell, arises in its place. And finally, the entire ovum, with its external covering, is enveloped by a double covering, the *deciduous membrane*, which is developed and reflected from the inner surface of the uterus.

The manner of the escape of the unimpregnated ovule from the ovary has already been described, on page 73 of this work, to which reference is now to be made. The description of the manner in which impregnation is effected will be found on page 80 *et seq.*, which see. The changes which occur in the uterus immediately after conception, and the attendant condition of the ovary and Fallopian tubes, have been recounted on pages 86 and 87; these should be carefully reviewed. It remains now to describe the changes that occur in the ovum from the first possible moment of observation after impregnation, to the full development of the new being at the period just preceding parturition.

No change has ever yet been observed immediately after fecundation, until the escape of the ovule from the ovary into the abdominal extremity of the Fallopian tube. No ovule has yet been observed in the Fallopian tube still presenting either the germinal vesicle or the germinal spot. At what time exactly these features of the ovule become transformed has not yet transpired. But it is certain that the ovule, either while still remaining in the ovary or on its way out from it, gradually loses both the germinal vesicle and the germinal spot. It may be possible that the spot disappears first, the vesicle subsequently; and it is certain that the space occupied by them becomes filled with granules. This single circumstance alone is sufficient to prove that conception must take place before the ovule enters the Fallopian tube, and that the ovules that have just caused the menstruation cannot be the same that are impregnated. The same circumstance also proves that there is one ovule for menstruation and another for conception.

The only change observable in the ovum during its passage through the first half of the Fallopian tube is the thickening of the vitelline membrane. During the passage of the ovum through the second portion of the tube, the vitellus evidently becomes more consolidated; and in concurrence with this change a thin white fluid escapes, entirely surrounds the vitellus, and fills the interval between the vitelline membrane and the vitellus, occasioned by the condensation of the latter.

Other and very remarkable changes take place in the ovule as it

descends through the second portion of the Fallopian tube. One of the more remarkable of these constitutes what is termed the *segmentation of the vitellus,* which, with its immediate consequences, may be thus described. The vitelline membrane continues to thicken, and the vitellus becomes divided into two distinct spheres, each of which

Fig. 26.

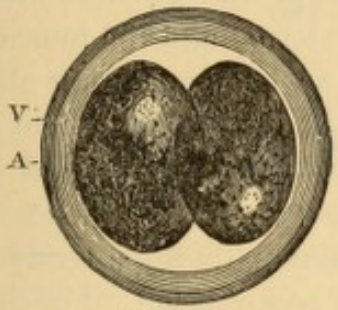
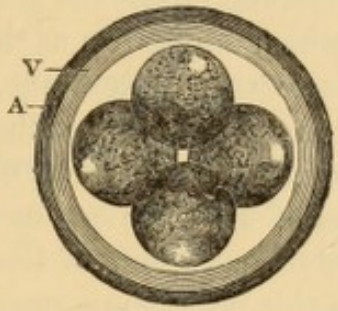
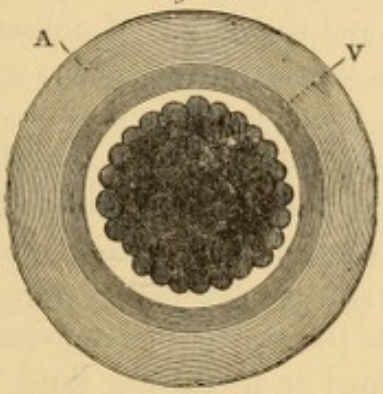


Fig. 27.



A, the layer of albumen; V, the vitelline membrane.

Fig. 28.



THE FECUNDATED OVUM AT A MORE ADVANCED STAGE.

A, the albuminous layer surrounding the vitelline membrane V, which is seen to be thickened, and to contain within its cavity the mulberry-like mass.

is again divided into two others; these again into others, and so on, during the whole course of the descent into the uterus, each minute sphere dividing and subdividing until the ovum reaches the uterine cavity. The vitellus is thus completely dissipated, and what in the first instance was its exterior surface comes to resemble a mulberry-seed in its appearance; while its cavity or interior is filled with a liquid containing an infinite number of minute granules. (This process of *segmentation* is illustrated in Figs. 26, 27 and 28.)

These are termed *vitelline spheres;* they have a somewhat firmer consistency than the original substance of the vitellus, and this consistency appears to increase as they successively multiply in number and diminish in size. At last they become so abundant as to be closely crowded together, compressed into polygonal forms and flattened

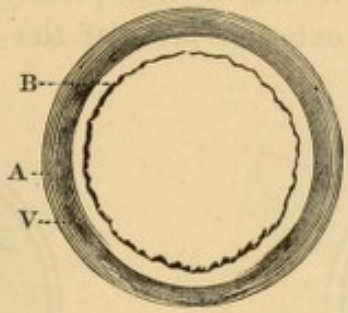
against the internal surface of the vitelline membrane. They have by this time become converted into true animal cells, which, adhering together by their adjacent edges, form a continuous organized membrane, called the *blastodermic membrane*. This constitutes the germ-mass, or plastic material, out of which the entire organization of the fœtus is gradually evolved.

This blastodermic membrane is subsequently divisible into two distinct layers, which are known as the external and the internal layers; and as the blastodermic membrane, as a whole, represents all the fœtal organization in its totality, so these two layers represent the commencement of all the particular organs of the fœtus, and the subsequent division of all these organs into two distinct classes—those of the vegetative life and those of the animal life respectively—finds its foundation in this pre-organic stage of organization. For the internal layer of the blastodermic membrane produces the intestinal canal and all the organs of vegetative life; while the external layer is developed into the spinal column and the organs of animal life.

As nearly as can be determined, the time occupied by the human ovum in traversing the Fallopian tube is twelve days, and the movement is always much more rapid in the first than in the second half of its descent, when the nearer it approaches the uterus the slower it moves, probably on account of the increasing narrowness of the tube. The ovum is known to enlarge decidedly during its continuance in the tube, during which time the product of conception must be nourished by the granules contained in its interior fluid. When the ovum approaches the uterine cavity, we find in it simply the vitelline membrane much thickened and surrounded by a dense layer of albumen which it has collected in passing through the tube, and the vitellus containing some granulations remaining from the decomposition of the mulberry-like body. The vitelline granulations, as they disappear, give place to a perfectly white, transparent liquid. In their disappearance these granulations seem to be condensed, and by adhering to one another they form a new vesicle which lines the first. This fact may be easily demonstrated by macerating the ovule in water, when the new vesicle will be thrown off by the water percolating through the vitelline membrane, and be seen to lay corrugated in distinct folds in the above-mentioned transparent liquid. This new membrane, or vesicle, is called the blastodermic vesicle. Whilst this process is going on the albumen collects as above stated, becomes absorbed and the vitelline membrane is much thinned. The ovule now for the first time begins to be fixed.

In sixteen or seventeen days after fecundation a rounded, whitish speck is perceptible on some portions of the blastodermic vesicular

Fig. 29.



THE OVULE SHORTLY AFTER ITS ARRIVAL IN THE WOMB.

A, the diminished albuminous layer; V, the vitelline membrane; B, the blastodermic membrane.

membrane, and really stands out in relief; this is called the embryonic spot. This embryonic spot is composed of granulations, like those of the blastodermic vesicle, only they are more numerous and more concrete. It is very evident that the embryonic spot and the blastodermic membrane are each developed from processes of a double lamina, which may be separated by means of fine needles. Fig. 30 portrays the doubling of the blastoderm, the embryonic spot assuming an elongated form. Finally, the blastoderm exhibits a convex and a concave surface, as in Fig. 32. The concave surface is divided into two dis-

Fig. 30.

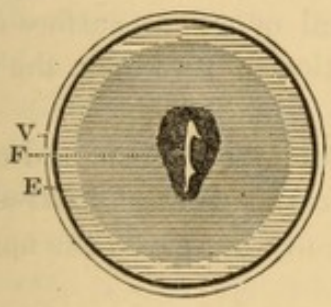


Fig. 31.

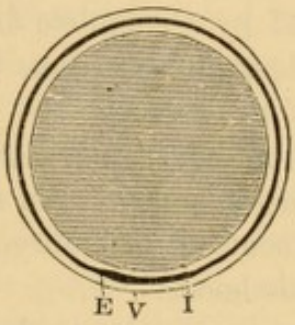


Fig. 30. The blastoderm with the embryonic spot seen in front; V, the vitelline membrane; E, the external layer of the blastoderm; F, the embryonic spot.

Fig. 31. The same figure in profile, to show the two layers of the blastoderm; V, the vitelline membrane; E, the external, and I, the internal or intestinal layer of the blastoderm.

tinct portions, one embryonic, the other becoming the umbilical vesicle. The tache embryonnaire becomes the embryo. The margin of the embryo exhibits a tendency to double over, leaving a cavity (as well as the extremities) of considerable depth. The extremity which

is most fallen is called the cephalic, the other the caudal extremity. As the development of the embryo goes forward, numerous minute elevations appear scattered over the external surface of the ovum; these become the villosities which subsequently appear on the chorion. At the same time the external layer of the blastoderm is raised in

Fig. 32.

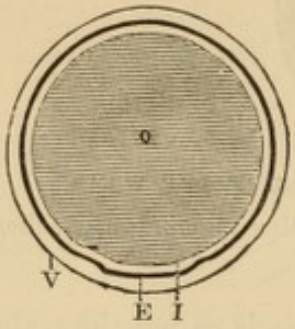


Fig. 33.

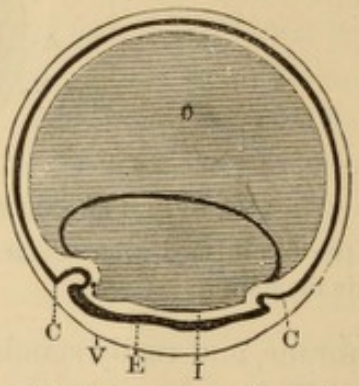


Fig. 32. A section of a more developed ovum, in which the two portions, the embryonic and the umbilical vesicle, begin to appear; O, the umbilical vesicle; I, the internal layer of the blastoderm; E, the external layer; V, the vitelline membrane.

Fig. 33. A section showing the origin and first traces of the amnios; O, the umbilical vesicle; I, the intestinal, and E, the external layer of the blastoderm; V, the vitelline membrane; C C, origin of the cephalic and caudal amniotic hoods.

folds around the central or embryonic portion. (See Fig. 33.) Figs. 34 to 37 exhibit the continuous approach of the embryo toward the centre of the ovum, until the blastoderm has become united over the dorsal surface of the embryo, their union absorbed, and the embryo surrounded by a complete fold of the external or serous surface of the blastoderm, which seems to be a continuation of that upon the abdomen of the embryo.

This fold gradually increases in size at both the cephalic and caudal extremities, and between these points to form, as it were, hood-shaped investments of the embryo. To these Cazeaux has given the name of amniotic hoods.

The new membrane thus formed is called the amnion, and becomes distended and separated from the external surface of the embryo by the amniotic fluid. The external or serous lamina now forms a ring or membrane by itself, which surrounds the whole. This contains the liquid in which the embryo, with its amnios, swims, and which, as the fœtus develops, is forced onward to join the vitelline membrane and chorion. Immediately after the formation of the amnios, the doubling in of the cephalic and caudal extremities increases, and forms more and more the abdominal cavity of the embryo, and finally

a mere canal leading out of the abdominal cavity into a large vesicle, called the *umbilical vesicle*, and this canal, as it finally closes up, forms the umbilicus of the nine months' child.

Fig. 34.

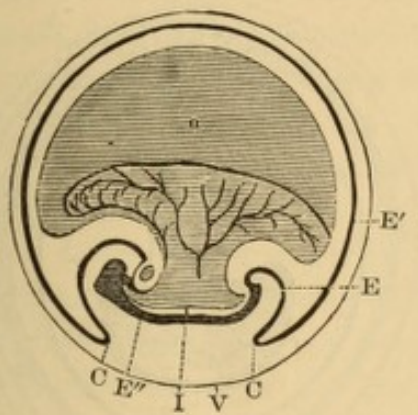
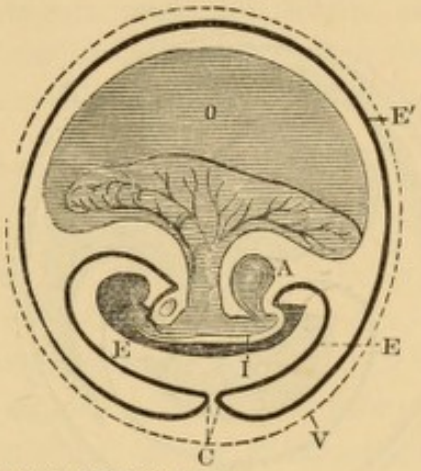


Fig. 35.



THE AMNIOTIC HOODS MORE DEVELOPED.

Fig. 34. O, the umbilical vesicle; I, the internal or intestinal, and E, the external layer of the blastoderm; E′, a portion of the external layer converted into the amnios; E″, the embryo; C, the limit of the amniotic hoods; V, the vitelline membrane.

Fig. 35. This figure shows the amnios almost completed, and likewise the origin of the allantois. O, the umbilical vesicle; I, the intestines; E, the amnios; E′, the external layer of the blastoderm, or the non-vascular chorion; V, the vitelline membrane; C, the amniotic hoods ready to close up; A, the allantois.

In the cuts 34, 35, 36, 37 blood-vessels may be seen running from the embryo into this vesicle and again returning, one artery from and two veins returning to the embryo; these are called the omphalo-mesenteric vessels. As this doubling of the embryo goes on (see Fig. 35), we find a slight elevation springing up at the spot where the rectum and bladder are confounded in the earlier days of embryonic life, under the name of cloaca. This begins to take place about the time the embryo has nearly exhausted all the nourishment contained in the umbilical vesicle, and the embryo would inevitably perish at this stage from want of nourishment but for this wise provision of nature, by which a connection is formed with the parent; for this little elevation rapidly extends to the villi of the chorion, passing out from the abdominal canal alongside of the umbilical vesicle, and is called the *allantois*. The allantois is composed of two arteries and one vein, the arteries arising from the primitive iliacs, carrying arterial blood of the embryo, seeking a fountain for allaying its thirst for material wherewith to sustain the little being over which it presides; for the blood always contains all the material elements for upbuilding and for repairing tissue.

These arteries seem to compel the growth of the allantois, and with the accompanying vein plunge into and take root in the villous coat of the chorion, when the desired nourishment is found in the blood of

Fig. 36.

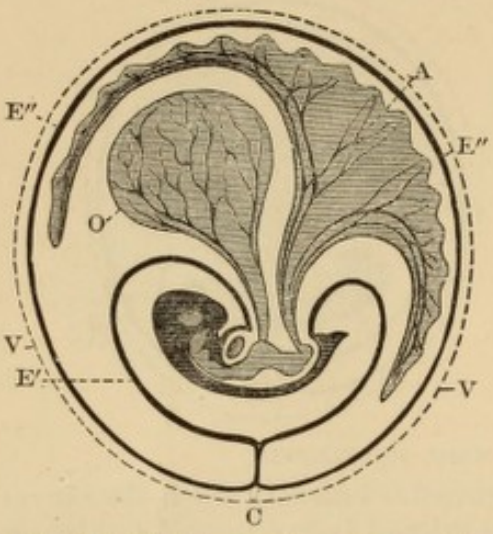


Fig. 37.

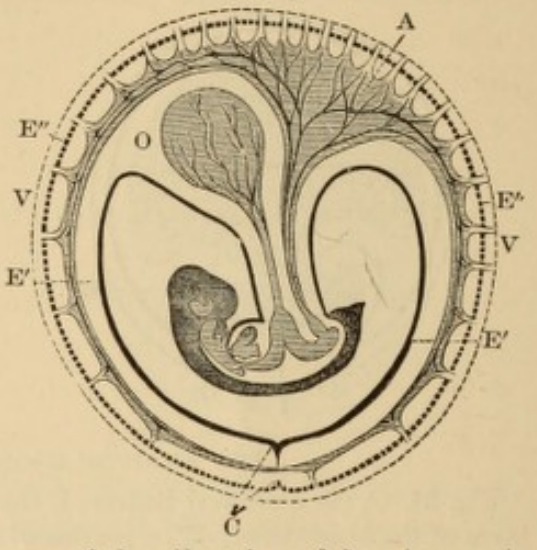


Fig. 36. This figure shows the rapid progress of the allantois, and how it spreads over the fœtus, the umbilical vesicle and the amnios. This latter begins to unsheath the pedicle of the umbilical vesicle and that of the allantois in such a way as to form a commencement of the cord. According to some writers the vitelline membrane disappears more and more. O, the umbilical vesicle; E′, the amnios; E″, the external layer of the blastoderm; C, the point where the two hoods come in contact; V, the vitelline membrane almost entirely atrophied; A, the allantois.

Fig. 37. In this figure the allantois has spread over the whole internal surface of the ovum, and but very slight traces are left of the continuity between the amnios and that part of the external layer of the blastoderm which formed the non-vascular chorion; the latter has a tendency to be confounded with the chorion, and the amnios encloses the umbilical cord more and more. O, the umbilical vesicle; E′, the amnios; C, the point where the two hoods are fused into each other and form but a single membrane; E″, the external layer of the blastoderm; A, the allantois; V, the vitelline membrane.

the mother. This is quickly carried back by the vein to the famishing embryo, and delivered through the liver, as will be seen farther on. In the subsequent pages, also, it will be shown that the first circuit in the embryonic circulation constitutes the beginning of the placental mass to be afterward described.

In some animals, and perhaps in the human female, the allantois in its development spreads out like an umbrella; but for all practical purposes it is sufficient to describe it as taking root in a single villus of the chorion, and spreading out more and more as more ample means of supply are demanded till the full time is accomplished.

The closing up of the abdominal or umbilical canal brings the

amnios in close juxtaposition to the remaining minute stem of the umbilical vesicle (as seen in Fig. 37), and as this canal closes up the amnios sheaths over the allantois and the small stem of the remaining umbilical vesicle, which vesicle is thereby forced out, and is found finally to be a little yellow body lying between the chorion and the amnion, next to the placental mass, and the allantois stem is found to be one and the same thing as the umbilical cord entirely sheathed over by the amnios.

With this description of the development of the allantois concludes the principal parts of the ovum; which are therefore: 1, The embryo; 2, the liquid in which it swims; 3, the amnios, filled with the liquor amnii, and forming a sheath over the umbilical vessels; 4, the umbilical vesicle with the omphalo-mesenteric vessels still to be seen communicating with the embryo; 5, the allantoid vesicle; 6, the space between the amnios and the umbilical vesicle, filled with liquid; and 7, the chorion, the outer envelope over all.

The Development of the Decidua.—The *decidua*, from first to last, is simply the mucous membrane of the uterus hypertrophied by the influence of conception and gestation. This hypertrophied development, which constitutes the deciduous characteristic, as previously stated, has already commenced when the impregnated ovule is about to make its escape from the ovary; so that upon its arrival in the cavity of the uterus, the ovule finds a soft, velvety bed in readiness to receive it. And as the mucous membrane of the uterus is continuous with that of the Fallopian tube, so in cases of extra-uterine fœtation, the deciduous development has sometimes, although not always, been found in the uterus; and in one case of development of the ovum in the Fallopian tube, referred to by Müller, the decidua was observed both in the uterus and in the tube.

Into the vegetative bed above described the ovule becomes fixed by the villi of the vitelline membrane (which becomes the chorion) taking root and growing into it in every direction. The decidua at the same time grows up all around the ovum, which latter thus becomes implanted in a living cyst, attached to one portion of the wall of the uterus, usually that of the fundus. When thus encysted the ovum is not only completely covered by the mucous membrane, but by means of the villi of its own membrane, the chorion, it becomes attached to the decidua, growing into it whenever they thus come in contact.

In the earlier months of embryonic development the decidua is formed of two apparently distinct layers, the one being in approxi-

mation with the internal uterine surface, and the other enveloping the embryo. The uterine layer has been called the *decidua vera*, or parietal decidua, while the embryonic layer has been termed the *decidua reflexa*. The decidua vera presents upon its external surface a rough or shaggy appearance, with numerous projecting filaments, which are doubtless due to the separation of the decidua from the proper tissue of the uterus and the remains of uterine glands. The internal surface of this layer, however, is smooth and shining, and elevated, according to Dr. Arthur Farre, into numerous projections which may be roughly compared to the convolutions of the cerebrum. It contains numerous minute apertures which are continuous with similar apertures on the outer surface of this layer.

The inner layer, or *decidua reflexa*, which invests the embryo, is, so far as histological elements are concerned, composed of the same material as the decidua vera, and it is, indeed, but a part of the same structure. It received the name decidua reflexa from Dr. William Hunter, who believed that it was formed by the ovum in its passage into the uterus from the orifice of the Fallopian tube thrusting it before it away from the uterine wall and enveloping itself, so to speak, in it as a covering; in a manner similar to the investiture of the heart by the pericardium. This view of Hunter's has been combated by other investigators, but the mode of formation of the decidua reflexa may be regarded as a question still in doubt.

If the intimate structure of the decidua be examined at about the sixth week of embryonic life, it will be found to consist of large round and oval cells, nuclei, fat granules and elongated fibre-cells, the whole so bound up that if a portion of the membrane be spread out and examined with the microscope, "it is observed to be readily separable into irregular portions or fragments, with clear interspaces, very much, in fact, like a web or network formed by the superposition of several layers of a cribriform membrane one upon another." (Meadows, "*Manual of Midwifery*," p. 69.)

There can be but little doubt now that the opinion of William Hunter in regard to the formation of the decidua is correct—viz.: that it is "an efflorescence of the internal coat of the uterus itself, the internal membrane of the uterus." It assumes in the first instance the triangular shape of the cavity of the uterus, and although these are not constant, there are commonly three openings which correspond with the orifices of the two Fallopian tubes and the internal *os* of the cervix. At parturition it is thrown off, either as a whole or in part, as a useless appendage, and replaced by a new formation.

THE FURTHER DEVELOPMENT OF THE OVUM.—Having thus described the provision made for the primary reception and support of the ovum in the changes which occur in the interior surface of the uterus, we will now proceed to the more particular examination of the further development of the ovum itself. We have briefly traced this development from the original ova to the production of the embryo, and noticed in a cursory manner the umbilical and allantoid vesicles, the amnios and the chorion. These appendages to the embryo, which at the same time protect it and administer to its growth, require now to be more particularly considered.

The *allantois*, as before partially described, is usually observed to arise as a minute tubercle from the inferior portion of the canal about the tenth day; it then rapidly shoots forward and takes root in the villi of the chorion. This organ is also called the *urachus*, and is accompanied by, or rather principally composed of, two arteries proceeding from the iliacs and called the umbilical arteries, and one vein.

The allantoid vesicle, as such, disappears very rapidly; after a few days no trace of it can be found, excepting a cord of no definite length which connects the embryo with the chorion and contains the umbilical vessels. That portion of this vesicle which is contained within the abdomen of the child is, however, more persistent in its duration, becomes converted into the urinary bladder, and in the rudimentary state terminates in the rectum and constitutes the temporary cloaca; all of which is capable of demonstration in the human subject. It is here easy to understand what is meant by the urachus, which is really that portion of the allantois which extends from the bladder to the umbilicus; hence anything that is capable of causing descent of the uterus must drag on the bladder from this attachment, and thus results the dragging sensation felt in the umbilicus in such cases from the attachment of the urachus to that part of the body.

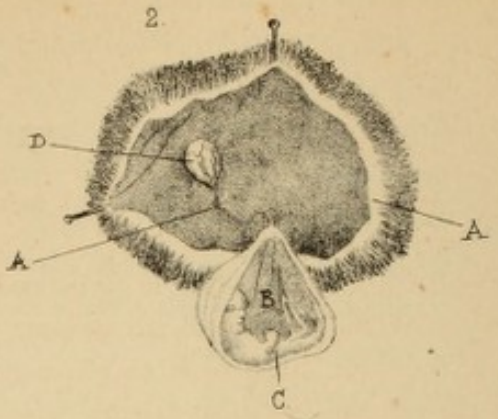
The *umbilical vesicle*, when first seen, seems to occupy the whole of the cavity of the ovum. Subsequently the embryo is seen on the blastoderm, its back corresponding to the serous external surface, and its abdomen to the mucous or interior surface, of the blastodermic membrane. Thus, at this early period the abdomen is open to the entire umbilical vesicle. As development goes on the embryo seems to rise more and more toward the umbilical vesicle, and to be developed forward and inward upon the abdomen. In consequence this vesicle loses more and more of its bulk, and assumes the appearance of a long narrow stem. This vesicle contains a yellowish and highly nutritious fluid, which, through the intervention of a vascular appa-

ratus, serves to nourish the embryo until it can provide for itself by other means. This vascular apparatus is supplied with two trunks for the transmission of blood—one venous, the other arterial; both, however, accompany the pedicle and form an important constituent part of it. (See large figure on plate facing 143.) "The first, N, called the omphalo-mesenteric vein, enters the abdomen, winds around the duodenum, and then opens into the umbilical vein at the point O, just as the latter emerges from the liver. As it passes the duodenum, branches are given off to the stomach and intestines, and when it discharges into the umbilical vein it sends a voluminous trunk to the liver. That portion which furnishes the branches just described persists in the adult under the name of ventral or hepatic-portal vein, whilst all the rest will disappear with the umbilical vesicle and its pedicle. The arterial trunk, P, accompanying the pedicle, has been designated as the omphalo-mesenteric artery. Arising from the aorta, it gains the summit of the intestinal convolution, and gives off branches to the mesentery and to the intestine itself; then it reaches the pedicle and follows the latter to the umbilical vesicle, upon which it ultimately ramifies. The part that supplies the mesentery is converted in the adult into a mesenteric artery, all the rest being effaced. From all which it appears that the vascular system of the umbilical vesicle represents the primitive circulation in the embryo, corresponding in it to the sanguiferous apparatus of the yolk of fowls."—CAZEAUX.

The *amnion*, as before stated, becomes developed by the embryo rising into the umbilical vesicle, thereby completely developing the blastoderm about itself; when the doubled parts unite the bridge uniting this new ring with the former becomes absorbed, leaving two distinct circles formed out of one—the former being the chorion, the latter the amnion. Now, as the amnion becomes distended more and more with liquor amnii, of course the umbilical vesicle becomes encroached upon and grows smaller and smaller; at the same time the abdomen of the embryo curves up more and more, and the pedicle of the umbilical vesicle becomes longer and smaller, being now found on the outside of the amnion, between it and the chorion. At the end of six weeks after conception this is seen to be a small yellowish point about as large as a coriander seed. The umbilical vesicle is of vital importance to the embryo until after the formation of the allantois and its union with the villi of the chorion; after which it is no longer of any particular account, and with the exception of the above-mentioned remnant of its artery and vein it becomes entirely atrophied.

1.

2.



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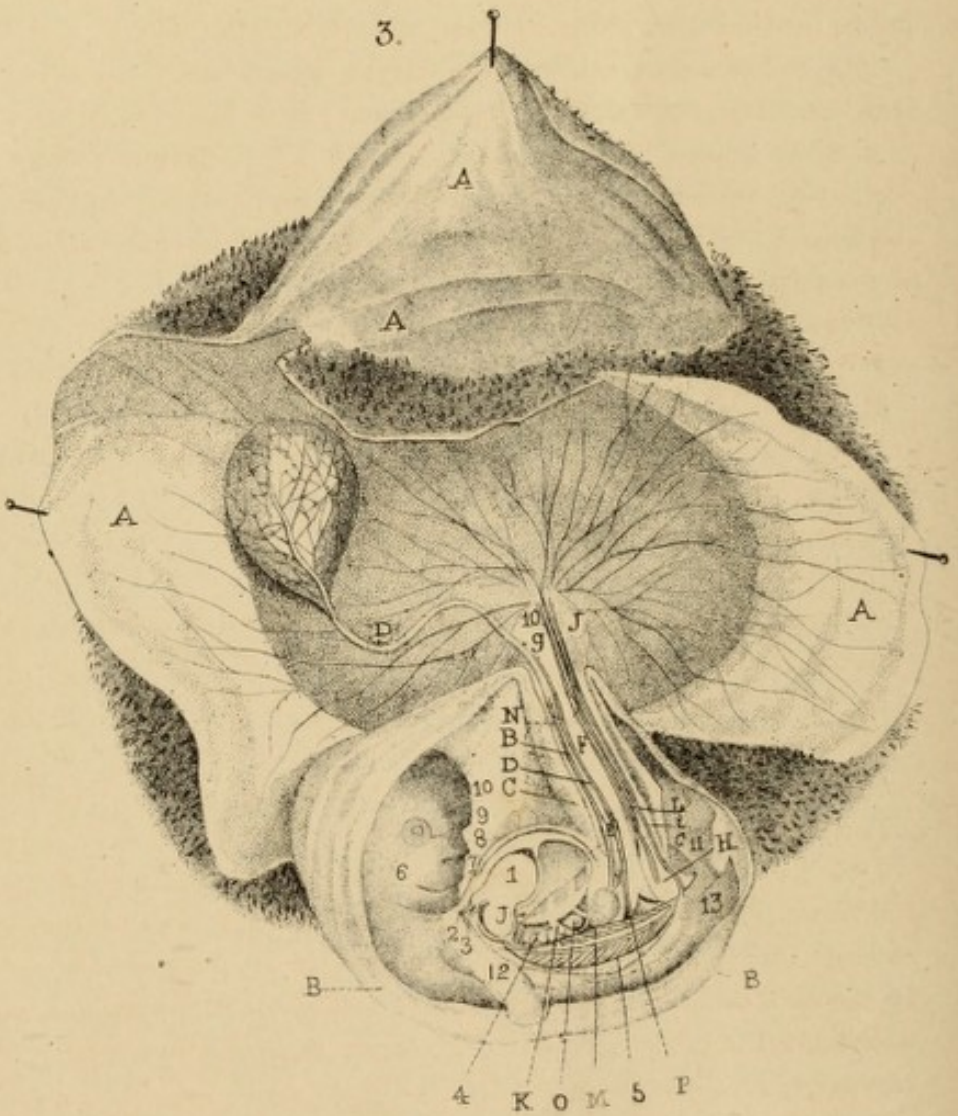


EXPLANATION OF THE FIGURES IN PLATE OPPOSITE.

No. 1, the human ovum, of its natural size, at about the thirtieth or thirty-sixth day.

No. 2, the same ovum, of its natural size, laid open to show its constituent parts.

A, A, the chorion; B, the amnion; C, the fœtus; D, the umbilical vesicle.

No. 3, the same ovum highly magnified and opened in such a way as to exhibit the principal relations existing between the embryo and its appendages. The walls of the abdomen and chest have been cut away so as to bring the viscera into view, and the umbilical cord has also been split up for the purpose of showing how the appendages of the fœtus are brought into relation with this latter.

A, A, the chorion, consisting of two layers, placed back to back, and confounded with each other, but which have been dissected apart for a limited extent at A′ A′.

B, B, the amnion laid open so as to show how it is continuous with the umbilical cord, along which it is reflected, thereby forming a sheath which, under the form of the canal B′ B′, is directly continuous with the umbilicus or the umbilical walls C C of the embryo.

D, the umbilical vesicle, and D′, its pedicle.

D″, the point where this pedicle communicates with the intestine E.

E, the loop of the intestine prolonged into the cord.

F, the urachus, continuous by one extremity, *g*, with the chorion, and by the other with the rectum at the point H.

ii, the umbilical arteries.

j, the umbilical vein.

j′, the part of the right auricle from which the umbilical vein comes off.

K, the vena cava inferior.

M, the inferior surface of the liver.

N, the omphalo-mesenteric vein.

O, the point where this vein empties into the umbilical vein.

P, the omphalo-mesenteric artery.

1, the heart; 2, the arch of the aorta; 3, the pulmonary artery; 4, the lung of the right side; 5, the Wolffian body; 6, the branchial fissure which is converted into the external ear; 7, the lower jaw; 8, the upper jaw; 9, the nostril of the right side; 10, the nasal canal still forming a kind of fissure, which extends from the eye to the nostril; 11, the caudal extremity, or coccyx, projecting like a tail; 12, the upper extremity; 13, the lower extremity.

The amnion is thus seen to be the most internal membrane of the embryo, and that it is formed by folding the blastoderm over the embryo in every direction, which latter is accomplished apparently by the rising of the embryo toward the centre of the umbilical vesicle. When the folding over is complete, and both portions have grown together so as to form a complete shut sac around the embryo, then we have the amnion containing the embryo, the umbilical vesicle, and a quantity of fluid, thick and gelatinous, between the amnion and the chorion, which becomes less and less as the amnion itself becomes distended with its own proper fluid. This fluid sometimes exists up to the period of parturition, and is called spurious liquor amnii, or liquor allantoidis. Its escape at an early period of labor gives rise to the opinion, sometimes, that the membranes have ruptured. The amnion consists, structurally, of a fibrous membrane, covered with a layer of oval nucleated epithelial cells, but contains neither vessels nor nerves. Its inner surface resembles a serous membrane, and in the opinion of many authors it secretes the *liquor amnii;* its outer surface presents a rough and reticulate appearance. The doctrine, however, that the amniotic fluid is a secretion from the surface of the amnion appears to be a mistake, since this liquid is most likely an efflux from the embryo itself. From the moment of the complete formation of the amnion as a shut sac, there is no longer any outlet for the escape of the efflux from the embryo; and that there must be such an efflux must be evident, since there are certain portions of the nourishment flowing into the embryo that are not entirely assimilated—some material carried thither from the mother, which, although it has served the purpose for which it had been imbibed, must be in part rejected in the form of sensible or insensible perspiration. In fact, there can be little doubt that there is enough of what we may call offal from the embryo and fœtus to account for the quantity and quality of the liquid found within the amniotic membrane.

As the embryo develops and the liquor amnii increases, the amnion is forced to recede more and more from the fœtus; of course it must eventually be forced to join the outer membrane or chorion, and thus form a covering to the umbilical cord all the way from the navel of the fœtus to the outer membrane or chorion, into which its maternal end is inserted, and all the parts thus enclosed constitute what is called the umbilical cord. Consequently the whole abdominal cavity must be in connection with the canal represented by this cord, that the fœtal appendages may communicate with it through the opening thus prepared for them. It is in this manner that the pedicle of the um-

bilical vesicle becomes united to the ileo-cæcal fold of the intestine, while the allantois connects with the rectum by the intervention of the urachus.

The *liquor amnii* itself varies in appearance with the time at which it is examined. At the earliest period it is clear, transparent and limpid; at later periods it becomes thicker, more opaque, sometimes flaky, green, yellow, or of almost any other color, according to certain states of the fœtus itself, which it derives from corresponding conditions of the mother. Its odor varies also; sometimes it is like that of spermatic fluid, with saline taste. The proportionate quantity of the liquor amnii also varies according to the time; in the earlier periods it is much greater than the weight of the fœtus. At the middle of the term the relation may be about equal, and after that time the liquid lessens in proportion as the fœtus increases; so that at full term the quantity of water is usually about a pound and a half, sometimes more and sometimes much less.

Its specific gravity is somewhat above that of water, and it presents an alkaline reaction. Careful examinations have shown that in addition to water it consists of a small quantity of albumen and gelatine, with traces of chloride of sodium, ammonia and phosphate of lime.

The formation of the embryo involves the formation of the amnion as a matter of course, as a reservoir for the reception of effete matters from the fœtus. The amnion also affords protection to the fœtus by surrounding its body with an aqueous shield, impervious to blows and shocks, since the embryo floats freely in its centre. The fœtus, thus floating in the liquor amnii, is at liberty to accommodate itself to all the movements and varying positions of the mother, and to yield, with the least possible disturbance, to all the influences of her mental and moral states. The accoucheur finds in the ballottement practiced by the aid of this fluid an important diagnostic sign of pregnancy; and at the period of parturition is able to correct any malpositions with greater ease before than after the waters have been discharged. Again, it serves other useful purposes during labor, by diminishing and equalizing the pressure of the fœtus upon the womb, and by distending the membrane into an elastic and conical plug or wedge affords material assistance in the dilatation of the os uteri.

The *chorion* lies next in order to the decidua, between it and the amnion. "The chorion begins to be formed in the Fallopian tubes as an albuminous layer enveloping the ovum; but as soon as it reaches the uterine cavity a number of small tubular projections, the chorion

villi, start from every point of its outer surface. At this time no vessels exist in it, but at about the second month the vascular sac of the allantois comes into contact with the inner surface of the chorion, forming its inner layer, or *endochorion*, and then capillary twigs are sent into the hollow villi; these now take on a rapid development; they become compound branching tufts, enclosing capillary vessels, which are brought into closer interdigitating communion with the capillaries ramifying in the decidual membrane. During the first three months of gestation every part of the chorion remains covered with villi, giving it the appearance, when placed in water, of a beautiful white shaggy or woolly membrane. After this time, however, a great number of the villi begin to disappear, so that a large portion of the external surface becomes smooth, except within the site of the placenta, where they increase enormously, becoming at the same time more convoluted, and constituting the fœtal portion of that organ, their trunks helping to form the umbilical vessel."

THE PLACENTA, OR AFTER-BIRTH.—In order to obtain a proper idea of the *placenta*, so named by Fallopius from its fancied resemblance to a flattened cake, it is necessary to commence its description at the very commencement of its formation. It will be recollected that the allantois shoots from the embryo at a very early period of its existence, and very soon takes root in the villi of the chorion. Examination and experiments prove that this process is adapted to furnish nourishment to the embryo by means of arteries and one vein passing from the embryo to the mother and back. The arteries carry the impoverished arterial blood from the fœtus toward the mother, seeking aëration and nourishment in the mother. The vein brings it back, purified and laden with all that the embryo needs for its growth and nourishment. In this first circuit there is made the beginning of the placenta, or the placenta itself so far. The next circuit adds to its size by the larger demand made by the increasing embryo; and so it goes on, constantly enlarging, circuit after circuit, until it has attained a full and sufficient size.

The placental mass, at its full size, is about six inches in diameter, three-fourths of an inch thick in its centre, tapering to a thin edge at its circumference. In different persons the placenta will often be found to vary in form and size; but the above are about the average dimensions. The cord is usually attached in the centre, but it is sometimes found attached to one edge, constituting what is termed a battledore placenta. The placenta presents an internal or fœtal surface, and an external, maternal or uterine surface, and a border. At

full term the internal surface is found covered by the chorion and the amnion. The fœtal surface is smooth and shining, from being covered with the amnion—concave and transparent, showing the ramifications of the blood-vessels of the cord most beautifully at full term. Immediately beneath the amnion is found the chorion, which enters largely into the formation of the placenta, giving it strength and transmitting the ramifications of the placental vessels. The maternal surface is convex, rough, and subdivided into a variable number of lobules, held together by an albuminous tissue, which is so easily torn off that it is very difficult to retain it in separating the placenta. These lobules, or cotyledons, are the original villi of the chorion very much enlarged and compacted together, although even these are also very easily ruptured and separated into loose, disorganized masses.

Fig. 38. *Fig. 39.*

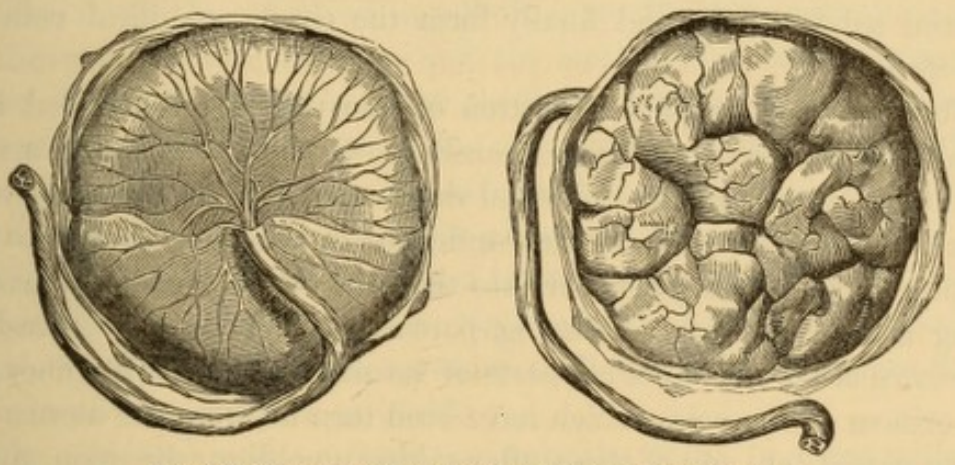


Fig. 38, the internal or fœtal surface of the placenta.
Fig. 39, the external or uterine surface of the placenta.

The villi have been described as compacted together; this results from their having grown into the mucous membrane of the uterus, between that organ and the ovum. At the same time the mucous membrane has also grown into the villi and the chorion; so that there is a mutual growth of one into the other, each supplying its own share in the formation of the placenta; the villi and their growth forming the fœtal side, and the mucous membrane and its growth forming the maternal or uterine side of the placenta. Thus, in the very first circuit of the fœtal blood in its vessels on the inner side of these villi, it becomes aërated and supplied with all things needful from the maternal blood on the outer side of these villi. In this way the process goes on, hour after hour, day after day, the demand and the supply alike increasing, till large quantities of blood are formed

on each side; their banks, however, never breaking, while the fœtal blood constantly communicates, but never commingles, with the maternal blood. This is proved by injecting the vessels on the fœtal side; not a particle, even of the finest material, is ever found to pass beyond the fœtal side, while on the other hand it is found equally impossible to cause a particle of the finest injection to pass from the maternal to the fœtal side.

The *fœtal* portion of the placenta, that to which the umbilical cord is attached, receives the branches of the two umbilical arteries, each of which divides into two branches at the point of juncture with the placental surface, and these branches again divide and subdivide until the vessels are reduced considerably in size, and thus pass through the chorion and ramify within the substance of the fœtal portion of the placenta. The blood is taken up by the venous radicles and returned by sixteen chief venous branches, which follow the course of the main arterial subdivisions, and finally form the single umbilical vein of the cord.

The *maternal* or *uterine* portion of the placenta is divided into lobules or cotyledons as before described. Over these is spread a thin and pulpy membrane, the placental decidua, or *decidua serotina*, which dips down into the sulci of the cotyledons in a manner similar to the dipping down of the pia mater into the sulci of the brain. In examining a placenta cast off during parturition "numerous valve-like apertures are found upon all parts of its surface (uterine). They are the orifices of the veins which have been torn off from the uterus. A probe passed into any of these, after taking an oblique direction, enters at once into the placental substance; small arteries, about half an inch in length, are also everywhere observed imbedded in this layer. After making several spiral turns they likewise suddenly open into the placenta. These are the uterine vessels which carry the maternal blood to and from the interior of the placenta."—Dr. Arthur Farre.

It will thus be seen that the placenta is covered upon its maternal or uterine surface by a membrane (decidua serotina), and on its fœtal surface by another membrane (the amnion). These give firmness and consistence to the placental mass, and at the edge or circumference they unite and spread out to form the envelope of the fœtus and liquor amnii.

In regard to the manner in which nutriment is conveyed to the embryo through the maternal blood without a commingling of that fluid with the blood of the embryo, we quote the following passage

from Dr. John Reid: "When the blood of the mother flows into the placenta through the curling arteries of the uterus, it passes into a large sac formed by the inner coat of the vascular system of the mother, which is intersected in many thousands of different directions by the placental tufts projecting into it like fringes, and pushing its thin walls before them in the form of sheaths, which closely envelop both the trunk and each individual branch composing these tufts. From this sac the maternal blood is returned by the utero-placental veins, without having been extravasated, or without having left her own system of vessels. The blood of the mother contained in this placental sac, and the blood of the fœtus contained in the umbilical vessels, can easily act and react upon each other through the spongy and cellular walls of the placental vessels and the thin sac ensheathing them, in the same manner as the blood in the branchial vessels of aquatic animals is acted upon by the water in which they float."

Thus it will be perceived that there is no direct vascular intercommunication between the fœtus and the mother, and hence all changes which take place in the blood of the fœtus, whether of depuration or of nutrition, must take place by *endomosis*. There is probably no nervous connection between the fœtus and the mother, since no nerves have been discovered in either the placenta or the umbilical cord.

The placenta is usually attached to the fundus of the uterus—more frequently to the left than to the right side—but it may be implanted upon any part of the interior uterine surface, and is sometimes found near to or even over the os itself.

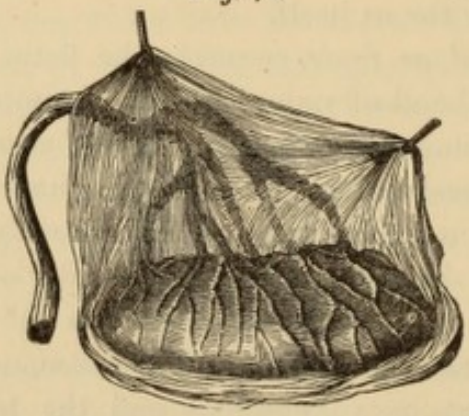
The umbilical cord, or *funis*, connects the fœtus in utero with the placenta, and is the bond of union between the mother and her child. The product of a somewhat advanced state of development, it is not found in the early weeks of pregnancy. The umbilical cord takes its origin in the embryo, in the form of the allantoid vesicle. And as soon as this vesicle has taken root in the villi of the chorion, it is found to consist of two arteries arising from the bifurcation of the abdominal aorta in the embryo, and of one accompanying vein which arises from the vena cava ascendens and the hepatic portal vein. The arteries carry the embryonic blood away, to be replenished and nourished by that of the parent. This is accomplished through the medium of the placental villi, as above described. From them the blood is returned by the vein to the embryo; and thus is established the living connection of the fœtus with the mother.

As the abdomen of the fœtus closes up with the advancing development, it is found that the stem of the allantoid vesicle and the

umbilical vesicle are embraced in one common sheath, the amnion And when the abdomen fails to close up firmly and tightly around the cord, there remains what is called a congenital umbilical hernia, which continues till the child is perfectly formed. The urinary bladder is formed on the abdominal portion of the urachus or allantoid vesicle. Hence it appears that the bladder is on a line with the cord; and when the child has been separated from the mother and the fœtal circulation cut off, the two arteries arising from the bifurcation of the aorta are converted into suspensory ligaments of the bladder, which terminate in the umbilicus.

The umbilical cord at full term differs very much in length in different cases; it may be but a few inches, or even five or six feet in length, but it is usually from twenty-one to twenty-three inches. The existence of nerves has not been demonstrated in the cord, but lymphatics have recently been discovered. Thus, as the waters of the amnion serve to protect the fœtus as far as possible from external violence, by allowing it easily to float away and evade any direct attack, so the entire absence of direct nervous connection between the fœtus and the mother prevents the former from being too injuriously affected by any sudden mental emotion or moral excitement of the latter. The child must indeed be powerfully affected in such cases, but through the circulation only; and thus not so rapidly or so violently as if there were direct nervous communication.

Fig. 40.



An anomaly, described by Benckiser: a division of the cord, just within the membranes, into five or six branches.

The greater part of the body of the umbilical cord is made up of the arteries and vein, which are imbedded in a gelatinous material consisting of a very delicate cellular structure infiltrated with albuminous matter; but, what is very curious, the arteries wind around the cord from left to right through its whole length, the vein con-

stituting the central axis of this regular spiral. The cause of this—for it must have a determinate cause—has not been satisfactorily explained; a similar phenomenon may be observed in pouring fluids through a funnel; they will always gyrate in a single direction.

It is very common to find the cord wound round the child's neck at parturition, requiring to be slipped off upon the emergence of the head; in such cases there is probably an abnormal length of the cord. Other cases are reported in which the cord is tied in knots, but not so tightly as to compromise the fœtal life by impeding the circulation. The umbilicus usually constitutes the point of origin of the cord, but it has been known to arise from the head, the chest, the shoulder, etc.; such anomalies result from some peculiarly disordered condition of the mother during this period of the incipient development of the embryo. It will be observed that as the interior or abdominal portion of the blastodermic membrane represents the organs of the vegetative life, so the umbilical cord, arising from this very portion of the embryo, and connecting with a corresponding portion of the mother, through the placental mass attached to the uterine walls, directly unites the vegetative organization of the mother with that of the child; this organization being thus seen to underlie the whole organic life, and thus to involve all that we understand by hereditary constitution. The same ideas are also no less plainly suggested by the fact that the whole life of the child is absolutely dependent upon the vital circulation of the mother, the movement of which is entirely under the control of the vegetative, organic or ganglionic nervous system.

CHAPTER X.

DEVELOPMENT OF THE FŒTUS.

HAVING thus described the primary development and organization of the ovum with its appendages, we now come to the study of the fœtus as a whole, with particular reference to its safe delivery from its gestative world to a more independent state of existence. But before proceeding to trace the intra-uterine life to the full term, it will be proper to review the ground already surveyed; this will be best done by a careful examination of the Plate (after Cazeaux) facing page 143, in which are delineated the embryo and appendages up to the already described state of development.

Successive Dimensions and Weight of the Fœtus.—The first indications of the formation of a new human being that it is possible to discover, even by the help of a microscope, consist in an oblong figure, obtuse at one extremity, swollen in the middle, blunt-pointed at the other extremity. This rudimentary embryo is slightly curved forward, is of a grayish-white color, of a gelatinous consistence, from two to four lines long, and weighs one or two grains. Here a slight depression, representing the neck, enables us to distinguish the head; the body is marked by the swollen centre, but there are no traces of the separate extremities. So much can be observed about the end of the third week after conception.

At about the *fifth week* the embryo is found much more distinct. The head is very large in proportion to the rest of the body; the eyes are represented by two black spots; and the upper extremities are represented by small protuberances on the sides of the trunk. The embryo is now nearly two-thirds of an inch in length, and weighs about fifteen grains. The umbilical cord can now be distinguished in its rudimentary stage, and the lower extremities begin to appear in the shape of two minute rounded tubercles. Minute depressions may now be discerned between the vertebræ, and the embryo is so much curved forward that its caudal portion very nearly approximates the head. Till about this time a straight artery has been observed to beat with the regularity of the pulse, but now it appears doubled somewhat in the shape of an adult heart, although as yet it has but one auricle and one ventricle. But as the time advances we find at length the perfect heart, with its two auricles and two ventricles, all developed from the original straight artery. The division of the first cardiac cavity into others is effected by partitions thrown up, or by contractions accomplished in the course of the same natural and orderly development. The septum which divides this primary ventricle into two is developed from the apex toward the base between the pulmonary artery and the aorta, so that we shall open the pulmonary artery from the right ventricle, and the aorta from the left ventricle.

At this period the lungs appear to exist in five or six different lobes, and we can barely distinguish the bronchial tubes, terminating apparently in minute cul-de-sacs. Along the vertebral column may be perceived two large glandular structures, which extend from the lung to the bottom of the pelvis. These structures, termed the Wolffian bodies, are constituted by an excretory canal which runs through their whole length, and perform the functions of the kidneys

until the latter are developed. By means of numerous cæca which appear on one side only of their surfaces they secrete a fluid which is poured into the canal and thence transmitted into the temporary cloaca. The Wolffian bodies disappear upon the development of the kidneys, and leave no traces of their former existence.—CAZEAUX.

A second canal, perfectly distinct, although lying alongside of that of the Wolffian body, is also to be discerned, which presents in the adult, and, according to the sex, becomes either the oviduct or the vas deferens. At about the same period of embryonic life may be distinguished four transverse fissures upon each side of the neck, which open into the pharynx. These are separated by fleshy partitions that correspond with the branchial arcs of fishes, and they may for a time serve some similar or corresponding purpose. In the course of the subsequent development these fissures are dispersed and disappear, with the exception of one on each side (see the Plate), which are converted into the external ears. At about the same period, upon what appears to be the face appear two isolated tubercles, which gradually approach the mesian line as development goes on, and form the upper jaw. The double hare-lip, so often seen in children, results from the failure of development of the upper jaw and nose, as the nostrils originally constituted one cavity on a mesian line with the mouth.

At about the *seventh week* the first centres of ossification appear in the clavicle, and subsequently in the lower jaw. The intestines still extend some distance along the interior of the umbilical cord; the omphalo-mesenteric canal is nearly obliterated, although it may still be traced as far as the umbilical vesicle, where it is reduced to a mere thread. The anus is not yet opened or formed. The kidneys now begin to be formed, and soon after the genital organs. The urinary bladder is first seen in the form of a small tumor continuous with the urachus. The embryo is about one inch in length.

At two months the rudiments of the extremities become more prominent. The forearm and hand can be distinguished, but not the arm; the hand is larger than the forearm, but it is not supplied with fingers. The cord has not yet become spiral, and still contains a large quantity of intestine; it is four or five lines in length, and is found to proceed from the lowest point of the abdomen. The formation of the placenta commencing, a minute tubercle may be distinguished between the cord and the termination of the spine, marking the locality of the genital organs, but the sex cannot yet be determined. The length of the embryo is now from one inch and a half to two inches, and it weighs

from three to five drachms. The eyes are discernible, but still uncovered by the rudimentary lids. The nose forms an obtuse eminence, the nostrils are rounded and separated; the mouth is gaping, and the epidermis can be distinguished from the true skin.

At ten weeks the embryo is from one and a half to two and a half inches long, and its weight is one ounce or one ounce and a half; the eyelids are more developed and descend in front of the eyes; the puncta lachrymalia are visible, and the mouth begins to be closed by the development of the lips. The walls of the thorax are now more completely formed, so that it is no longer possible to see the movement of the heart. The fingers become distinct, and the toes appear like small projections, webbed together like a frog's foot. The umbilical cord now assumes the spiral form, still contains a portion of the intestine in its base, and its place of attachment appears higher up in the abdomen.

At the end of the third month the weight of the embryo is from three to four ounces, and its length from four to five inches; the eyeballs are seen through the lids, the pupils of the eyes can be discerned, the forehead, nose and lips can be clearly made out. The neck now appears between the head and shoulders; the cord contains no intestine, and its spirals are more numerous and apparent; the finger-nails resemble thin membranous plates; the cerebro-spinal axis is divisible into its leading parts; the ventricles of the heart are separate, the placenta is separate, and the allantois and umbilical vesicle have disappeared. The skin shows more firmness; although apparently without fibrous structure, it is still rosy-hued, thin and transparent.

At the end of the fourth month the product of conception is no longer called the embryo, but the fœtus. The body is from six to eight inches in length and weighs six or seven ounces. The sutures and fontanelles are now very large, and little white hairs may be seen scattered over the scalp. The development of the face is still imperfect. The eyes are now closed by their lids, the nostrils are well formed, and the mouth is shut in by the lips. The sexes are now distinguishable, and meconium is present in the upper bowel. The tongue may be observed far back in the buccal cavity, and the lower angle of the face is rounded off by what a little later will be a well-formed chin. The umbilical cord is attached to the abdomen still higher up, though as yet much below the centre of the body. A fœtus born at this time may survive for several hours.

At the end of the fifth month the body of the fœtus is from seven to nine inches long, and weighs from eight to eleven ounces. The skin

has now a fairer appearance and is more consistent; the eyes can no longer be distinguished through the lids, owing to the increasing thickness of the latter. The head, heart and kidneys are large and well developed. The movements of the fœtus are usually plainly felt by the mother.

At the end of the sixth month the fœtus is from eleven to twelve and a half inches in length, and weighs about sixteen ounces, more or less. The hair upon the scalp is thicker and longer, the eyes remain closed, and very delicate hairs may be seen upon the margins of the eyelids and upon the eyebrows. The nails are solid, the scrotum small and empty; the surface of the skin appears wrinkled, but the dermis may be distinguished from the epidermis. The liver is large and red, and the gall-bladder contains fluid.

At the end of the seventh month the length of the fœtus is from twelve and a half to fourteen inches, its weight is about fifty-five ounces, and it is both well defined and well proportioned in all its parts. The bones of the cranium, hitherto quite flat, now appear a little arched, and as the process of ossification goes on the arching increases till the vault is quite complete. The brain presents greater firmness, and the eyelids are opened. The skin is much firmer and red. The gall bladder contains bile.

At the end of the eighth month the fœtus seems to thicken up rather than to increase in length, since it is only from sixteen to eighteen inches in length, while its weight increases to four or five pounds. The skin is red, and characterized at this period by a fine downy covering, over which is spread a quantity of thick viscous matter, called the sebaceous coat, which has been forming since the latter part of the fifth month. The lower jaw has now become as long as the upper one, and in the male the left testicle may be found in the scrotum. Convolutions appear in the brain structure.

At nine months the anxious time has arrived; the fœtus is from nineteen to twenty-three inches in length, and weighs from six to eight pounds, on an average. Some children weigh very much less; some as much as fourteen pounds; but such extremes are very rare. In most instances the child is covered with a whitish, sebaceous matter, which is really a secretion from the child's skin, which may be dissolved and removed from the surface after birth by rubbing with some unctuous material, such as oil or lard.

At this period the white and gray matter of the brain are distinct, and the convolutions are well marked; the nails assume a horny consistence; hair is more or less abundant; the testes are

in the scrotum; the umbilicus is situated midway between the head and feet.

Upon a careful review of the preceding account of the growth and development of the fœtus, it will be seen that this growth is much more rapid in the first and in the last three months of its intra-uterine life than during the middle of this period.

The following brief though graphic account of the development of the different parts and organs of the fœtus is taken from *Meadows' Manual of Midwifery*, condensed by the author from *Carpenter's Physiology:*

"*The alimentary canal* is formed from the vitelline sac or umbilical vesicle, with which a communication is kept up for some time. At first it exists as a narrow straight tube, having no division of parts and no orifices; subsequently, the mouth, œsophagus, stomach, large and small intestines are formed; and it is at the junction of the two latter that the vitelline duct exists.

"The *liver* is formed upon the small intestine, and makes its appearance first, at about the third week, by the aggregation of a number of cells at the spot where the hepatic duct afterward opens; this increases, and gradually removes farther from the canal; ducts begin to appear in it, starting first of all from the intestinal wall; and so rapid is the growth that by the fifth week the organ is about one-half the weight of the embryo itself. The subsequent changes which take place consolidate it and adapt it to what we see at birth.

"The *pancreas* and *salivary* glands are similarly developed as offshoots of the alimentary canal. It will be remembered that all the organs of vegetative life arise from the original inner or mucous layer of the area germinativa.

"The *lungs* arise at about the sixth week, as a pair of bud-like processes, from the œsophageal portion of the alimentary canal; their surfaces soon become covered with numerous little wart-like projections, caused by corresponding enlargements of their cavity. This goes on increasing; the parenchymatous tissue is developed in the spaces between the bronchi, vessels are deposited in it, and by degrees these organs separate from the tube from which they spring, and assume more and more the natural state.

"The *urinary organs* begin as two large tubes situate one on either side of the spinal column; little cæcal appendages, the *corpora Wolffiana*, are developed on their outer sides; the ducts then enter the allantois, there being at present no proper urinary bladder; this takes place about the fifth week, and by the end of the second month they

have disappeared. These take no part whatever in the development of the *kidneys,* which begin to form at about the seventh week, behind the Wolffian bodies. At first as separate lobules, they afterward coalesce: for some time the *supra-renal capsules* equal in size the kidneys, but at the sixth month the former rapidly decrease, while the latter as quickly increase in growth. The ureters at first open, with the duct of the Wolffian bodies, into the allantois; but as these bodies disappear a portion of the allantois is nipped off, and thus the *urinary bladder* is formed.

"The *generative organs* are developed later than the other vegetative organs, and at first they present no essential sexual difference. This applies to both the internal and external organs until at least as late as the fourteenth week.

"The *internal generative organs* appear first at the inner side of the Wolffian bodies. As development advances, the testes become round, thick, vertical in direction, and are united to the *vasa deferentia;* the *ovaries,* on the contrary, become long, flat, transversely situate, and remain unconnected with the Fallopian tubes; the former subsequently enter the scrotum, beginning the descent about the middle of pregnancy; the latter descend into the pelvis. The *uterus* is formed by a coalescence of the inner extremities of the Fallopian tubes; it remains bifid or bihorned (the normal condition of some animals) up to about the fourth month.

"The developmental changes of the *external generative organs* are interesting, from the light they throw on some malformations incident to these parts. So early as the fifth or sixth week a common cloaca exists for the termination of the intestine, the urinary and generative organs. At about the tenth week the former is separated from the two latter by a band, and subsequently these are shut off from one another by a similar band. Then the *labia majora* or the two halves of the scrotum, as the case may be, are developed on either side of the orifice of the genito-urinary canal; and above and between these a small body protrudes, being surrounded with a *glans* and fissured on its under surface. This becomes the *clitoris* in the female, and, by future growth, the penis in the male. The margins of the fissure are, in the former, developed into the *nymphæ;* in the latter they unite and form the *urethra.* It will now be readily understood how, by arrested or morbidly augmented development of these parts, *hermaphrodism* or other deformities may result.

"Turning now to the *organs of animal life,* a few words upon the development of the *cerebro-spinal axis* may fitly terminate the con-

sideration of the embryological changes affecting individual organs. This, as has already been stated, takes its origin in the external serous or animal layer of the germinal membrane by a contribution from each side of the primary groove formed by the rising up of the laminæ dorsales; it is, in fact, from a portion of these latter, at first separate, but afterward united, that the central nervous system arises. The encephalic portion consists at first of three vesicles: out of the first is formed the greater portion of the *cerebral hemispheres*, the *corpora striata*, *optic thalami* and *third ventricle;* out of the second, the *corpora quadrigemina* and *crura cerebri;* and out of the third, the *pons varolii*, the *medulla* and *fourth ventricle.* At first, all these vesicles are arranged in a straight line, very much like the permanent condition of the brain in fishes, but a curve is formed about the seventh week, the hemispheres arching over the thalami and corpora quadrigemina. The *lateral sinuses* are formed about the third month, the *corpus callosum* in the fifth, and *convolutions* appear at the fourth. The membranes of the brain are formed at about the sixth or seventh week, the arachnoid rather later. They are developed from the primary encephalic mass."

Ossification sets in in the embryo at an early period, commencing about the sixth week at a point of the clavicle; nearly simultaneously with this primary point of ossification bony formation commences in the inferior maxilla; then follow, successively, the vertebræ, humerus, femur, ribs and occipital bone. At the commencement of the third month it occurs in the superior maxilla, frontal bones, radius and ulna, tibia and fibula, and the scapula; and toward the close of the third month it has commenced in the metacarpal, metatarsal and phalangeal bones, and the remaining bones of the cranium. During the fourth month the bones of the pelvis and the sacrum begin to ossify, together with the minute ossicles of the inner ear. During the fifth, sixth and seventh months the astragalus and os calcis, the ethmoid bone, the pubis and the ischium commence to ossify. At the eighth month ossification sets in in the last bone of the sacrum. At full term many of the bones still remain in a cartilaginous condition, as the carpus, the smaller bones of the tarsus, part of the coccyx, the patella, the epiphyses of the long bones, and usually the os hyoides.

The Fœtus at Full Term.—It must be evident that all the mechanical difficulties attending childbirth increase with the development of the child; hence the necessity of particularly studying the most voluminous portion, in order that we may intelligently adapt it

to the passage in the pelvis through which it must pass. The most voluminous, the least yielding and compressible, and by far the most difficult part to manage in parturition, is the head, and of course where this may pass, the remainder of the body can follow with comparative ease.

The shape of the fœtal head is ovoidal, the posterior part being larger than the anterior. The cranium, with which as accoucheurs we are principally interested, is composed of the os frontis, the occipital, the two parietal and the two temporal bones. These are articulated by means of sutures, which in the fœtus at full term are usually cartilaginous. Angular spaces, called fontanelles, are left at the crossing of these sutures. Each suture and fontanelle has its particular designation.

The sagittal suture arises from the root of the nose, dividing the frontal bone on the mesian line, runs across the top of the head to the occipital bone, and sometimes divides that bone to its very base.

The coronal suture crosses the sagittal at right angles, uniting the os frontis to the parietal and temporal bones.

The lambdoidal suture also crosses the sagittal, although at a more acute angle, uniting the occipital bone to the parietal and temporal bones. Where the coronal suture crosses the sagittal suture there is left a large quadrangular space called the *anterior fontanelle.* The crossing of the lambdoidal suture with the sagittal leaves a three-sided space, smaller than that of the anterior fontanelle, and called the *posterior fontanelle.* There are other sutures and fontanelles, formed in a similar manner, between the bones which compose the fœtal head, but those mentioned above are the only ones of practical importance to the accoucheur. By means of these sutures and fontanelles the head may be compressed so as to require less space during parturition, thus rendering this function less frequently injurious to both mother and child than must otherwise be the case; and these sutures and fontanelles serve as guide-marks for determining the exact position of the fœtal head relatively with the cavity of the pelvis during labor.

The diameters of the fœtal head at term may be reduced, for all practical purposes, to seven in number. The *occipito-mental* (*a b*, Fig. 41), extending from the occipital protuberance below the posterior fontanelle, to the chin, is five and one-fourth inches. The *longitudinal* or *occipito-frontal*, *d e*, extends from the occipital protuberance to the frontal protuberance, and is four and one-fourth inches. The *sub-occipito bregmatic*, *c f*, extends from the central point between

the foramen magnum and the occipital protuberance to the anterior fontanelle, and measures three inches and three-fourths. These are called antero-posterior diameters. The transverse diameters are, the

Fig. 41.

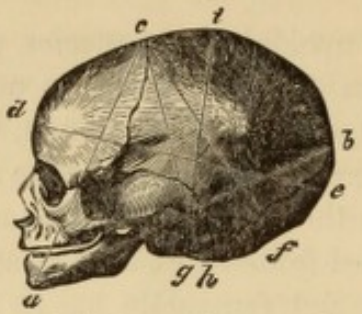
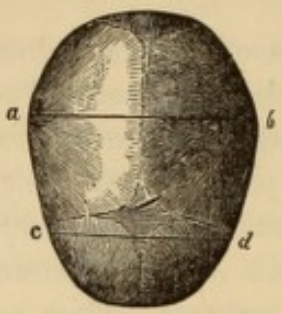


Fig. 42.



bi-parietal, *a b* (Fig. 42), extending from one parietal protuberance to the other, three inches and three-fourths; the other, the *bi-temporal*, *c d* (Fig. 42), extending from the zygomatic process of one side to the same point on the other, measures three inches. Finally, there are also two vertical diameters: First, the *vertical diameter*, *i g* (Fig. 41), extending perpendicularly from the highest point of the vertex to the anterior boundary of the foramen magnum, measures three inches and three-fourths. Second, the *fronto-mental*, *d a* (Fig. 41), from the frontal protuberance to the lowest point of the chin, measures three inches.

While it is absolutely necessary for the accoucheur to have a perfect knowledge of these various and varying diameters of the fœtal head, yet the most important in an obstetrical point of view undoubtedly are, the *occipito-mental*, five and one-fourth inches; the *occipito-frontal*, four and one-fourth inches; the *bi-parietal*, three and three-fourths inches.

Now, it will be readily seen that the antero-posterior diameter is quite too long to pass any diameter in the well-formed pelvis, even in the dried state, where the largest diameter is only five inches. Hence it must be apparent that in order for the head to be capable of passing in parturition, the longest diameter must lead the way—that is, the long diameter of the head must be made parallel to the axis of the pelvis by making either the occiput or the chin lead the way. When this is accomplished it is evident that all the other diameters of the head will be permitted to pass through a well-formed female pelvis. And the more perfectly the antero-posterior diameters of the head are made parallel with the general axis of the pelvis, the easier —other things being equal—will the child be born.

A great difference exists between the heads of male and female

children, in the greater size and more complete ossification which are found to obtain in the former. As a proof of this we may adduce the one observed fact, that the proportion of stillborn boys to stillborn girls is one hundred and fifty-one of the former to one hundred of the latter. And even of those born alive a much larger number of boys than of girls die in infancy from injuries received during birth. And finally, of the mothers who succumb to consequences of childbirth a majority have given birth to boys. Thus, it appears that the growth of the male portion of the race costs much more suffering and a greater loss of life than does that of the female portion.

One more fact needs to be studied in this connection, and this is the articulation of the child's head to its trunk. The occiput is articulated with the atlas in such a manner as to admit of great flexion and extension, while at the same time the atlas is so placed upon the axis as to admit of great rotation—much more freedom of movement in either articulation than is possible in the adult. Hence it makes little difference, so far as the child's neck is concerned, whether the occiput or the chin lead the way in parturition. It is, however, much better, as is usually the case, for the occiput to lead the way; for, as the chin thus rests upon the sternum of the fœtus, the long diameter of the head corresponds more exactly with the long diameter of the body of the fœtus, and consequently the whole long diameter is more in harmony with the axis of the cavity of the pelvis. Thus, the direct force of each contraction of the uterus is received by the propelled body in a mass, none of the force being lost, as would necessarily be the case if the chin were to lead the way. For here every contraction would tend to throw the occiput back upon the spine, in which case it would not find a firm base, as in the natural position of the chin upon the sternum.

The Presentation and Position of the Fœtus at Full Term is a thing of much interest, and the true causes which influence and determine these must now be stated and explained. At the earliest period at which the embryo is seen, it has always been observed to be curved forward, and in all orderly developments this position continues as the growth increases, until at full term of gestation the head is found flexed so that the chin nearly touches the sternum, the arms are flexed upon the chest, and the forearms upon the arms, so that the palm of each hand is applied to its side of the face and chin. The inferior extremities are also flexed in a similar manner, the thighs upon the abdomen and the legs upon the thighs; the feet lying together and within the thighs, the knees and elbows touching each other.

This is found to be the position most economical of space; it forms the body into a compact and ovoidal mass, similar in shape to that of the head, and most convenient for expulsion from the pelvis.

Upon a little reflection it must be evident that the same influences that give shape to the embryo and fœtus must also shape its position in utero. And furthermore, that the same influences must also determine the presentation of the fœtus, not at once, but as it is gradually developed so it is gradually made to assume its best possible position and gradually to present itself at the superior strait with its head downward, the occiput turned to the left ilio-pectineal eminence, its back—relative to the mother—to the left and in front, and its face looking back to the mother's right. This position and presentation is assumed by means of the all-pervading influence of the mother more frequently than all the others put together, simply because it is the most favorable for an easy expulsion from the generative organs, and is consequently the most orderly and natural one. When the fœtus deviates from this it assumes the next most favorable position for an easy delivery, and so on; the greatest number of presentations and positions being by far the best, and the least number being the most difficult. The causes of all these different presentations and positions may be much more rationally accounted for by referring the whole matter to Nature's formative process than by attempting to explain them as the effects of gravity or of any other mechanical influence; since the same result is obtained where women maintain the horizontal position during the entire period of utero-gestation. If the formative powers of Nature in the mother are adequate to the folding of the limbs in the compact and symmetrical manner just described, why should they not be deemed sufficient to determine the presentations and the precise position? It is contended by many writers, however, that the fact of the fœtal head being usually found at the outlet of the uterus is due to gravity. "The reason," says William Hunter, in his work on the *Human Gravid Uterus*, "why the child's head is commonly downward may be supposed to be this: the child is specifically heavier than the liquor amnii, and therefore in the various attitudes of the mother is always in contact with and supported upon the depending part of the uterus. This in the more common attitudes is the cervix uteri. The child's head and upper part of the trunk contain more matter in proportion to their surface than the lower part of the body; hence the head will more generally fall down to the lower part of the uterus."

It may be asked, Why, then, are there so many different presenta-

tions and positions? The head is sometimes extended upon the back, as in the face presentation, and sometimes the lower extremities are thrown over toward the back. All these various attitudes, presentations and positions result from corresponding variations in the vital energies of the mother. Should she be well, in an orderly and happy condition, both mentally and physically, her child will have only natural and orderly presentations and positions. The truth of this is proven by daily experience in practice. For women who, for instance, invariably have face presentations of their children, and who have always been ill in some particular manner themselves, after the removal of their malady have as invariably had their children present naturally. Hence the great importance of making the most strenuous and persevering efforts to remove the various disorders with which women are afflicted, and to advise happy and orderly modes of life in order that the distresses of childbearing may be entirely overcome; which indeed is not only possible, but under the prevalence of the homœopathic régime quite probable in the course of time. It should be remembered here that the embryo or fœtus is not suspended in the uterus by the umbilical cord, but that it floats in the liquor amnii; hence it is free to obey any influence brought to bear upon it by the mother.

By presentation we mean the part that presents at the superior strait, as the vertex, the face, the breech, etc. By position we mean the particular posture in presentation, as the occiput in the left half of the pelvis, anterior, transverse or posterior. But the further consideration of this subject will be postponed until we come to treat of the mechanism of labor.

The development of the fœtus needs also to be studied with especial reference to the three great *functions of Nutrition, Respiration and Circulation*, by which this development is accomplished. Each of these functions is evidently maintained during intra-uterine life in a manner altogether different from that after birth.

Nutrition.—At no instant in the history even of the unimpregnated ovule is it without the support of the mother, from the earliest moment of its existence within the ovary till it is ruthlessly washed away by the menstrual flux or broken and destroyed by some other means. But when impregnated the ovule becomes still more especially the object of the particular care of the mother. Hence, immediately upon the occurrence of conception the entire natural, spiritual and vital organism of the mother is aroused to provide for what is really a *new creature, already a new human being*. From this moment,

therefore, commences the nutrition of the embryo. And at the very first this is accomplished in a manner similar to the nutrition of a seed in the earth; which, although in a general manner supported by the external influences of the mother-earth, is in a still more immediate and particular manner sustained by itself, the sprout flourishing upon the remaining substance of the seed till that is consumed. So the impregnated ovum, even after it has left the ovary, is sustained in a general way by a sort of endosmosis from the mother, but in a more immediate and particular manner its primary development is maintained by, and the embryo itself subsists upon, the vitellus; a substance most nutritious and especially provided for this very purpose. When this original resource is exhausted, the embryo throws out the allantoid vesicle in search of other supplies. These are found by coming in contact with the mother's blood in the villi of the chorion. In this great life-fountain the embryo finds a bountiful supply of all things needful for its present wants and future growth and development. The vitellus is indeed very small, but the embryo itself is correspondingly minute; it wants but little.

Sufficient proof of these statements may be found in the fact that the umbilical vesicle is entirely constituted from the vitellus, or from what remains of it after the formation of the blastodermic membrane, and in the further fact that the omphalo-mesenteric vessels are found to circulate blood to and from the embryo in a manner altogether similar to that in which it is subsequently done in the umbilical cord. And, finally, the umbilical vesicle and the omphalo-mesenteric vessels soon become obliterated after the nutritious root has become well established by means of the allantoid vesicle, its arteries and veins.

Pure arterial blood contains all the needful materials for growth, and for the separation of the waste and decomposition of tissue; these must be first accumulated in the blood, then distributed as needed. For this supply of the elements necessary for growth and repair there is a constant yearning, of which the blood, as a living body, is conscious, and to which it continually seeks to respond. Blood is found in the embryo at the earliest possible period of examination; a circulation has already been established in the embryo and in the omphalo-mesenteric vessels by the time the supply is exhausted which was contained in the umbilical vesicle, into which these vessels ramify in search of nourishment for the blood itself.

Upon the failure of the supplies from the umbilical vesicle a new route must be opened up to furnish the demand. This is done by the embryo throwing out the allantois supplied with the two arteries aris-

ing from the internal iliacs, and containing impoverished blood which must be renovated and returned to the embryo. These arteries are accompanied by a vein. The whole apparatus soon takes root in the villi of the chorion, and forthwith a return of nourishment is made to the already famishing embryo. The impoverished blood from the embryo, by endosmosis through the coats of the villi of the chorion, is renewed and regenerated from the maternal blood. And the arteries anastomosing with the vein, the aërated and revivified blood is immediately returned to the embryo for its especial benefit. Now is formed the first nucleus of the placenta; and in this manner is accomplished the continued nutrition of the fœtus, by its famished and exhausted blood being thus supplied with all things needful by endosmosis from the maternal blood, through the blood in and about the villi of the chorion. From this time the fœtus, the cord and the placenta grow *pari passu* till the completion of the full term. And by no other means is the nutrition of the embryo and fœtus provided. All the plants, and, indeed, the whole animate creation, is nourished by a kind of endosmosis from the parent earth, or mother; but the material thus supplied is appropriated by each receiver in its own way, in accordance with its own form of life.

A positive proof that the nutrition is supplied by means of the cord, and in no other way, is found in the well-known fact that compression of the cord so as to arrest the circulation, although but for a very short space of time, is certain death to the child. What change the nutritious material obtained from the mother undergoes before it is fitted for appropriation by the fœtus, or where that preparatory change is made, whether in the fœtal placenta or in the fœtal liver, is not yet known. Nor is it known where or how the plant transforms the nutriment derived from the earth into its peculiar sap, fibre and bark.

Respiration.—This function is essential to the existence of all the animals of creation, and for every individual thereof; for this is the process by which the effete blood becomes aërated, and gives up the excess of carbon and other useless matters with which it is loaded. This, as just above described, is accomplished by the fœtal blood coming in contact with the maternal, in a manner not unlike that in which the blood of fishes is decarbonized by being exposed, by means of the gills, to the air contained in the water which passes through them. The blood of the mother serves exactly the same purpose for that of the fœtus that the water does for the blood of fishes; the water contains an appreciable amount of air, or rather of

oxygen, and so does the mother's blood. In proof of this, it is only necessary to compress the cord so as to prevent the blood of the fœtus from being exposed to that of the mother, and the child turns black and dies, as from asphyxia.

SECRETION.—As development advances all the secretions are successively established. The liver secretes bile, the gall-bladder is found full, and there is reason to believe that bile is steadily supplied to the intestines. Even prior to the fifth month the alimentary canal contains a substance called meconium, which is principally composed of biliary matter and the detritus of the mucous membrane. There is no positive evidence that this meconium is ever evacuated into the amniotic sac, but it sometimes passes off freely during labor, and in other cases not long after delivery. Urine is secreted, and usually passes in considerable quantities after birth; and it is thought by some that the fœtus in utero discharges the urine into the amniotic cavity. But we have no positive evidence that the urine is ever discharged from the bladder till after delivery.

CIRCULATION.—The lungs of the fœtus in utero not being employed, are small and collapsed, and bear a striking resemblance to the liver in appearance. A very small portion of blood passes through them, and that which does so pass neither gives up impurities nor receives vivifying material, as after birth. In consequence of this the pulmonary arteries are small, and the passage of blood from the right side of the heart would be impeded in consequence of their lack of development were it not for the existence of the *foramen ovale*, or foramen of Botal, as it is likewise termed, an opening in the septum of the right and left auricle and through which a proper quantity of the blood flows from the right into the left auricle. But notwithstanding the fact that a portion of the blood received by the right auricle is thus conveyed away, there is still too great a quantity to be transmitted through the minute pulmonary artery; and hence a supplementary short and thick vessel is provided, the *ductus arteriosus*, which passes between the pulmonary artery and the aorta, and gives free escape from the right ventricle. The right and left ventricles thus become in a measure one, and the blood from each enters directly into the aorta; while it will be seen that the right and left auricles are likewise one through the medium of the foramen ovale. Now, in the pelvis of the fœtus the common iliac arteries divide into two branches, an external and an internal. The latter go to supply the extremities of the fœtus, while the former pass directly upward to the umbilicus as the *umbilical* arteries, and reach the placenta

through the medium of the cord. Here the blood receives its vivifying properties from the maternal blood, as has been already described, and is returned by the venous branches which unite to form the umbilical vein. The blood thus changed and purified enters again the body of the fœtus at the umbilicus, passes upward along the anterior edge of the suspensory ligament of the liver, and supplies that organ with blood. The current then passes onward to be emptied into the ascending vena cava by means of another short supplementary trunk, the *ductus venosus*, and is conveyed to the right auricle of the heart.

The course of the fœtal circulation, then, may be thus stated: starting from the placenta, the blood passes through the umbilical vein, along the cord, into the fœtus at the umbilicus, and thence to the liver; part goes to that organ, and the remainder passes onward through the ductus venosus into the ascending vena cava, and through it to the right auricle. Part of the blood received by the right auricle comes through the descending vena cava, and of this a portion passes into the left auricle through the foramen ovale, and thence to the left ventricle, while another portion passes into the right ventricle, is forced by its contractions into the pulmonary artery, and into the ductus arteriosus, which conveys it to the aorta. The blood in the left ventricle is also forced into the aorta, and through the aorta the blood passes upward to the head and superior extremities and downward to the trunk and inferior extremities. Having reached the internal iliacs in its downward course, it passes through the umbilical arteries of the cord to the placenta again.

CHAPTER XI.

ANOMALOUS PREGNANCY.

Multiple Pregnancy.

HAVING described normal pregnancy, the product of which is a single fœtus, we now advert briefly to that form of gestation in which there are two or more. It is by no means an uncommon occurrence for a woman to give birth to twins; triplets are produced less frequently; and yet there are well-authenticated instances on record in which four and even five children have been brought forth during a single labor. Twin pregnancy occurs about once in seventy-

five cases. Madame la Chapelle records that in 37,441 births there were 444 instances of twins and but five of triplets. Churchill states that in 257,935 births recorded by British practitioners there were 3431 cases of twins and 43 cases of triplets. A great variety of theories have been promulgated by various writers regarding the causes of multiple pregnancies. These theories, however, may be summed up into the general opinion that the cause lies in an extraordinary reproductive power, possessed in some instances by the male and in others by the female.

As a general rule, in plural pregnancies each fœtus has its own set of membranes and its own placenta, although there may be an inosculation of the blood-vessels of the placentæ. It sometimes happens, however, that there is but a single placenta. This may be, and doubtless is, attributable to there being but a single ovule impregnated, which has contained two yolks and two germinal vesicles, as is sometimes observed in the eggs of birds.

Twin pregnancy is, as is shown above, the most frequent form of multiple pregnancy. The fœtuses in such cases are usually smaller than where there is but a single product of conception, and in after life they are usually marked as "delicate" children; but this is by no means the case in every instance, for twin children are frequently fully and largely developed at birth, and are quite as healthful in after life as are other children.

The *signs* of plural gestation prior to delivery may be regarded as uncertain and unsatisfactory. The disproportionate size of the abdomen, as compared with the period of gestation, which has been advanced as a sign of twin pregnancy, may be due to other causes, such as an excessive quantity of liquor amnii, an unusually large development of the fœtus, dropsy, either ovarian or abdominal, tumors, etc. The appearance of the abdominal tumor as though it were divided into halves is equally untrustworthy as a sign, for it may be due to other causes, such as those enumerated above. The only sign that can be regarded as at all reliable is that derivable from auscultation. If two distinct fœtal pulsations, *not synchronous*, can be detected in different parts of the abdomen, almost conclusive evidence is afforded of the existence of more than one fœtus.

Extra-uterine Pregnancy.—Impregnation is effected within the ovary, as has been described in a preceding chapter. But where the fecundated ovule fails to reach the cavity of the uterus, it may lodge, adhere and become developed in some other place, constituting extra-uterine pregnancy—a very disastrous and happily infrequent

occurrence. Of the *causes* of this failure to reach the uterine cavity we know but little; the most plausible view being that it is due to a constriction or other morbid condition of the Fallopian tube.

Sometimes the impregnated ovule remains in the ovary and is there developed, constituting *ovarian* pregnancy. The autopsy of a woman dying suddenly has revealed, as the cause of her dissolution, an enlarged ovary rent in twain by a fœtus of four and a half months.

Sometimes the ovule is arrested in its progress through the Fallopian tube, becomes attached to its walls, and development there progresses. This is called *tubarian* pregnancy, and is the most frequent form of extra-uterine gestation. The ovum may be arrested in any part of the tube, the walls of which, becoming distended around the ovum, envelop it in a sort of sac or cyst.

In other instances, on account of some abnormality of structure, the ovum slips in between the interstices of the uterine tissue in that part where the Fallopian tube traverses the uterus. This anomaly is termed *interstitial* pregnancy, and is the rarest of all the forms of misplaced gestation. Owing to the yielding and distensible character of the uterine walls, gestation may here go on for a longer period than in other abnormal situations, and even exceed full term; but in such cases labor sooner or later sets in, with disastrous consequences to the woman. In some recorded cases of this form of extra-uterine pregnancy the placenta was found to be normally attached within the uterine cavity.

In some instances the impregnated ovum either does not enter the Fallopian tube at all, or, having entered it, drops out again and falls into some part of the abdominal cavity, fastens to some portion of the peritoneum and develops there for a longer or shorter period. When the fœtus dies shortly after conception in these cases, it may remain within the abdominal cavity in the form of a cyst for years, or an abscess may form and discharge either externally or internally. In the latter case this would necessarily result fatally; not so, however, should the contents of the abscess discharge externally, or even into the intestines, uterus, bladder or vagina. This form of extra-uterine pregnancy has been termed *ventral* or *abdominal*.

The *mode of development* in these abnormal cases is similar to that in others. Internally, the ovule goes on developing as in normal pregnancies, in the formation of the amnion, chorion, placenta, umbilical cord, etc. It is doubtful, however, whether a true decidua is formed in these cases, though a substitute for that membrane exists. Externally, to whatever point the ovule may become attached, it be-

comes so attached by means of the villi of the chorion growing into whatever structure they are brought into contact with. Simultaneously with this growth on the part of the ovule, the maternal structure grows to correspond and to furnish its part in the reproduction, by growing upon these villi and throwing out blood-vessels to meet those coming from the embryo. Thus the placenta is formed precisely in a similar manner here as in the uterine cavity—only with far less present security to the embryo, and with almost certain fatal consequences to the mother.

After the ovule has thus become fixed in its unnatural bed for development, its growth goes on for a longer or shorter time, according to the strength of the membranes—usually till about the middle of the ordinary term of utero-gestation—sometimes even to the full term. At last, the membranes, from want of sufficient protection, burst and their contents are poured out into the abdominal cavity, and there results a rapidly fatal inflammation of the peritoneum of the ill-fated mother. Sometimes the maternal surface of the placenta becomes ruptured, so as to produce fatal hemorrhage. In other instances the first shock is withstood, the contents of the cyst become absorbed or again encysted—as any foreign body may be—and the woman not only survives, but may even enjoy good health for years. In some cases the fœtus itself perishes at about the full term, and makes its exit by means of fistulous openings through the abdominal parietes or otherwise.

The *diagnosis* of these cases will be most easily effected by observing that in vaginal examination the os and cervix uteri will be found little, if at all, altered in size, and generally higher than usual. A tumor may also be felt above the vagina, either in the recto-vaginal pouch or on one side of the uterus. This tumor generally pushes the uterus against the pubes or to one side of the pelvis, or draws it up into the pelvis almost beyond reach. Little satisfaction is derivable from auscultation, but palpation may reveal the fœtal outlines if the abdominal parietes be sufficiently thin and relaxed. Where the pregnancy is of the interstitial variety, the uterus will be found irregularly enlarged.

Super-Fœtation.—The question as to whether conception can take place while the uterus is carrying the product of a previous conception has given rise to a vast amount of argument pro and con. At one time a belief in the possibility of super-fœtation occurring was almost universal; but a careful scrutiny of the so-called facts of the case, together with the plausible arguments advanced in opposition,

succeeded in engendering an almost universal disbelief in the doctrine. Now, however, there appears to be no bar offered to a belief in the possibility of the occurrence of conception during the earlier months of embryonic life by any anatomical or physiological fact connected with gestation. Dr. Matthews Duncan is of the opinion that, while ovulation is suspended during the greater part, if not the whole, of pregnancy, yet there may be exceptions to this rule, particularly during the earlier months. If, then, ovulation be not suspended, it is of course possible for super-impregnation to take place. It is difficult to understand in the ordinary view of the case how impregnation can occur while the uterine cavity is filled with an embryo and the decidua is closely adherent to the inner uterine wall. Dr. Duncan says that the "decidua reflexa does not become adherent to the decidua vera till after the third month, prior to which sufficient space exists to admit of the passage of the semen, and consequently to allow of a subsequent conception." This special pleading is not demanded to explain the occurrence of super-fœtation if the views entertained by the writer in regard to the passage of the semen to the ovaries, as laid down in a previous chapter of this work, are taken into consideration.

CHAPTER XII.

LABOR.

LABOR, or parturition, completes the grand function of reproduction, and by it, either by nature, by art, or by both conjoined, the new being is ushered forth to assume an independent existence with all other isolated existences.

Labor is considered *natural* when it is accomplished by the unaided powers of nature, and *unnatural* when manual or other assistance is found necessary. Labor is also considered *at term* when it occurs at about the expiration of the ninth month of utero-gestation, and premature when it occurs at any time between the first part of the seventh month and full term. Provoked labor is one which has been produced by some mechanical cause, either accidental or designed. A retarded labor is one that is delayed beyond nine and a half or ten months of gestation.

PREMATURE LABOR.—Premature labor may result from a great variety of causes—accidents of any kind, diseases incidental to the

pregnant condition, etc. For the precautions and remedies to be employed in case of threatened premature labor we refer to the chapter on Abortion. It may be stated here, however, that all women should use extra precautions at about the seventh month of gestation. In premature labors the first stage is usually longer in proportion than the second, which latter is generally longer than a labor at full term. Also vertex presentations are far less frequent than in natural labor at term, and cross, breech or irregular presentations are much more frequent. There is great danger from hemorrhage in premature labors, consequently more need of quiet rest, from the first symptoms and ever after till all danger is past, and so much the more need of carefully selecting the proper remedy.

Retarded Labors.—The ordinary time for gestation is two hundred and seventy-five days, but as there are exceptions to all other rules, we might naturally conclude they would be found here also. Accordingly, investigation has been made, and out of forty-three instances of conception after a single coitus, collected by Dr. Reid—all of them resting upon testimony as credible as can be obtained in such cases—of which the average duration of gestation was two hundred and seventy-five days—three were delivered at the 280th day, two on the 283d day, one each on the 284th and 286th days, two on the 287th, one on the 291st, two on the 293d, and one each on the 296th and 300th days.

Natural Labor at Term.—In the study of this subject two orders of facts must be separately considered—the one regarding the physiology of labor on the part of the mother, the other consisting of the movements which the child must execute in order to promote its passage from the uterus through the organs of generation. The former is to be regarded as purely functional, the other as simply mechanical. Let us first consider the subject functionally with reference to the vital action of the mother.

Causes of Labor.—The causes of labor have been divided into the efficient and the determining causes. The efficient causes are unquestionably the vital energies of the mother, brought to bear in every possible manner upon the child for its expulsion, and at the same time to open up the way as much as possible for its exit. The uterus itself, acting involuntarily, is an agent in the expulsion, aided more or less by the voluntary efforts of the mother, while at the same time an involuntary dilatation is effected of the os uteri, vagina and external organs. All these processes on the part of the mother are purely functional and involuntary—as much so as are the processes of concep-

tion, gestation, digestion, nutrition, etc. The efficient cause of the labor is in fact only the last part of the grand function of reproduction. How important, then, that this most sacred function should not be disturbed by any influences whatever, but should be sedulously watched over by a careful and skillful homœopathic physician, ready to administer the proper remedy for whatever deviation from the normal condition may occur! How different when the blood is poisoned and the senses stupefied by anæsthetics; how impossible then for the mother to give the alarm, or for nature to respond and furnish the symptomatic signs of danger till it is too late!

The determining cause may be any influence by which the efficient cause is set in motion. At the full term, when the woman should be delivered, the determining cause becomes spontaneous, the grand function of reproduction is about to be completed; and here, as in all other vital processes, there is no delay; the work constantly advances till parturition terminates and completes to the very last the great process of reproduction. At the full term, or even a few days before, various kind of accidents, diseases or mechanical means may become the determining cause by arousing the efficient cause in the contractive and expulsive action of the uterus; but this function of parturition will not be so safely or so easily accomplished when thus excited by external influences as when it begins in a perfectly natural and spontaneous manner.

As to what it is that *immediately* excites labor, however, very little is definitely known. Various speculations have been indulged in by obstetrical writers. By some it has been attributed to the direct action of the fœtus; others have thought it due to the uterus having attained its utmost limit of distension; while still others have thought that labor sets in at that period at which a menstrual period would have occurred had conception not taken place. Sir James Simpson believed it to be due to the disintegration of the decidua at full term, and a consequent separation between that membrane and the uterus. It is undoubtedly referable to a natural law which at present is not understood or explainable.

THE PHYSIOLOGY OF LABOR.—The phenomena of labor may be arranged in three distinct groups or successive stages—the first including the whole period from the commencement of the labor to the complete dilatation of the os uteri; the second extending from the dilatation of the os uteri to the expulsion of the child; the third terminating with the final delivery of the placenta.

1. *The First Stage.*—The approaching termination of gestation is

indicated usually by various symptoms called *precursory* or *premonitory signs* of labor. About the last two weeks a change becomes perceptible in the form of the abdomen. Its sides become more projecting as the uterine tumor sinks from the region of the stomach and epigastrium, so that respiration becomes easier and food can be taken with less discomfort. And in many respects the woman feels lighter, better and easier. This change results from the cavity of the body and of the neck of the uterus being blended into one by the softening and giving way of the os internum uteri, and by the sinking downward of the uterus, the fundus of which is now found to lie midway between the ensiform cartilage of the sternum and the umbilicus; at the same time the uterus is projected forward. The calls to urinate now become rather more frequent, owing to increased pressure on the bladder and its lessened capacity; sleep is more broken by restlessness, and walking becomes more difficult. The woman becomes more clumsy, and a little later glairy discharges take place from the vagina, which simply show an increased action of the muciparous glands preparatory to the final act of parturition.

Finally, the first stage is ushered in by painless contractions, which after a while become somewhat painful, and finally more and more so. The mucous discharge often becomes more or less tinged with blood from the rupture of small vessels about the cervix, due to commencing dilatation and separation of the membranes. This, in the parlance of the lying-in chamber, is called a "*show*." The os uteri dilates more and more with every orderly contraction, the parts become bathed with moisture, and the upper portion of the vagina gradually dilates simultaneously with the os uteri. During this stage the woman may walk about, sit or lie down, as she finds most comfortable. Her respiration is usually continuous with every pain; there may be a sort of shivering-like respiration; at times violent shiverings and shudderings seize upon her, although she does not feel cold, and she wonders why it is she shakes so. This shivering is one of the phenomena most usually witnessed during an orderly first stage of labor.

The pains of this stage of labor are of a "cutting" or "grinding" character, and although they are of shorter duration than those which occur when labor is more advanced, they are, in many women, less easily borne, and give occasion to expressions of impatience. They usually begin in the back, extending around into the abdomen, but are unaccompanied with any bearing-down effort on the part of the

woman. Vomiting sometimes occurs at this stage, but is usually regarded as a favorable sign.

These pains indicate the gradual dilatation of the os uteri. This dilatation of the os is due not only to the pressure downward of the membranes and the presenting part of the fœtus, but chiefly, according to Dr. Rigby, to the contraction of the longitudinal fibres of the uterus, which, overcoming the action of the circular fibres, have a tendency by their action to open the os in every direction.

This state of things continues for a longer or shorter period until the dilatation of the os uteri is completed, which marks the termination of the first stage of labor. "As a general rule, it may be stated that regular and genuine contractions of the uterus sufficiently powerful to produce pain seldom require more than six hours to effect the full dilatation of the os uteri; in many cases a much shorter time will be sufficient; whereas, in others the first stage of labor may last for more than quadruple this period before it is completed; in neither can it be considered abnormal, and we usually find that where the pains of the first stage have been slow and lingering, they become remarkably quick and active during the second stage."—Dr. Rigby.

If the hand be placed upon the abdomen during the continuance of a pain, the uterus will be found to be hard and tense, as though it were drawn up into a knot. An examination per vaginam will reveal a greater or less dilatation of the os, which will be found during a pain to be hard, tight and circular, while the membranes protrude through the aperture, are tense, and communicate a feeling of firmness to the finger, which passes away and they become relaxed again as the pain subsides. Usually in primiparæ, at this stage, the os will be found to be high up, while in women who have already borne children it will be lower down and nearer to the pubes. At the same time, if any considerable progress has been made, the vagina will be found to be flaccid and dilatable, hot and moist.

II. *The Second Stage.*—The os uteri is now fully dilated, and a marked change takes place in the character of the pains and in the condition and appearance of the patient. Generally at the completion of the first stage, or quite early in the second stage, the membranes are ruptured and a portion of the liquor amnii is discharged. This fluid still farther moistens the parts, and its escape gives rise to a sense of relief to the woman, which is very grateful to her. There is quite frequently at this time a suspension of active uterine operations for a longer or shorter period, which likewise adds materially to her comfort, and gives her an opportunity to gather her strength for the try-

ing ordeal she has yet to encounter. Soon, however, pains return, and these are of a different character and serve a different purpose from those that preceded them. The efforts of the uterus are increased, the pains are longer, and the intervals between them are shorter; and yet, although there is absolutely greater suffering at this period than during the first stage, the woman bears up more heroically and gives less evidence of suffering. This is doubtless due to the fact that her attention is directed to the bearing-down efforts which attend the pains of the second stage of labor. These pains have been termed voluntary, but it is a question whether they are entirely so, for there is an undoubted sympathy between the uterus and vagina on the one hand and the muscles of the abdomen and other parts on the other, which gives to them an involuntary or irrestrainable character. To aid this bearing-down or expulsive effort the woman holds her breath, generally grasps something to aid her in bringing into play the necessary muscles of the trunk and extremities, her face becomes red or even dusky-hued, the respiration is quickened, the voice is hoarse, and she replies to questions in a short and spasmodic manner. When this is noticed in a woman in labor, it is certain that the second stage has set in and that the os uteri is fully dilated.

As the pains come on the presenting part of the fœtus advances, and as they go off it recedes; thus, by this wise provision, the vagina is gradually distended and dilated, acted upon and relieved. An examination per vaginam now reveals the disappearance of the os uteri, the cavity of the uterus and the vagina constituting a single channel, in the lower part of which the fœtal head is found completely filling up the passage-way. Occasionally the finger will encounter the anterior lip of the os uteri, for it is sometimes forced down by the advancing head and becomes distended over it.

As the pains and the quasi-involuntary muscular efforts continue the head advances more and more, and as it passes along the utero-vaginal channel pressure is made on the rectum, the contents of which are expelled, and even a part of the intestine itself in some instances. Finally, the floor of the pelvis is reached, and pressure upon and distension of the perineum and dilatation of the vulva follow. The head advances still farther under the operation of the combined muscular exertions, the perineum and vulva are distended, while the head of the fœtus is moulded to accommodate itself to the channel and outlet, and begins to be extruded through the vulva. Finally, at the moment when the expulsive efforts are at their greatest, and the woman is in a condition of intense mental excitement, the head is

born. This is usually followed by a moment of relief and rest, but frequently the efforts of the uterus are continued, and the child is forced into the world, one shoulder coming out under the pubic arch, and the other passing over the floor made by the distended perineum. As soon as the body of the child is born the remaining portion of the liquor amnii, that which was dammed up by the occupancy of the channel by the fœtus, is discharged, and the uterus contracts upon itself. This completes the second stage of labor.

III. *The Third Stage.*—After the termination of the second stage of labor in the birth of the child there is usually a lull, as though the uterus were resting from its exertions. Soon, however, there is a return of pain, which is slight and excites no bearing-down effort on the part of the mother. This usually marks the detachment of the placenta and its extrusion into the vagina, or even its expulsion through the vulva. This is commonly followed by a slight gush of blood. The uterus will then be found low down in the pelvic cavity, hard and globular, and contracted to about the size of a fœtal head. The subsequent pains—or after-pains, as they are called—serve the important purpose of completing the contraction of the uterus, and by thus closing the mouths of the uterine sinuses, rendered patulous by the detachment of the placenta, preventing hemorrhage which would otherwise occur.

A *pain*, in labor, signifies the contraction of such muscular fibres as are concerned in giving birth to the child, and the sensation of pain produced in such contractions results from pressure upon the nerves distributed in the tissues, especially of the uterus itself, thus contracting, the forcible distension of the os, and the dilatation of the utero-vaginal channel. The sensation of pain is felt in the back, abdomen and elsewhere by virtue of reflex action, by which the seat of the pain is located at the central origin of the nerves themselves, rather than at their peripheral terminations. During the entire course of the parturition the child takes no part in its delivery ; it is entirely submissive, as it has been during its entire stay in the uterine cavity, it is entirely neutral and passive, and is expelled entirely by the last act of reproduction on the part of the mother.

The more active the muciparous glands in this vital act the more easily is the child brought forth, the abundant glairy discharges rendering the labor a moist one and comparatively easy. Where little or none of this mucus is secreted the labor is called dry, and is consequently more painful and tardy.

The bag of waters, known as such, is simply the amnion and cho-

rion distended in advance of the presenting part of the child by the bulging of the liquor amnii in consequence of the pain.

The Duration of Labor is exceedingly variable—even when no obstacle seems to oppose the delivery—lasting from one hour to a week, and between these two extremes there is every intermediate grade. In general, labor is longer in primiparæ than in those who have had many children or are nearer the climacteric period of life. As a general rule, the average length of time may be set down at from six to twelve hours. The duration of the labor is expected to be announced as soon as an examination is made per vaginam. But much caution should be used in this matter, for it is discouraging to the patient to overrun the specified time. After the first stage is passed, the second will be two or three times shorter, other things being equal, the diameter of the straits all being normal and there being no undue rigidity of the soft parts. In other cases the time will vary according to the changed conditions. It is, after all, utterly impossible to predict the time of delivery with certainty.

The Effect of Labor upon the Mother and Child.—On the part of the mother there is often much despondency at the commencement of labor, and during the first stage there is apt to be more or less distress of body and mind—a feeling of despair, as if she could not endure to the end, or a feeling of fretfulness or irritability. But as soon as the second stage sets in the patient nearly always is in better spirits; she becomes more hopeful and bears her pains, and voluntarily exerts herself, with greater confidence that she will be delivered all right. She often perspires profusely and becomes much exhausted during labor. The whole process of parturition is apt to be a great shock to the nervous system, and there is danger of great prostration during delivery, similar in effect to that produced in persons sustaining a severe mechanical injury; even a complete collapse may sometimes occur. Great care is needed, immediately after the completion of this great event, that the patient get quiet sleep as soon as possible. She should not be allowed to talk, and much less should the accoucheur try to have a little pleasant conversation with her after the labor is over. Such a course cannot be too severely censured, since it may be attended with fatal consequences. A little sleep goes very far toward making all safe.

On the part of the child the effect of the labor varies with its severity and its duration; and the shock of the compression of the uterine contractions is more severely felt upon male than upon female children, as before stated. In many cases the sad effects are

immediate; in others more remote and proportionally more injurious.

In regard to the force possible to be called into operation during the progress of labor, the experiments and calculations of Professor Haughton are certainly very interesting. He has shown that the expulsive force of the uterus during the first stage of labor in accomplishing the dilatation of the os amounts to about 3.4 lbs. on the square inch. In addition to this, Dr. Haughton has calculated the force capable of being exerted by the mother in her expulsive efforts to be equal to 38.6 lbs. to the square inch. So that, taking the uterine and abdominal forces together, we have a total of 42.0 lbs. to the square inch as representing the force capable of being exerted in the expulsion of the fœtus. It is not to be supposed that this great power is necessary, or that it is brought into operation in any stage of labor. The immense power dependent upon the action of the muscles of the woman apart from those of the uterus, is more or less dependent on the will, and hence, it will be perceived, the use of chloroform must interfere with labor to the extent that it lessens the power to cause voluntary muscular effort.

The Mechanism of Labor.

The mechanical phenomena of labor have relation strictly to the child. It is very evident, from the knowledge we possess of the form and mechanism of the pelvis and also of the child, that there must be a mechanical adaptation of the latter to the former, in order that it can be born, and that in order to secure this result there must be certain *presentations* and *positions* at the superior strait.

Almost any part of the child may present at the superior strait, making almost an infinite variety of presentations, but for all practical purposes it will be sufficient to describe only five; for when the accoucheur recognizes either of these he will be able to determine what, if any, mechanical means may be needed to produce relief.

These five presentations are: I. Vertex Presentation; II. Facial Presentation; III. Presentation of the Pelvic Extremity; IV. Presentation of the Right Lateral Plane of the Trunk; V. Presentation of the Left Lateral Plane of the Trunk.

Each of these five presentations may have one of six positions—as, for instance, in *vertex* presentations the occiput must lead the way in labor, for it is, as it were, one end of the head. Then the occiput is described as being in the left iliac region, anterior, transverse or

posterior; or in the right iliac region, anterior, transverse or posterior. That is to say, the position is *left occipito-iliac anterior, left occipito-iliac transverse* or *left occipito-iliac posterior*, according as the occiput is in the left half of the pelvis and at the ilio-pectineal eminence, transversely across the pelvis, or at the sacro-iliac symphysis. And the position is *right occipito-iliac anterior, right occipito-iliac transverse* or *right occipito-iliac posterior*, according as the occiput is in the right half of the pelvis and at the ilio-pectineal eminence, transversely across the pelvis, or at the sacro-iliac symphysis.

In *facial* presentations the chin would lead. Then the position would be styled *right mento-iliac anterior, right mento-iliac transverse* or *right mento-iliac posterior*, if the chin were in the right half of the pelvis and at the right ilio-pectineal eminence, transversely across the pelvis, or at the sacro-iliac symphysis. And they would be styled the *left mento-iliac anterior, left mento-iliac transverse* or *left mento-iliac posterior*, if the chin occupied corresponding positions in the left half of the pelvis.

In presentations of the *breech* the sacrum is regarded as the point determining the position, and the positions are called, according to circumstances, the *right sacro-iliac anterior, right sacro-iliac transverse, right sacro-iliac posterior*, or *left sacro-iliac anterior, left sacro-iliac transverse, left sacro-iliac posterior*.

In presentations of the *trunk*, when the right lateral plane presents, the head must be either in the right or the left half of the pelvis, and hence we have the *right cephalo-iliac anterior, right cephalo-iliac transverse* or *right cephalo-iliac posterior*, and the *left cephalo-iliac anterior, left cephalo-iliac transverse* or *left cephalo-iliac posterior* positions. In presentations of the left lateral plane the same terms, according to circumstances, must express the positions with sufficient accuracy for practical purposes. Each of these presentations will now be particularly explained.

The Vertex Presentation.—This occurs very much more frequently than all the others put together; as, for instance, of twenty-two thousand five hundred and thirty-seven carefully observed cases, only eight hundred and fourteen were found to be of any other presentation. And of the vertex presentation the very much larger proportion of cases is found to be in the left occipito-iliac anterior position. This position, which occurs the most frequently, is found to be the most natural of all, and the one by which delivery is most easily accomplished.

The diagnosis of the vertex presentation is made out by feeling a

large, round, hard, smooth tumor, while examining per vaginam, either at the superior strait or descending into the cavity of the pelvis. The stethoscope will also reveal with much certainty the presentation of the vertex, by the beat of the fœtal heart being heard low down in the abdomen. The vertex presentation being made out, it remains to define the position by means of the position of the fontanelles and sutures.

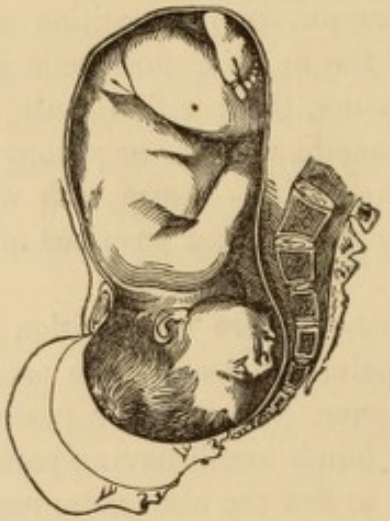
By carrying the finger a little backward and upward on the head the sagittal suture will be encountered, and if it runs from before backward, from left to right, and if the anterior fontanelle is toward the right sacro-iliac symphysis, the position must be left occipito-iliac anterior. But if the anterior fontanelle is found to be at the left ilio-pectineal eminence, the position must be right occipito-iliac posterior. Either fontanelle, anterior or posterior, may be ascertained by tracing along on the sagittal suture each way, backward or forward. In this manner are all the positions of the vertex presentation ascertained.

The mechanism of labor where the position is with the occiput in the left half of the pelvis is usually the same in all cases. The occiput being left anterior, transverse or posterior, the contractions having begun and the liquor amnii having partially escaped, the first effect upon the child is to flex the head more perfectly upon the chest, which constitutes the first stage in the mechanism of labor. This has the effect to bring the long diameter of the head in harmony with the axis of the superior strait. The second stage is completed when the head descends into the cavity of the pelvis till its crown presses upon the floor of the pelvis. The third stage and rotation is accomplished from left to right till the progress of the head is arrested by the back of the neck resting upon the symphysis pubis. While the third stage is in progress the shoulders rotate into the long diameter of the superior strait and engage therein. During the fourth stage the shoulders and chest descend to the floor of the pelvis, extension of the head upon the neck takes place, and the head is born by the occiput slipping up in front of the symphysis pubis and the perineum retracting from over the forehead, face and chin of the child. (See Fig. 43.) Now the fifth and last stage in the mechanism of labor is accomplished by the shoulders rotating into the long diameter of the inferior strait, which produces external rotation of the head, and the child is delivered.

It will be observed that the external rotation of the head is not an isolated fact, but that it is in consequence of the shoulders rotating

into the long diameter of the inferior strait, and that this corresponds to the previous rotation of the shoulders into the superior strait simultaneously with the rotation of the long diameter of the head into the inferior strait. The face in these positions always appears on the right thigh of the mother. The right or anterior shoulder is the first to appear in the fissure of the vulva, but the left or posterior shoulder is the first to be set free by means of the perineum retracting from it, and it is thus in reality born first.

Fig. 43.



In Figure 43 the relative positions of the head are seen in the various degrees of disengagement and extension, the nape of the neck resting first behind and then under the symphysis pubis.

The mechanism of labor, the occiput being in the right half of the pelvis, whether it be anterior, transverse or posterior, is all the same usually as that just described. The same stages are passed through, but the rotations are now all from right to left, and consequently the face will appear at the left thigh of the mother instead of the right as in the former case. When the occiput is at the right sacro-iliac symphysis it should always rotate to the front and appear under the arch of the pubes, precisely the same as when it is at the left sacro-iliac symphysis; which it sometimes fails to do, but slips into the hollow of the sacrum and remains behind till the completion of the labor, when the forehead appears under the arch and the occiput is first disengaged at the posterior commissure of the vulva. (See Fig. 44.) It may happen that when the occiput is in the hollow of the sacrum the head becomes gradually extended by the vertex being detained in the sacral depression, and the presentation becomes converted into one of the face.

Inclined or irregular vertex presentations are usually aided in recovering a regular presentation by changing the mother's position upon the same side as the inclination; thus, if the sagittal suture is inclining far upon the right side, by turning the patient upon the right side the child's body will fall down upon that side and the inclination will be rectified at once; and if inclined upon the left side, by turning the patient upon that side a similar result will be attained.

Fig. 44.

In Figure 44 is portrayed the disengagement of the head, it having failed to rotate to the front, as usual, to come under the symphysis pubis.

After the birth of the child, if inspection is made at once, it is always easy to tell the position it occupied from the sero-sanguineous tumor upon that part which presented; for the presenting part not being in contact with anything and pressure being made upon all other parts of the child, the fluids are forced into this part; all of which soon subsides after the birth of the child. This sero-sanguineous tumor need not be mistaken for cephalæmatoma, for the former exists at birth, the latter does not appear for some hours after; the former is large and purple, the latter smaller, the skin not discolored; it is fluctuating or pulsating and has an osseous border. The sero-sanguineous tumor does not exist if the child perishes long before birth; from which fact a medical jurist can draw an important inference in fixing upon the time of death of a newly-born child.

Facial Presentation.—According to standard authorities this presentation occurs about once in three hundred labors. The head, instead of being flexed upon the chest, is extended upon the neck, so that the face looks right down into the superior strait. In vertex presentations the occipital end of the long diameter leads the way in parturition; now in facial presentations the other end of the long diameter must lead the way—that is, the chin; of course, then, the

chin must become the point of departure. Then we have the left mento-iliac, anterior, transverse or posterior; or the right mento-iliac, anterior, transverse or posterior.

The cause of this unnatural presentation, except when it is produced by the accidental exchange of other presentations, can only be accounted for as the result of some previous conditions of the mother, which may be beyond our power to designate exactly.

This presentation of the face is diagnosed by feeling the depression of the eyes, the prominence of the nose, the mouth and the chin, and more especially by feeling the upper and lower gums and the intervening tongue. The relative position of the chin will also determine the exact position in this presentation.

Mechanism.—As the right mento-iliac transverse position is the most frequent of any of the facial presentations, we will describe the mechanism in this for all the others—since they are similar—only it should be remembered that the rotation will be from right to left, or the reverse, according as the chin is in the right or left iliac regions. After the liquor amnii has been discharged and the expulsive pains begin to operate, the first effect is to produce forced extension of the head upon the trunk, so that every pain has a strong tendency to throw the child's neck backward. (See Figs. 45 and 46.) Descent now goes on, the chin leading the way, till its farther progress is obstructed by the breast coming in contact with the superior strait. Now, rotation must commence and continue till the chin comes round in front sufficiently for the length of the neck to span the depth of the pelvis, and the chin to pass under the arch. By this time complete descent and rotation have taken place, for the depth of the pelvis is here so shallow as to allow the neck to span it completely, and the crown of the head rests upon the floor of the pelvis; and this is the only point at which such a result can be obtained.

Flexion now begins to take place slowly around the symphysis as a centre, and finally the chin rises up in front of the symphysis pubis, and the crown of the head descends on the anterior face of the sacrum and coccyx, and is finally disengaged at the posterior commissure of the vulva. (See Fig. 43.) External rotation is effected by the shoulders rotating into the inferior strait. Internal rotation causes the shoulders to place themselves in the long diameter of the superior strait. By no other means can a viable child be born in facial presentations than that rotation shall bring the chin under the arch of the pubis, unless the presentation itself should be changed into one of the vertex or some other. Sometimes this actually does spontan-

eously take place by the chin, when it is posterior, engaging in the sciatic notch; the progress of the child continuing gradually flexes the head upon the trunk, and the vertex appears under the arch of the pubis, as in original vertex presentations. Inclined or irregular facial presentations—when the chin or one cheek is found in the centre of the superior strait—by continued contractions gradually regain the normal face presentation.

Fig. 45.

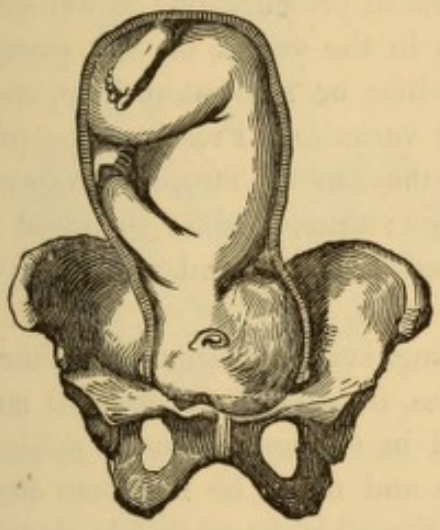


Fig. 46.

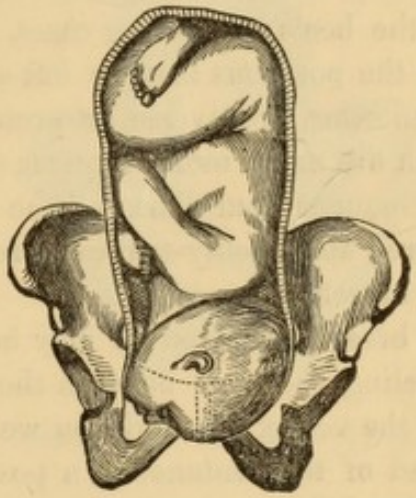


Fig. 47.

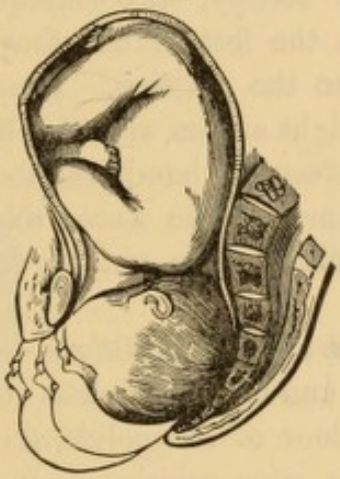


Figure 45 exhibits the face in the right transverse mento-iliac position, after the forced extension.

Figure 46 shows the face in the same position, although more fully engaged.

Figure 47 exhibits the passage of the chin under the symphysis, the head descending on the anterior face of the sacrum and coccyx, and the occiput departing more and more from the shoulders.

Facial presentations are by no means so safe for mother or child as are those of the vertex, yet in a very large majority of the cases they terminate favorably to both. The position is such that at every con-

traction the expulsive force upon the child is much diminished by the rolling back of the head upon the spine. Dilatation and rotation are not effected so rapidly on this account, and the child must of course remain, as a general thing, much longer in the pelvis.

Presentations of the Pelvic Extremity.—We class as such presentations all those of the feet, knees and breech, since in labor the same mechanism pertains to all alike. In the breech presentation the sacrum forms the point of departure for determining the relative position; the anterior face of the tibia in presentations of the knees; and the heels in footling cases. As in the vertex or face presentations the positions may be left sacro-iliac or right sacro-iliac, and of the anterior, transverse or posterior varieties. Presentations of the breech are much more frequent than those of the face, and very much less frequent than those of the vertex; thus, of sixty thousand four hundred and twenty-two cases reported, two thousand and eighty-two were breech presentations.

A breech presentation may be recognized, on digital examination, by feeling the cleft between the nates, instead of the sagittal suture as in the vertex; in addition we find in the anus with its sphincter, instead of the fontanelles, a positive and not to be mistaken characteristic. The coccyx and sacrum will enable us to decide as to the part of the pelvis they occupy, and consequently to determine the position exactly; when the feet or one foot presents, the heel will enable us to decide as to the position. It must be recollected that a foot is articulated at right angles with the leg, which fact alone will enable us to decide between the hand and foot, since the hand is in a straight line with the arm. The knees seldom present, but when they do it is easy to make them out by recognizing the popliteal spaces.

The Mechanism of Breech Presentations.—The position being the left sacro-iliac anterior, and the membranes ruptured, the first stage is one of descent to the floor of the pelvis, the child's legs, arms and chin being folded in the same position as in the vertex presentation. The next stage is one of internal rotation, where the left hip comes under the arch of the pubes, and at the same time the shoulders are made to come into the long diameter of the superior strait. The next stage is the expulsion of the breech, during which time the child is strongly flexed upon its left lateral border, to correspond to the curve in the excavation of the pelvis. As the breech is delivered the body descends with the arms folded up, and the chest and shoulders rotate into the long diameter of the inferior strait; the long diameter of the

head passes through that of the superior strait, and finally rotates itself into the long diameter of the inferior strait; and the head is born with the chin still strongly flexed upon the chest, and the back of the neck and occiput under the pubic arch. (See Figures 48, 49 and 50.)

Fig. 48.

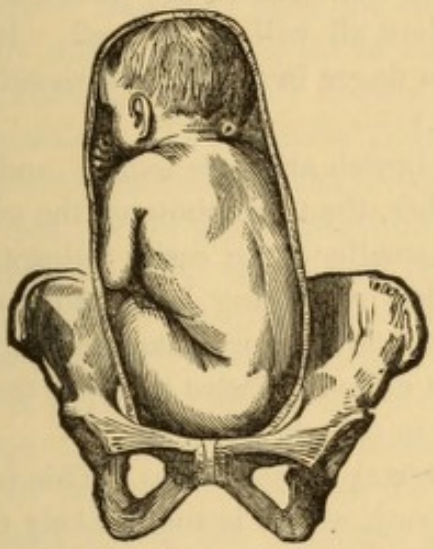


Fig. 49.

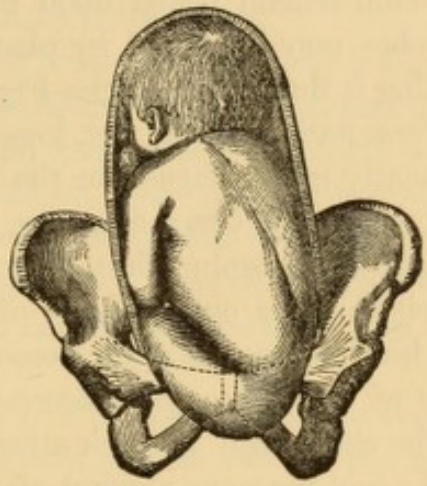


Figure 48 exhibits the presentation of the breech in the left sacro-iliac anterior position.

Figure 49 exhibits the same position after internal rotation is accomplished.

Fig. 50.

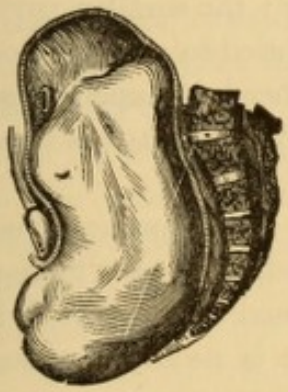


Fig. 51.

Figure 50 illustrates the delivery of the breech.

Figure 51 exhibits the delivery of the head in the sacro-iliac posterior position. The faint outlines show the successive stages of the flexure of the chin upon the already delivered chest, which may be greatly assisted, if need be, by the pressure of the operator's finger introduced into the child's mouth.

If the breech is in the right sacro-iliac posterior position, the mechanism is the same, only rotation occurs from right to left. If the feet appear first, or the knees, the mechanism is still the same as in the former breech positions. Sometimes it occurs that rotation is reversed, so as to bring the occiput into the hollow of the sacrum, in which case the face will appear under the arch of the pubes, and if the chin remain flexed upon the chest all will go on well. If not, the chin may be flexed by placing a finger in the child's mouth and pulling it downward. (See Fig. 51.)

Presentations of the feet, knees or breech are more tedious, and consequently rather harder for the mother, than are those of the vertex. The largest part escaping first, the smaller quite easily follows; but the smaller escaping first, there is less remaining in the uterus with which to force out the most difficult part. For instance, if all but the head escapes, it often becomes a difficult matter to expel that for want of leverage or purchase-power in the uterus itself.

The child itself is much safer in vertex presentations. This is true in the first place on account of the cord, which is more likely to become compressed and strangulated in breech presentations—an accident from which the child necessarily perishes. For after the breech and abdomen are born up to the navel, the cord must be more or less compressed till after the delivery of the head, since the placental extremity of the cord extends of course far above the head, even to the fundus of the uterus. Another danger to which the child is exposed in breech presentations arises in this manner: the smaller part escaping first, the uterus becomes sufficiently emptied to allow the contractions to detach the after-birth before the head is expelled, and the child perishes from asphyxia. Thus, it is evident that it is very much safer for the child to have the head expelled first.

It is not safe for the accoucheur to leave a breech presentation, even for a brief period, after the os is well dilated, as it may happen that during an expulsive pain the cord is prolapsed and expelled beyond the vulva. In such a case delivery at once is necessary to save the life of the child.

Presentations of the Trunk.—These are all comprised under presentations of the right lateral plane or of the left lateral plane, either anterior or posterior. The head is always taken as the point of departure, it being either in the left or in the right half of the pelvis, constituting the left cephalo-iliac anterior or left cephalo-iliac posterior, or the right cephalo-iliac anterior or right cephalo-iliac posterior. In each case the back is either anterior or posterior. It is quite common to find

the hand or the hand and arm in the vulva in either of these positions; but this is of no account, as it neither alters nor complicates the matter at all. This presentation occurs rather more frequently than do those of the face; many estimates have been made, but a fair average would be about one in one hundred and fifty cases. A failure on the part of Nature to place the child in a more auspicious position is the only assignable cause for so unfortunate a condition.

The shoulder is usually the first point touched in making a digital examination. The acromion process is distinctly made out, and then the clavicle, the spine of the scapulæ and the axillary space, all combined and always within reach of the finger, confirm the presentation to a certainty. All these being made out, we can tell the position of the child, for the axillary space always looks away from the head, and the clavicle will also tell where the face is, as the scapula will tell where is the dorsal region of the child.

When the elbow alone is accessible to the finger, it can be recognized by three protuberances, the olecranon process and the two condyles, and also by the transverse space in the bend of the elbow, and by the vicinity of the chest and the intercostal spaces, for the arm is always found lying upon the chest. The elbow always points away from the head, and the forearm is always on the anterior plane; thus we at once know where the head and face are when we diagnose an elbow.

If the forearm is not doubled up, but lies in the vagina, by turning the palmar surface upward and in front, the thumb will always indicate which hand it is by its being next to the corresponding thigh of the mother, and then to determine where the head is it will be necessary to slip the finger up to the axillary space.

When the hand comes out of the vulva its dorsal surface will always correspond with the direction of the head, and the little finger with the dorsal surface of the child.

The presentation of the trunk at the superior strait is always an indication for manual treatment. Still, under certain circumstances a spontaneous delivery may take place, and this is effected either by spontaneous version or by spontaneous evolution. Of spontaneous version there are two varieties—one cephalic, the other pelvic. In the former, where the shoulder presents, the trunk ascends under the influence of the uterine contractions and the vertex comes into the superior strait; in the latter the head ascends into the fundus under the same influence, and the trunk comes into the superior strait; and in either case of course a spontaneous delivery is effected.

*Spontaneous Evolution.**—"The mechanism of *spontaneous* evolution is much better understood, and in its description we shall find all the divisions of the mechanism of natural labor in the presentations of the vertex and face. M. Velpeau admits a spontaneous cephalic and a spontaneous pelvic evolution. But since we can conceive of a spontaneous cephalic evolution only in abortions, or in cases where the fœtus is completely putrefied, we shall speak of the pelvic evolution alone.

"Take, for example, the first or left cephalo-iliac position of the right shoulder. In this variety we find the cephalic extremity is placed in the left iliac fossa, the breech in the right iliac fossa, the dorsal plane of the fœtus being in front, the sternal plane behind; so that its long axis is almost exactly in the direction of the transverse diameter.

"Immediately after the rupture of the membranes the waters almost entirely escape; the uterus forcibly contracts, and pressing in every direction upon the trunk of the fœtus tends to engage the presenting part in the excavation.

"A. Under the influence of the uterine contractions the fœtus in its long axis is strongly flexed upon the side opposite to that which presents; in the case proposed the head is turned toward the left side and the breech toward the hip of the same side. This first change in the situation of the fœtus may be designated as the *movement of lateral flexion.*

"B. Then begins a second period, which we may term the *period of descent;* that is to say, as the contractions are renewed the shoulder tends more and more to approach the inferior strait, and the trunk, bent double, engages itself deeply in the excavation. But here appears the same difficulty as in presentations of the face (see position of the face), that it is impossible for the shoulder—the trunk being thus placed transversely—to reach the inferior strait unless the head at the same time engages with it in the excavation, or unless the neck should be long enough to reach the whole length of the lateral wall of the excavation, which we have already seen to be impossible. The descent of the shoulder is governed, then, by the length of the neck.

"C. Then follows a movement of rotation, by means of which the long axis of the child, originally transverse, assumes almost exactly an antero-posterior direction, so that the head rests above the horizontal ramus of the pubis near its spine, and the breech above, or rather in front of, the sacro-iliac symphysis. The movement of rotation being accomplished, that of descent may now be completed, since

* Translated from the French of M. Cazeaux.

the side of the neck is placed behind the symphysis pubis, equaling its whole length. Thus the forearm and arm make their appearance at the vulva, the arm and shoulder having passed under the arch of the pubis.

"D. Under the powerful efforts of the uterus the trunk, bent double, is pressed into the excavation, but the shoulder can descend no farther, because it is arrested by the shortness of the neck. The expulsive force acts upon the pelvic extremity, forcing it more and more toward the floor of the pelvis, and causing it to traverse the anterior face of the sacrum, till finally it reaches, depresses and drives the perineum before it. Presently the vulva dilates, and—the *acromion remaining fixed under the symphysis*—the superior and lateral portion of the chest, the inferior part, the loins of that side, the hip, the thighs, and finally the whole extent of the lower limbs, successively make their appearance at the posterior commissure of the vulva; and the head and left shoulder only remain in the excavation, and these parts are extracted or expelled without difficulty. This last movement may be considered the fourth stage of the labor, and may be named the stage of *deflexion* or disengagement. This movement has for its centre the shoulder engaged beneath the symphysis; and if from this centre we extend lines to all the points of the side of the fœtus, we shall have here the radii which subtend the antero-posterior diameter of the inferior strait.

"This is, very exactly, the mechanism of the spontaneous evolution in those cases in which the posterior plane of the child was primarily in front; that is, in the first position of the right shoulder, and in the second position of the left. For in this latter there is this difference only, that the movement of the rotation must be in the opposite direction, that is, the head must turn from the right to the left, and from behind forward; and the breech must turn from left to right, and from before backward.

"But where the sternal plane of the fœtus is originally turned forward—as in the first position of the left shoulder and in the second position of the right—the movement is somewhat different. M. P. Dubois, who had an opportunity to see two such cases, states that at the moment of the disengagement of the breech at the anterior perineal commissure the entire trunk of the child experienced a movement of torsion that brought the dorsal plane of the fœtus still farther forward and upward, which, without this movement, would have been directed toward the anus. Thus it happens—and we cannot but declare it a very remarkable circumstance—that even here we find

the same general law that we have already seen to regulate every natural labor, *that whatever may be the primitive situation of the posterior plane of the fœtus, it ultimately places itself in relation with the anterior parts of the pelvis.*

"As was observed at first, it is easy to submit the mechanism of spontaneous evolution to the same divisions as the delivery by the face. We have, in fact, a first period of *flexion* of the trunk of the fœtus toward the side opposite to that which presents; a second one of *descent*, interrupted by the third movement or stage of *rotation;* a fourth period of *deflexion* or *disengagement;* and according to the observations of M. Dubois for the dorso-posterior positions, we may add a fifth movement, or period of *exterior rotation.*"

Such is the account given by M. Cazeaux. Of course no one at the present day would think of allowing any of these unnatural presentations to continue for the sake of observing a possible spontaneous evolution. Speedy interposition should be instituted for the humane purpose of saving both mother and child.

CHAPTER XIII.

THE CARE OF THE WOMAN AND OF THE CHILD DURING AND AFTER LABOR.

The Care of the Woman During Labor.

WHEN summoned to attend upon a case of labor, it is better to go provided with a male and a female catheter, a pair of forceps and a blunt hook. Emergencies may arise requiring in haste the use of one or more of these instruments, and no time should be lost in sending for what might so easily be taken in the first instance. A case containing medicines should likewise be taken to meet any emergency demanding the exhibition of the appropriate homœopathic remedy.

Before entering the room our arrival should always be announced, that we may not shock our patient by our unexpected entrance. We should take especial care to appear in an easy, unaffected manner; and we should have no other thought in our mind than to attend strictly to our business in as agreeable a manner as possible.

First we should inquire into the nature of the pains, with a view to prescribe for any abnormality that may appear in the sufferings of our patient.

When this grand function commences, the pregnant woman comes into a new physiological state, and if harmony exists throughout her entire organism, her labor will be comparatively free from suffering, and parturition will be accomplished as speedily as is consistent with safety. If a *want of harmony* should exist, *symptoms* will be developed and manifested in some way, by means of which the follower of Hahnemann will be guided to make that selection from the great storehouse of the Materia Medica which shall at once relieve and remove the disarray and re-establish harmonious action. *Anæsthesia should not be resorted to;* oblivion should not be courted at the risk of safety; for the symptoms masked and suffering suppressed, crushed under the ponderous action of chloroform or ether, what guide has the physician to the selection of a remedy for disorder, or to a knowledge even that disorder has arisen?

After observing attentively, without seeming to look at the woman, the nature of her pains, we may, when we think it necessary, propose an examination per vaginam, in order to observe the condition of the internal organs, the presentation, etc. This vaginal examination should be conducted in the following manner: The woman should lie on her left side upon a couch or bed, with the thighs drawn up toward the abdomen. The forefinger of the right or left hand of the accoucheur should then be introduced into the vagina, and passed upward and backward in a direction toward the promontory of the sacrum, to reach the uterus and detect the os. The finger and even the hand used in making the examination should be anointed with lard or some other innocuous grease, for the double purpose of facilitating the examination and protecting the hand against possible poisoning.

It may not seem out of place to observe that the first object of search will be to see if the woman be pregnant, for it has sometimes happened that every preparation has been made for parturition when no pregnancy existed. The writer has met with such cases where the real facts were not revealed until examination was made per vaginam as if to ascertain the presentation.

Having, then, determined the existence of pregnancy, which may be ascertained by noting the condition of the os and cervix, and other signs of pregnancy laid down in a preceding portion of this work, the next thing is to learn if the patient be in labor, or whether she

have not, instead, certain abdominal or lumbar pains called "false pains." If she be really in labor, we shall find, on retaining the finger in the os uteri during a few pains, a rigidity and tenseness of the os accompanying every contraction, and followed, after the pain, by a corresponding looseness and state of relaxation. Or if the membranes are entire and become tight and firm under the contraction, relaxing as it passes off, the woman is certainly in labor.

The next step is to inquire if she is at full term. This inquiry will of course be settled in our own minds affirmatively if we find the neck of the uterus absolutely blended or spread out into the globe of the uterus. The internal os will not be felt, the orifice leading to the membranes now being simply that of the os tincæ. If the internal os still remains closed or partially so, and the cervix uteri be found still capable of being distinguished, the full term has not arrived; and we must hasten, as in threatened abortion or premature labor, to arrest all further progress by means of quietness and the exhibition of the proper homœopathic remedy.

The accoucheur should determine the position and presentation as early as possible; and if it be one of the usual and natural ones, he has little to do but watch and wait—*watch* the conditions, note the symptoms, and apply the homœopathic remedy when needed; and *wait* for Nature to complete the process she has incepted, in her own best manner. It is well to cheer the patient at this period by telling her that "all is right" (if so it really be), as such a communication rarely fails to add to her comfort of mind and her contentment to bear the pangs to come.

The next question to determine is, Are the membranes ruptured? And this is not always an easy task, since they are sometimes so closely drawn over the scalp as to deceive a novice. But during a pain, unless the head has already descended low down in the excavation, so much water will be forced down between the membranes and the scalp as to make it quite apparent that the former are still intact. And besides, there is a certain greasy smoothness perceptible in the touch of the unruptured membranes which differs from the sensation experienced in feeling the hairy scalp of the child. Bearing these things in mind, we never need be mistaken if we press firmly down upon the scalp, for the rough, hairy condition of the uncovered scalp is never simulated by the unbroken membranes.

Next we wish to determine how far the labor has advanced and what part of the child presents. In *primiparæ* particularly it is not always easy to find the os uteri, for sometimes it is not discoverable

till we carry the finger far upward and backward upon the anterior face of the sacrum, nearly up to its promontory. In such cases it may be necessary for the woman to lie on her back till the anterior obliquity disappears; and this can be aided by the accoucheur elevating the fundus with one hand applied externally, and with a finger of the other hand in the os to draw it down.

If it now appear that we have a timely labor to treat, it will be necessary to provide for it accordingly. Where we can have our choice the woman should be placed in a large, airy chamber, exposed to the sunny side of the house, and as much retired as possible, if the above more important points can likewise be secured. The temperature of the room should be about sixty-five degrees during labor, about seventy degrees afterward; the covering should be sufficient for the comfort of the patient. While labor is at its height the covering should be reduced as much as possible, according to existing circumstances, thus compensating in some degree for the accumulating heat of labor. Bright light should not be permitted to strike the eye, as being liable to induce nervous irritation. Particular care should be taken that the feet are comfortably warm, not alone for the sake of personal comfort, but the pains of labor will be more apt to be natural. A strict adherence to these rules may prevent fatal or at least dangerous accidents, such as hemorrhages, chills, metastases, etc. If the bowels have not been freely evacuated within twelve hours, she had better take a large injection at once, that no accumulation of feces remain in the rectum. She should now be suitably dressed for the occasion. Let her be arrayed in the dress she intends to wear in bed, but so adjusted that it cannot slip down below the waist. Next to this let an old sheet or something of the kind be pinned around her, so as to cover all the lower part of the body, hips and legs. Next the bed must be suitably prepared for its own protection and for the comfort of the patient. An india-rubber sheet about one yard wide should be placed across the middle of the bed upon the mattrass. A clean sheet should now be spread over the whole bed. Across the foot of the bed an oil-cloth or another piece of india-rubber a yard wide should be placed, and this covered with a thick doubling of blanket. The patient should lie upon this, on her left side, with her feet placed against the foot of the bed as a purchase during the expulsive efforts of labor. She should lie with the breech near the edge of the bed, with her thighs flexed at right angles with her abdomen, and the legs at the same angle with the thighs. During the expulsive pains an assistant may hold her hands, or a towel may be so attached that she

can assist herself by drawing with her hands in the direction of the support of her feet.

The rule to observe in relation to attendants is to have in ordinary natural labors only the nurse and the doctor. The doctor should be in and out from time to time, as his judgment may dictate. It is better to be absent as much as possible, and keep due surveillance over the case, till toward the close of the labor. In the first stage the woman may make herself as comfortable as she best can by walking about, sitting in her chair, or changing from the one to the other. Unless the labor be very protracted, cold water or other beverage of a cooling and refreshing nature is the only refreshment required.

When the head has commenced descending into the cavity of the pelvis, and the os uteri is fully dilated, the accoucheur should not absent himself from the patient long at a time. It will be better for him to take his seat at the patient's bed, in a position to watch the appearance of her face, place the finger on the presenting part, mark well its progress, and be ready for any emergency that may arise. Some women are troubled with a terrible shivering during the early part of labor or at its commencement, and sometimes it follows immediately afterward, but it is of no account. When it occurs as a first symptom the labor is apt to be quick.

No obstetric apothegm carries with it greater weight of truthfulness than this, that "meddlesome midwifery is bad" when applied to *natural* labor. All fingering and manœuvring, with the hope of bettering the process of nature, is uncalled for and injudicious. Parts that under the severest tax laid upon them by a provision of nature quickly rally to a normal condition and tone, may be seriously injured and give rise to much after suffering by being subjected to "manipulation." Interfere judiciously where interference is necessary, but trust to Nature where she is sufficient of herself, seeking aid from homœopathic remedies where aid seems requisite.

Women in labor are apt to be frightened at the noise of the rupture of the bag of waters, so that it is best to forewarn them in time to prevent any alarm. When the labor seems delayed by the tardy discharge of the waters, and the os is fully dilated, and yet the head is evidently kept back by something, it is better to rupture the sac during a pain and let the waters escape; then the labor will advance much faster. When the membranes are tightly drawn over the head they can be scratched through by means of the finger-nail, and then they may be torn up each way by forcing the finger between them and the scalp. Care should be taken, however, during the examina-

tions made in the earlier part of the labor, when the os uteri is not fully dilated, not to rupture the membranes, as such a mischance as the premature discharge of the liquor amnii is apt to render the labor more tedious than it otherwise would be.

Sometimes the child is very movable at the superior strait, and several portions present in alternation; in such cases when the head presents the membranes may be ruptured and the head thus caused to engage in the superior strait. Where there is evidently an over-distension of the uterus by excessive amount of liquor amnii, weakening the contractions, the membranes may be punctured at any time we are certain of such a complication. If the membranes should be found to be too dense to be ruptured by the finger-nail, a probe may be introduced into the vagina, carefully guarded by the finger, by means of which a puncture can easily be made during a pain.

During the first stage of labor the woman should never bear down, since her strength must be exhausted in making such useless efforts. It is only in the second stage, when the expulsive pains occasion a sort of involuntary forcing, that advantage can be taken of this effort, for then only is it useful. Too much voluntary exertion should not be used at the very last, for fear of lacerating the perineum. Nor should a woman be allowed to rise to the chamber near the close of the second stage, for fear of accidents, however much she may desire to evacuate the bowels, for it is far easier to remove such discharges from the bed than to extricate a new-born child from the chamber, as has sometimes been necessary in such cases.

As the head is about to escape from the vulva the accoucheur should bear his right hand upon the perineum, in such a manner as to encircle the labia as much as possible with his thumb and fingers; and while he is drawing down with these upon the labia, he must press gently forward and upward upon the perineum with the palm of the same hand.

The Care of the Child during Labor.—Immediately after the expulsion of the head we should feel with one finger about the child's neck to ascertain if the cord is around it; if this is the case, a slight elevation of the cord upon the finger will cause the placental extremity to yield; thus the loop will become large enough to slip over the head. Should the cord prove too short for this purpose, when the next pain occurs it may still be loosened sufficiently to enable the child to pass through it in safety without becoming strangulated.

When the head is delivered it should be carefully supported and

protected from the clots and other discharges from the uterus, the accoucheur patiently waiting for the subsequent contractions of the uterus to complete the delivery. The more we trust to nature in this respect, the better it will be for the mother, and the less will she suffer from subsequent hemorrhage and after-pains. No interference should be attempted at this stage unless demanded by the child seeming to be in danger of strangulation or apoplexy, which will be evidenced by its face becoming livid, congested and swollen. In such cases the child should be delivered at once, even at the risk of hemorrhage from want of uterine action. Gentle traction may be made by the head; or, better still, if the finger can be passed up and hooked into the axilla, traction may be made in that way. When the occiput remains posteriorly, we should not interfere any more than when it rotates to the front, all the instructions of other accoucheurs to the contrary notwithstanding.

After the expulsion of the child it is better to turn its back to the mother and let her covering fall between the child and herself, thus at the same time bringing the child to our full view and completely protecting the mother from cold or exposure. A soft napkin should now be used to wipe the child's face, eyes and mouth. It usually cries lustily as soon as it is born, but it should be permitted to lie undisturbed for some five minutes, or until respiration is fully established. By that time, in most cases, the cord will have ceased to pulsate until within three inches and a half of the abdomen. It should then be cut about three inches from the abdomen, care being taken that the blood does not spurt over the bed or one's own clothing if pulsation still continues. The child should then be permitted to lie for about five minutes longer, to allow the remainder of the effete blood to ooze away—just such quantity as would otherwise have been returned to the placenta. This blood is loaded with effete and noxious material, and on its way to the placenta for such purification as it could there receive was arrested in its course, and if permitted to enter into the general circulation of the child, or to lie congested in that part of the cord between the ligature—when applied—and the bifurcation of the iliac arteries, may do great harm to the general health of the child, and I am convinced often does. In one minute the flow from the cord will have ceased. For the sake of cleanliness during the washing of the child, it will be more satisfactory to apply a ligature to the cord after the gush of effete blood has fairly ceased; for in some cases blood continues to ooze for some time, thus keeping the child constantly soiled during washing. The child should then be handed

to the nurse, wrapped in a blanket. This may be neatly done by seizing the feet with one hand and placing the other under its shoulders and neck, and thus depositing it carefully in its blanket, which should be handily laid for its reception. It is the best plan to simply anoint thoroughly the newly-born babe with olive oil instead of immediate washing. After which the oil should be carefully wiped off and the child dressed. This cleansing will suffice for the first twenty-four hours. Should the cord seem large and tapering from the abdomen, care should be taken not to wound the intestine, a portion of which may be within it. In such a case the cord should be cut beyond the extruded intestine, and the gut should be returned into the abdomen and retained there by means of the belly-band. After it has been properly cleaned and thoroughly dried, a piece of raw cotton or cotton batting of the size of the palm of the hand should be laid on the abdomen just above the navel, the remnant of the cord laid on it with its cut end pointing upward, and another piece of cotton of the same size placed over the cord, the whole being kept in place by the usual belly-band. So well convinced am I that this is the best plan of treatment for the navel that I do not think I shall ever change my practice to go back to old methods.

When the breech presents great care should be observed not to interfere further than to watch the condition of the cord after the lower part of the body is born. We should take hold of the cord with the thumb and finger, and draw it down a little to prevent it from being dragged upon at the navel. Then it should be examined to ascertain if pulsation still continues; if not, try to disengage it from compression by slipping it sideways or by drawing it a little lower down; for as long as the cord pulsates there is no danger to the child. But there is danger in this breech presentation of making so much traction upon the child as to pull the body away from the flexion of the head, and thus cause the chin to hang upon the superior strait or to become fixed in the cavity of the pelvis. Great care should be observed till the head has descended into the pelvic cavity, and then, if there is need to hasten delivery, the finger can be introduced into the child's mouth, by which means extension may be prevented and the child delivered at once.

The death of the child in breech presentations is nearly always due to the compression of the cord; therefore when its pulsations are seriously interfered with it will be better to make traction upon the lower extremities during a pain, but with great care; and as soon as the finger can be introduced into the child's mouth a good deal of

pressure can be applied to keep the chin down upon the chest, and then almost any amount of force can be exerted upon the shoulders with safety. As already stated, it is better as far as possible to avoid manual interference either with mother or child during labor. The more perfectly Nature can be helped by the use of homœopathic remedies where assistance is required, the better will it be for both parties —much less suffering will be entailed and much better health will be enjoyed in after life.

Diet and Regimen of the Woman in Labor.—Cold water or lemonade is all the refreshment usually required during labor. The use of fermented liquors of any kind should be dispensed with. If the patient is in the habit of taking tea, a small quantity, either cold or warm, will sometimes be found very refreshing. A little broth or some other light food may be allowed in case the labor proves tedious, but no spices.

It is necessary that the enema should not be forgotten where it may be needed, in order that the rectum may be as free from obstruction as possible, and for other obvious reasons. The patient should be encouraged to evacuate the bladder occasionally during labor, and if there be reason to apprehend an accumulation of urine which she cannot void, the male catheter should be at once employed. Much danger and inconvenience is avoided by such precautions, the over-distended bladder often becoming so paralyzed that the urine cannot be voluntarily passed for days. Therefore always beware of an over-distended bladder during parturition. After the discharge of the liquor amnii a distended bladder can be detected by the fluctuation between the pubes and the umbilicus. In order to introduce the catheter the patient should lie flat on her back, and the presenting portion of the child should be pressed backward and upward as much as may be necessary.

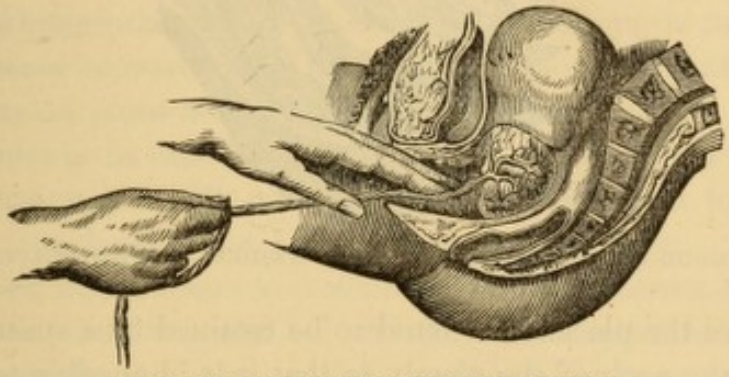
On the Attentions to the Woman Immediately after Labor. Delivery of the Placenta.

After the child has been handed to the nurse the next care of the accoucheur should be for the delivery of the *placenta*, for until it is removed and the uterus has contracted firmly the woman cannot be regarded as altogether free from the danger of flooding. In most cases there is a momentary suppression of the pains immediately after the expulsion of the child; upon which the pains return in a diminished degree, and the placenta usually becomes entirely detached from its uterine connections, and either lies free in the vagina or is expelled

without the vulva. It often happens, however, that the detachment of the placenta and its extrusion into the vagina follows immediately after the expulsion of the child. If upon introducing the finger into the vagina the insertion of the cord into the placenta can be reached, it may be taken as evidence that the placenta is detached and that it may be extracted. Should the placenta be found to be still attached to the uterus after a delay of about twenty minutes, or should hemorrhage occur, proper remedies should be administered to promote the expulsion of the placenta, when the hemorrhage will be arrested by the normal contractions of the uterus. This may be aided by applying the palm of the hand to the abdomen immediately over the fundus uteri, and making gentle pressure upon that organ as though attempting to clasp it.

If the placenta has been detached and is found lying in the vagina, its delivery may be facilitated by making gentle traction upon the cord, in a direction toward the lower part of the curve of the sacrum, and afterward toward the outlet of the vulva, guarding the cord against being ruptured by being drawn over the symphysis pubis. Especial care should always be observed, however, not to draw too forcibly or too violently upon the cord, for fear of tearing it away from the placental mass. Traction is facilitated by wrapping the cord several times around the fingers or by enclosing it in a napkin. (See Fig. 52.)

Fig. 52.



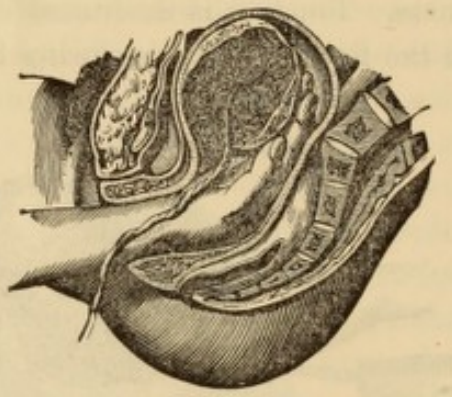
MODE OF EXTRACTING THE PLACENTA.

Sometimes the placenta is entirely detached from its uterine adhesions but is detained in the mouth of the uterus. In such a case the forefinger should be passed up into the vagina so as to pass above the edge of the placenta; the finger then being hooked into the placenta, it is easily drawn downward, and aided by traction on the cord is readily delivered.

Should the placenta remain attached to the uterus, the question

arises, Should any mechanical measures be resorted to to secure its detachment? According to my personal experience, I should say quite decidedly, No! The placenta may remain attached for hours without doing any actual harm to the woman. Such cases should be carefully watched, the indicated remedy selected and administered, and the result is usually a speedy detachment and expulsion of the mass. Cases must be very rare, indeed, in which other means than the above need to be resorted to. Friction over the uterus or pressure upon that organ may bring about uterine contractions and the expulsion of the placenta, but if the end can be secured through homœopathic medicines it must be much more satisfactory. Nevertheless, should there be hemorrhage—which may result from a partial adhesion—which we cannot control, we must not wait till our patient is hopelessly sacrificed, but after relying upon the selected remedy as long as we may feel safe in doing so, the hand should be introduced into the uterus and the attempt carefully made to insinuate the fingers between the placenta and the uterus until the placenta is, if possible, entirely separated from the uterine surface (see Fig. 53), when it should be carefully scooped out.

Fig. 53.



THE MODE OF BREAKING UP THE ADHESIONS OF THE PLACENTA.

Sometimes the placenta is found to be retained by a spasmodic contraction of the neck of the womb, so that it is impossible to extract it until this spasm has abated. Sometimes, again, and more frequently, we find what is called the *hour-glass* contraction, as shown in Fig. 54. Other abnormal contractions may occur which will render utterly impossible the delivery of the placenta until the proper remedy has been given to relieve the morbid irritability which gave rise to the abnormity. All these anomalies have a vital origin, and we have only to interpret rightly the symptoms which they present, exhibit the corresponding remedy, and the whole difficulty will be removed.

The remedies most usually appropriate for these occasions will be mentioned in the therapeutical portion of this work.

Fig. 54.

THE HOUR-GLASS CONTRACTION OF THE WOMB.

When some portions of the placenta are retained and cannot be removed, we must treat the symptoms as they arise, and thereby ward off any danger that may accrue from putrid absorption.

When any difficulty appears in relation to the delivery of the placenta, we should always examine through the abdominal walls in order to ascertain whether the uterus presents its regular globular form, or whether there may not be a depression in its fundus, showing a tendency to inversion; for it sometimes occurs that a complete inversion takes place in this manner.

If a tendency in this direction be discovered, and if a remedy cannot be found which will cause a return of the uterus to its natural condition, the hand must be used for this purpose. If there be *discovered already a complete inversion*, with the placenta attached, the latter should first be peeled off, and the uterus returned by seizing it with both hands and very carefully and steadily pressing it upward and backward until within the vulva; then with one hand press it gently upward, and finally upward and forward.

"An unfailing test by which we may judge when the placenta has become detached from the uterus, and consequently when it may be removed, even though still in the uterine cavity, is the presence or absence of pulsation in the cord, for while it remains attached to the uterus pulsation will still be felt; the cord will also be full and elastic under pressure between the finger and thumb. When, however, sepa-

ration has taken place, the elasticity and fullness disappear, the cord gets flabby, limp and cold, and no pulsation can now be detected in it."—MEADOWS.

When the placenta finally begins to emerge from the vulva it should be received into the palm of the left hand, and rotated with the right hand, in order to secure the twisting up and removal with it of the membranous shreds, since even a small portion left behind may occasion serious annoyance to the patient, even if it does not give rise to more serious complications. When any shred thus left behind afterward appears at the vulva, it may be removed by being seized with a dry napkin and extracted. The placenta, with its cord and attached membranes, should then be placed in a vessel conveniently placed to receive it, and removed from the lying-in chamber as soon thereafter as possible.

Other Attentions to the Woman.—The woman should then be made comfortably dry, and a soft dry cloth should be applied to the vulva. She should then be straightened out a little in bed, and in all respects made as comfortable as possible. *No bandage should be applied.* Since this doctrine is so entirely opposite to the usual practice, it will be proper to state the reasons which have led to the adoption of this method. First: It will be evident, from a moment's consideration of the natural position of the fundus uteri, inclining forward, that the application of a bandage could not but change this position, so as to render the uterus itself nearly perpendicular to the plane of the superior strait. This must of course bring the uterus into a line with the axis of the superior strait; this position must evidently be more favorable to prolapsus, and it may even lead to retroversion. Second: The great object intended to be secured by the bandage is to promote the contraction of the parietes of the abdomen, both for the safety of the patient and for the symmetry of her form. Now, we believe not only that this is better accomplished by Nature in her own way, uninterfered with by mechanical and compulsory appliances, but that such appliances actually weaken the walls of the abdomen, and so in reality tend to defeat the very object sought to be secured. Third: The omission of the bandage, as we have found by much experience, by allowing free circulation in the adjacent parts and avoiding unnatural compression of the peritoneum and uterus, in many cases removes much of the danger from peritoneal inflammation, and greatly facilitates the speedy recovery of the patient. There is also less liability to prolapse of the womb occurring after the woman gets about, or of leucorrhœal discharge. An abundant

personal experience of the superiority of this non-use of the bandage or binder since the first edition of this work appeared, coupled with the assertions to the same purport of numerous medical men in all parts of the country who have adopted it, warrant me in emphasizing the direction above given.

The mother should be enjoined to remain perfectly passive, and she should not be subjected to a disturbing influence of any kind. A pleasant chat with the patient after "all is safely over" is very enticing, and apt to be indulged in by the nurse and friends, and *sometimes even by the physician;* but too much cannot be said against this most cruel and injudicious practice, and it is almost impossible to calculate the amount of mischief that has been done by a deviation from the rule enjoined. It is to be remembered that the mother has just emerged from a condition of the highest mental and physical excitation, and if this be borne in mind the necessity for perfect passivity becomes at once apparent. The room should be darkened somewhat more than during parturition, and talking and whispering should not be allowed. Perfect quietude should be maintained, if possible, in order that she may sleep, which will prove very advantageous and refreshing. Additional covering should at once be applied, and if she desires water she should be allowed to have it in plentiful quantities. After an hour or two, when she may have thus rested, the nurse may safely proceed to place her in bed by gently moving her up to her position, rolling the soiled clothes up into a lump and removing them. Thus the patient will be at the same time rendered neat and comfortable, her clean clothes being brought down from her waist as the others are removed, and her lower limbs made dry and warm. The nurse will, of course, understand her duty of keeping the patient clean and comfortable by constant attention to the lochia and in other respects; but the physician should exercise the greatest care in seeing to it that the nurse does her duty fully in this particular, as very serious complications have arisen solely through the carelessness of nurses in not giving proper attention to cleanliness.

If all goes perfectly well with the patient, there is no need to resort to medicinal means. A dose of *arnica* may be given, however, in case the woman complains greatly of soreness or a bruised feeling, resulting either from the extrusion of the child or from the general muscular effort incidental to parturition. The accoucheur should not leave his patient for at least a half hour after the birth of the child, until he is assured that there is no danger of subsequent flooding.

He should carefully note the patient's pulse, watch her countenance without exciting observation, and be governed accordingly.

The relief experienced immediately after parturition is in a great majority of cases truly remarkable; according to her own expression, the patient feels "as though she were in heaven." Afterward, it is no uncommon occurrence, however, for the patient to be seized with a shivering or chattering of the teeth. With the addition of a little covering this soon passes off; she begins to feel a glow of heat, her skin becomes moist, and there is no more trouble. After a little sleep—which, as already suggested, she should seek to obtain as soon as possible—she seems to recover from the shock of delivery and once more appears in a natural, healthy condition.

The woman should be visited again within from twelve to twenty-four hours. At this visit the following points demand attention: *First.* The condition of the pulse. *Second.* The condition of the bladder and whether urine has been voided or not. *Third.* The degree of uterine pain or abdominal tenderness. *Fourth.* The character of the lochia. The general condition of the patient, the presence or absence of headache, and whether she has had a nap or not, are likewise matters of importance to be ascertained. The *pulse* of the lying-in woman should not reach a hundred beats per minute. If it goes beyond that number there is something wrong, and if it greatly exceeds one hundred, rising to one hundred and twenty or higher, active measures will be necessary to secure a restoration to health. These active measures will consist in the prompt administration of the appropriate and homœopathic remedy; and it is sometimes almost marvelous with what benignity and with what promptitude the remedy thus selected acts in restoring the lost equilibrium of the system.

If no *inclination to urinate* has been felt, the bladder is probably semi-paralyzed and needs help to resume its proper function. This help it will get from *arsenicum*, *causticum* or *hyosciamus*, according to the indications for each, as given elsewhere. All other derangements from the line of the true physiological lying-in state should be met with the proper homœopathic remedy.

At this second visit directions may be given for having the child applied to the breast, should all be going on well. This procedure not only serves to stimulate the mammary glands into action, but it furthers the necessary uterine contractions. Dr. Rigby advises that the child should be applied to the breast very shortly after delivery. He says: "Even if the child sucks fairly well for only five minutes, we

feel satisfied, for we cannot call to mind a single case of hemorrhage after the effects of this operation." There does not seem any necessity, however, for subjecting the mother in her weakened and exhausted condition at this early period to what must of necessity in most cases prove an annoyance.

Unless spontaneously moved, the patient's bowels should not in any way be disturbed for eight or nine days. The custom—formerly much more general than now in allopathic practice—of giving a purgative on the second or third day after confinement, is exceedingly pernicious, and sometimes gives rise to very serious consequences.

Until after the secretion of milk has been well established the diet should be very simple and the room should continue to be well shaded. During convalescence, commencing after the secretion of the lacteal fluid has been well established, the diet may be made more generous in both meats and vegetables (eggs, oysters and fish being strictly prohibited), and the light of day should be allowed to enter the chamber freely, rejoicing the woman's sight and strengthening her in every way. The bed-covering and her own clothing should provide a sufficient degree of warmth, and yet be so light as not to be burdensome. Heavy, close and thick material not only weighs down and swelters her, but prevents the carrying off of the effluvia arising chiefly from the profuse transpiration of the effete material, so desirable to be got rid of at this period. Let the accoucheur, at a subsequent visit, turn down the covering in cases where he finds the patient heavily blanketed, and the heat and stench escaping from the bed will suggest to him its occupancy by some offensive carrion, rather than by a living human being, and perhaps by two—the mother and her child. Can it be wondered at if such cases make a slow recovery?

The room should be ventilated every day, the thermometer never rising above 70° Fahr. The patient should be allowed plenty of pure cold water to drink, and her lavements should be sufficient for cleanliness, but always performed *under cover*. The feet should be sponged almost daily, one foot at a time, which should be rubbed perfectly dry and covered before the other foot is touched. The water for external use should be tepid, and free from alcohol, bay rum, cologne or anything of that kind.

The patient's clothing and the bed-linen should be changed frequently, having been previously well aired before a hot fire in another room than the lying-in chamber. For two weeks she should keep the recumbent posture, using a bed-pan when required, changing frequently from one side of the bed to the other to rest herself and

permit the vacated side to be shaken up and prepared for her return to it with increased satisfaction; or she may be transferred to another bed or a lounge for a few hours daily after the first few days. At the end of the third week she will be the stronger and better for having spent the first two weeks in a recumbent posture. Physicians should be particular in urging this point, as very much of the comfort, health and happiness of a woman's after life depends on the care she takes of herself during convalescence after parturition.

After the second week, other things being equal, the woman may take a sitz-bath, the water being at a temperature of 65° or 70° Fahr. While sitting in the tub, water may be poured over her shoulders and washed down for a few moments, which should then be rubbed dry and covered while the limbs are being washed and rubbed dry. The process being completed, she should go at once to bed. *In no case should she go out immediately after a bath.* Extra caution must be observed in bathing in cold weather. During the third week she may *drive* out in fine weather—in cold weather during the fourth week, other things being equal.

During the entire nursing period the diet should be plain and simple, but abundant and nourishing. All abnormal conditions should be carefully attended to and the proper remedy given. The room of a lying-in woman should be light and airy, and when the proper time comes she should *walk* out every day in the air and sun when the weather is suitable, riding being entirely insufficient.

The underclothing should not in any instance be allowed to hang upon the hips, but should be suspended from the shoulders. No woman can hope to remain well who allows the weight of her skirts to drag upon her hips and loins, and complaints of great magnitude may arise from this apparently trivial cause.

If a woman should feel weak "after she gets about the house," she should not be recommended or permitted to fly to stimulants of any kind for relief, but the physician, being consulted, should seek the appropriate remedy, which may be found under the law of the similars.

The After-Pains and the Lochia.

The uterus by alternations of contraction and repose gradually returns after parturition from its enormous distension to its natural size. Its complete restoration in size and position generally occupies about six weeks. Sometimes, on the contrary, it suddenly grows larger from some abnormal condition, and may be felt rolling from side to side as the patient turns in bed. This condition need excite no alarm

—since the uterus will soon subside to its normal size—except in some few instances in which it still remains large, with a sensation of bounding as if it contained a fœtus; in such cases a dose of *crocus* will soon set all things to rights. As the uterus regains its normal size, the new mucous membrane becomes completed, and the spot from which the placenta was peeled off is also supplied with a new mucous membrane by a process of granulation.

As the uterus returns to its normal state the vagina also grows shorter, its transverse rugæ return, and in the course of six weeks it is in all respects as before pregnancy, except that the subvaginal portions of the neck may be more or less permanently shortened on account of the extreme stretching upward during gestation.

The uterus and vagina return to their usual condition by virtue of the elasticity of their tissues, and where this is sufficient the process is unattended with pain. But if necessary, organic contractility is also brought to aid, and this is always attended with more or less pain, constituting what are called the *after-pains*.

During all this time a discharge from the vagina is taking place—first of pure blood for a day or two, which grows paler and paler till finally it appears as a sero-purulent liquid, often of a pinkish color; then it becomes lighter, watery, and at last entirely disappears. This discharge is called the *lochia*.

The After-Pains.

Of the *after-pains* it is proper to state more particularly that they are really the organic contractions of the uterine fibres, where the elasticity of the general uterine tissue is insufficient to expel the liquids with which the walls of the uterus are engorged, or the clots or shreds of membrane which are contained within its cavity. When they make their appearance at all—which is sometimes not the case—these pains usually come on soon after delivery, and continue with greater or less severity from two to eight days. Fluids or coagula, in greater or less quantity, are discharged with each pain. It is very important to diagnose between the after-pains and those which indicate the accession of puerperal inflammation; but this is an easy thing to do, since the former contract the uterus, while the latter do not, and in the former case there is usually considerable abdominal tenderness, which increases, while in the latter this is absent.

After-pains are commonly absent in primiparæ, but almost always present in a greater or less degree in multiparæ. They are generally salutary, as before remarked, but sometimes they become excessive,

unbearable, and give rise to distressing accompanying symptoms. When they assume this character, they should be checked by the administration of the appropriate remedy as laid down under its proper heading in the portion of this work devoted to therapeutics.

The Lochia.

The *lochia* constitute the discharge from the genital organs which commences soon after the expulsion of the placenta, and continues until the complete restoration of the uterus to its normal condition. This discharge results from the disgorgement of the uterus in its return to its usual size, and it is principally derived from that portion of the uterine surface to which the placenta had been adherent. During the first twenty-four hours the lochial discharge is quite sanguineous, and sufficient in quantity to soil ten or twelve napkins. After the first few hours this discharge gradually becomes less and less, as it passes through its four or five successive stages: first, sanguineous; second, serous; third, milky; fourth, puriform: and when it has nearly subsided it is not an uncommon occurrence for it to freshen up and assume a pinkish hue, and then, resuming the appearance of a delicate, limpid pus, rapidly disappear.

In about six days after parturition the sanguineous discharge should disappear entirely, and in two or three weeks more the patient should be completely well. In severe cases the lochia will cease sometimes earlier, sometimes later, either as a natural consequence of the attendant conditions or as an exception merely to the general rule; and in all such variations the accompanying sensations and conditions of the patient will indicate the treatment.

During the milk fever the lochial discharge lessens or ceases entirely, and returns more abundantly as the fever subsides. In quantity this discharge varies in different individuals; some have very little, others have much; in either case no interference is necessary, unless symptoms arise which show that the unusual quantity results from some abnormal state. The lochia has a peculiar odor, differing in individuals both in character and intensity. The presence of even a small shred of the membranes, which may have become detached and left behind in delivering the placenta, may render the lochial discharge exceedingly offensive. In all cases the fetid nature of the discharge, or any other deviation from its normal character, will go far to indicate the proper remedy for the general morbid condition of which this peculiarity is one of the evidences.

Throughout the lying-in period the condition of the lochia, if

abnormal, forms one of the surest and soundest indications for treatment. The selected remedy must always cover the condition here manifested. Every day the physician should inquire of the nurse as to the state of this discharge, and the first abnormal condition should place him on his guard against other serious disturbances which may result. We should always be watchful for the beginning of mischief, but this one of abnormality of the lochia should be especially guarded against, since it is very apt to be overlooked till a late hour. In such cases all the symptoms should be carefully collated and the remedy selected in accordance, but it must always cover the abnormal condition of the lochia.

In the treatment of cases in which there is *derangement of the lochial discharge* such medicines should be carefully studied as are recommended on page 428.

Hygiene and Treatment of the Child immediately after its Birth.

After the cord has been cut and the child has been given to the nurse, it should be washed and dressed as soon as may be convenient. Some unctuous matter, such as lard or oil, should be rubbed into all those places covered with the *caseusa*, which latter will then be entirely removed upon being washed with tepid or warm water and soap. The navel should then be dressed as directed on page 199, and the belly-band applied; then may be added the diaper, the shirt, the flannel petticoat and the outer dress or slip. This constitutes the babe's dress for the bed; when it is taken up it should also have a shawl or blanket provided for that purpose, to be laid aside upon its return to the bed. During the process of washing and dressing—which should be conducted with as much expedition as possible—the child usually becomes quite cold and blue. It should therefore be quickly placed in bed and covered to that degree that warmth will soon return. At his daily visits the physician should observe that the infant is not smothered while lying in bed, but has an opportunity of breathing like other human beings. Its pillow should not be more than two inches and a half thick, and it should be made of hair, untufted, so that it may be pulled apart and made light and airy every few hours.

Should the child be troubled with retention of urine, *aconite* will be the remedy most likely to afford relief. (See *Dysuria.*) If the meconium does not pass off naturally, *mercurius, nux v., bryonia* or *pulsatilla* may be resorted to. (See *Constipation.*)

The child is not always born in so healthy a condition as to be ca-

pable of undergoing promptly the treatment above described. Sometimes it comes into the world in a state of apparent death. This condition may result from three distinct classes of causes, and may present corresponding differences in the appearance of the child.

I. APPARENT DEATH of the child may result from shock to its nervous system in general, or from some special lesion of a particular portion of it. In the former class may be instanced the severe compression which the brain undergoes in certain cases of contracted pelvis, and from the application of the forceps under difficult circumstances, especially in the superior strait; in the latter class may be instanced the still more serious lesions of the medulla oblongata which may result from extreme rotation of the head, from undue traction upon the head after it is delivered, or from too much force applied to the body in order to deliver the head still detained within the pelvis. This latter is one of the most frequent causes of the fatality so commonly attendant upon breech presentations. The injury to the brain, not necessarily preventing respiration, may pass away and the life of the child still be preserved. Such, however, is not the case with serious lesion of the medulla oblongata, which renders respiration impossible. However, as it may not be known that such injury exists—unless the child's neck should have been distorted by some remarkable violence—every case of apparent death in the new-born babe should be treated as if there were a possibility of recovery.

II. Injuries of the placental circulation may have been the cause of the apparent death of the child. These may variously arise from compression of the umbilical cord between the sides of the pelvis and the head or body of the child; from winding of the cord so tightly around the neck as to obstruct the circulation in the umbilical vessels; from the premature separation of the placenta, which may occur in cases of delivery by the breech when all but the head has been delivered, or from great retraction of the uterus itself when only the head remains within it, such retraction preventing the admission of fresh blood into the uterine sinuses in sufficient quantity to supply the child. By either of these causes a real asphyxia may be produced. A similar condition may result from such an accumulation of mucus in the nose and mouth as will prevent the introduction of air into the bronchia. In addition to the breathlessness this condition will be indicated by discoloration of the skin, which may exhibit a violet or blackish-blue color; the muscles are motionless, the limbs flexible and the body warm; but the pulsations of the cord, of the

radial artery, and even those of the heart, are faint or imperceptible.

III. Lesions of the fœtal circulation constitute a no less dangerous class of causes of apparent death. These may consist in rupture of the placenta or of the umbilical cord, which affects the life of the child while yet unborn; or if the hemorrhage should be arrested in any way before proceeding to so fatal an extent, the child may be born alive, but in a state of syncope. In these cases the child is very pale, the muscles are relaxed; it may make a few short respirations and utter some feeble cries, but unless saved by the administration of the proper remedy, it soon perishes.

Treatment.—From whatever cause the apparent death or suspended animation of the child should result, no time should be lost in making proper efforts to establish respiration. In cases where the breathing is simply deficient, and there is not a complete suspension of animation, one or the other of the following remedies may be administered in accordance with the given indications:

ACONITE.—The child is hot, purple-hued, pulseless and breathless, or nearly so.

BELLADONNA.—The face is very red and the eyeballs are greatly injected.

CHINA.—In cases where profuse hemorrhage has been the apparent cause.

TARTAR EMETIC.—When the child is pale and breathless, although the cord still pulsates.

CAMPHORA may be given a few minutes after tartar emetic, if the latter should fail.

If the child does not soon respond to internal remedies, or in cases of so grave a nature that it is apparent that these remedies can have no effect, it should be immersed suddenly in very cold water, or, better still, cold water, even iced water, should be poured over it. In some pale and apparently lifeless children pouring cold water upon the head and allowing it to run down over the body establishes the circulation and respiration; the child should then be at once wrapped in woolen blankets until quite restored. Of course in all those cases where respiration is prevented by an accumulation of mucus in the nose and mouth these obstructions should be at once removed. Any or all of the above methods failing, artificial respiration should at once be resorted to by either Marshall Hall's or Sylvester's methods, which are so well known that they need not be described here; or the lungs may be filled directly from the accoucheur's lungs, by his closing

the child's nostrils between the thumb and forefinger of his hand, applying his mouth accurately to the mouth of the child, blowing air into the child's lungs, and, when filled, by gradually and carefully compressing the thoracic walls, emptying the lungs again. This manœuvre should be repeated again and again, as often as every half minute. This artificial respiration, and all other methods resorted to to restore suspended animation, should be persevered in for some time, life having returned after even an hour had elapsed, from judicious and continued treatment.*

Secretion of the Milk.

This function is one of the most interesting and at the same time one of the most remarkable of the phenomena transpiring during the lying-in period. While the child is still in utero the maternal principle and all that pertains to the mother unite to effect its nourishment, growth and development there. Suddenly all this is interrupted: the child is expelled from the little world within, and has to find nourishment elsewhere. It is supplied as before from the maternal blood through the medium of the mammary glands. The reaction upon the organism from this change from the uterus to the breasts causes what is called the milk fever, in consequence of which there results a disturbance in the system more or less well marked according to the obstacles to be overcome. Hence appear chills, fevers, headaches and a great variety of pains and sufferings; even intermittent fevers are sometimes developed in consequence of this great physical change.

Some women appear to have milk before the babe is born or at its birth, but this is not the real milk, since it is devoid of the true milk-globules, and is called colostrum. The change already referred to has yet to be made, and presently the real milk comes, exhibiting the true, full and plump milk-globules.

The quantity of milk varies greatly; in some women it is quite scanty but rich in quality, while in others it is poor in quality but abundant in quantity. Every woman in a perfectly healthy state will yield nourishment enough for her own babe, and when this is not the case remedial agents must be administered to bring about this much-to-be-desired result, for no child can possibly do so well as when supplied with its own maternal aliment. As a general thing, all the disturbances incident to the coming of the milk are less when the child is applied to the breast as soon after delivery as practicable. Much advantage is gained both to the mother and babe by this method,

* For further directions see Appendix, Note 1.

since it serves to lessen the suffering of the one from hunger and the danger of the other from fever.

When the fœtus perishes near the full term the child is still carried for a while—it may be till term. In general no milk secretes in such cases, certainly not till after the delivery of the dead child.

At no time should the milk flow from the breasts except when drawn. In those cases in which it is constantly flowing spontaneously remedies should be sought to remove the abnormality.

In order to relieve the disorders incident to lactation we should always rely upon homœopathic medicines. No bathing or even rubbing of the breasts should be resorted to. Rubbing the breasts in in order to "rub out lumps" often bruises the breasts and lays the foundation for abscesses. External applications are altogether unnecessary. The remedies to be given for these varied disorders will be pointed out under an appropriate heading in the latter part of this work. (See *Disorders of Lactation,* pp. 464 and 467.)

CHAPTER XIV.

DYSTOCIA.

BY dystocia is meant unnatural, "laborious, morbid or difficult labor." Labor does not always take place in what may be regarded as a truly normal manner. It may become, by a combination of circumstances, difficult, dangerous, and even impossible. In such cases the intervention of art is demanded. These circumstances are exceedingly various and numerous, and they give rise to three distinct classes of difficult labor, viz.: 1. "Those rendered difficult, dangerous or impossible by a defect or an excess in the action of the expulsive forces. 2. Those rendered difficult, dangerous or impossible by obstacles to the expulsion of the fœtus. 3. Those complicated by accidents liable to endanger the life or health of the mother and child." *

In respect to the first of these classes, it should be observed that the pelvis, as well as the organs of generation, may be perfectly natural, and the diameters of the child may all be in harmony with the passage, and yet the expulsive force may be wonderfully deficient, and at length may cease to act entirely. In deciding on the duration of

* Cazeaux.

labor, it may be adopted as a general rule that where more than twenty-four hours have elapsed since its commencement serious accidents may be feared either to the mother or child, and these should be anticipated by removing the cause of the excessive slowness. The fact which requires particular attention in the prognosis is, that the period of dilatation of the cervix is to that of the expulsion as two or three to one. Now, the delay may occur either in the first or the second of these stages. The first stage may be prolonged without danger either to the mother or the child unless there be hemorrhage or convulsions, but when the second stage, or the period of expulsion, is extended beyond ten or twelve hours, the uterine pains may become irregular in their return and intensity, and the fœtus seem to retrograde rather than advance—there is no expulsion. The condition of the patient at this crisis is thus described by Cazeaux:

"The local disorder is accompanied, or at least soon followed, by a violent trembling; the patient has an inclination to vomit, and even throws up bilious matters; she is uneasy, excited and changes her position every moment; the skin is hot and dry, the pulse runs up to a hundred or a hundred and fifty per minute the tongue is dry, and both it and the teeth are covered with a dark coating. The vagina and cervix are hot and sensitive to the touch, and a yellowish liquid escapes from them, which occasionally has a fetid odor; the pressure of the child's head on the cervix vesicæ prevents the emission of urine, and the parts that line the superior strait and the pelvic excavation being compressed for a long time by the head, may become inflamed or even gangrenous, which complications may subsequently prove a source of the most serious accidents.

"If the woman still remains undelivered, these symptoms increase in intensity in a frightful manner; the vomitings become more frequent and the abdomen more distended; the excitability of the patient knows no bounds; the pulse is more and more feeble and frequent, and she falls into a half-stupid or a semi-delirious condition, which is soon terminated by death. It is scarcely necessary to remark that in the latter case the life of the child is also most seriously compromised."

There are numerous causes which may operate to bring about this condition, some of which are vital, while others are mechanical. Among the former may be mentioned general debility, plethora of the uterus, inflammation of the uterus, mental emotions, various diseases, etc.; among the latter, over-distension of the uterus by an excess of liquor amnii, too early rupture of the membranes, etc.

When the cause appears to be a vital one, the pains, too weak from the first, grow weaker, are irregular or cease entirely, the appropriate homœopathic remedy will almost always bring about a normal condition, and labor will go on to its completion in a proper manner. The medicines to be resorted to under these circumstances will be mentioned, together with their indications, in a subsequent chapter.

A woman who has had a difficult labor from deficiency of uterine action in consequence of some general disease, such as gout, rheumatism, disorder of the digestive organs, etc., and has again become pregnant, should be very carefully treated during pregnancy, that the cause may be abated or removed, in which case she will not be apt to have a return of the uterine atony when she is again taken in childbed.

MECHANICAL CAUSES OF DYSTOCIA.—*Over-distension of the Uterus from Excess of the Liquor Amnii.*—Cases of this kind can be recognized from the fact that the membranes do not bulge into the mouth of the uterus as it dilates; during the contractions the membranes are felt to be tense and to retain the globular form of the uterus. In this case the only plan of relief and of rendering the pains efficacious is to rupture the membranes, which may be readily done by plunging the finger through them during a uterine contraction.

Premature Rupture of the Membranes.—In cases of this kind the early escape of a small portion of liquor amnii allows the head to descend upon the undilated mouth of the uterus, so as to hinder the escape of any more of that fluid, and of course it is all retained in the fundus above the child. The contractions gain nothing by forcing out more fluid either through the ruptured membranes or by causing the bulging of a pouch; consequently, the pains are liable to become more and more feeble. The mode of action now to be adopted is to introduce a finger and in the absence of a pain raise the head and hold it up during a pain, when the liquor amnii will escape freely. Repeat this process, if necessary, again and again, and the pains will strengthen rapidly.

Sometimes the child's head becomes engaged in the lower segment of the membranes and they fit close to it, and there is no opportunity for the membranes to bulge through the os, the consequence of which is that the liquor amnii is all retained above the body of the child and in the fundus of the uterus. In this case the membranes must be stretched through and the head elevated, in the absence of a pain, and held there until the next pain, when the waters will gush out and the pains will gain in strength. This process may be repeated again and again if necessary, and the pains will become more and more effective.

Impaired action of the abdominal muscles, occasioned by the existence of some disease, such as asthma, pneumonia or dropsy, may likewise be the cause of difficult or retarded labor. In such cases, should it become evident that nature is entirely unequal to the task of emptying the uterus, resort must be had to mechanical means for effecting delivery.

The pains may be rendered inefficacious from an *over-distended bladder*, the reflex from which painful condition will cause the uterine contractions to cease. This may be determined by the history of the patient's case, and by great sensitiveness of the bladder when pressed, or by a dullness on percussion if she has not voided urine for a long time. In this case a catheter must be used, the male being preferred, for obvious reasons. A loaded rectum may have the same effect as the bladder in the state above described, in which case it must be washed out with injections.

In precipitate labor the chief danger lies in a liability to the rupture of the uterus from too powerful contractions, or of the vagina or perineum. The umbilical cord may be torn asunder by the child falling on the floor, or the child may receive other injuries consequent on sudden and violent action. Some women are *always* troubled with too rapid labors, and, knowing from experience what to expect, should adapt themselves to this condition by preserving a recumbent posture from the first pain, and restraining themselves as much as possible. In some cases the disposition to too slow or to too rapid labor seems to descend hereditarily from mother to daughter.

The *treatment* of precipitate labor is usually unsatisfactory, inasmuch as it generally occurs in the absence of the accoucheur. Should, however, the accoucheur be present, and the force and rapidity of the pains be in excess of what may be regarded safe, they may be mitigated by the administration of *coffea*, *secale*, *belladonna*, *conium*, *nux vomica* or *chamomilla*. The patient should likewise be cautioned to refrain from expulsive efforts.

Dystocia from Malformation of the Pelvis.

We next come to the second group of causes which render labors difficult, dangerous or impossible. The causes are mechanical, and refer themselves to the mother or the child. We shall first treat of those which depend on the mother, and the first of these which we shall notice are *the malformations of the pelvis*. A pelvis is malformed, in the sense in which we here use the word, when it too greatly exceeds or falls short of the average size. Excess of amplitude or of

retraction, too great size or narrowness, are productive of notable obstacles in the exercise of the child-bearing function. If the amplitude is too great the woman is exposed to serious accidents in all the three states, the non-gravid, the pregnant and the parturient.

In the *non-gravid,* because the uterus, being free and movable in an over-spacious cavity, is much more liable to the various displacements of *descent, anteversion* and *retroversion.*

In the *pregnant,* because "during gestation the womb, finding more space than usual in the pelvic cavity, remains there until a much more advanced period of pregnancy, and the volume of the organ, by compressing the rectum and the bladder, often occasions an excessive tenesmus in these parts, which proves very distressing to the patient; sometimes even the discharge of the urine and fecal matters is impeded; besides which varices, hemorrhoidal tumors, and a considerable infiltration of the lower parts are found to be developed in consequence of the mechanical obstacle to the circulation of the inferior extremities."*

In the *parturient state,* because during labor the too great amplitude of the pelvis exposes the patient to all the dangers resulting from a too rapid delivery, which we do not propose to treat of here. A woman subject to this malformation should be kept in the recumbent posture during labor, and she should be instructed not to aid the pains in any way, and not to bear down until the os uteri is fully dilated; and even then as little voluntary effort should be made as possible.

But the most terrible deformities of the pelvis are those arising from its contractions; for it must at once be obvious that a just proportion must exist between the dimensions of the canal and those of the body which is to traverse it, and that where this relation does not hold, either through the contraction of the pelvis or the abnormal size of the child, delivery by any natural process becomes impossible.

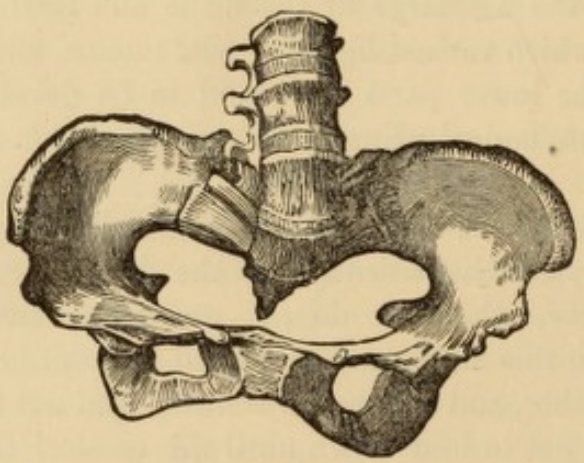
The contractions of the pelvis, according to Velpeau, are either absolute or relative—*absolute* when, although greatly retracted in all its dimensions, it notwithstanding is properly formed and presents no irregularity in its exterior aspect; *relative,* when only one or more of its diameters is affected by the contraction (the others preserving, or very nearly so, their normal length), and the form is completely changed by this partial alteration. The last group of contracted pelves —viz., the relative—is the only one which will engage our attention in this place. This deformity is referred by M. Dubois to one of three principal types—viz., either to a flattening from before backward,

* Cazeaux.

to a compression on the sides or to the depression of the anterior and lateral parts.

The flattening from before backward, or shortening of the antero-posterior diameter, results from a more or less marked approximation of the anterior and posterior pelvic walls; and of this species of malformation there are several varieties, all resulting from the extent of contraction either in height or width. An example of this kind is presented when the superior strait alone is contracted, the excavation retaining its normal capacity. This phenomenon is due to an unusual curvature of the sacrum, which sometimes makes an obtuse angle at

Fig. 55.



A PELVIS IN WHICH THE CONTRACTION OF THE SACRO-PUBIC DIAMETER IS PRODUCED BY THE UNUSUAL PROMINENCE OF THE SACRO-VERTEBRAL ANGLE.

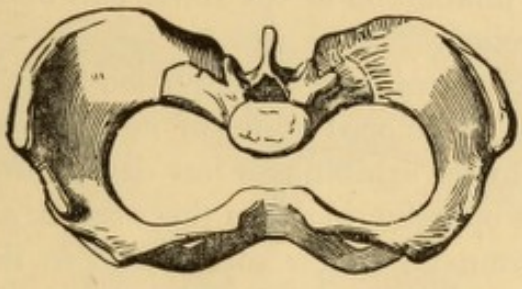
its middle part, so that the sacro-vertebral angle is increased to an unusual degree. Sometimes the reverse happens, and the sacrum, instead of affording an anterior cavity, is quite plane, or even convex in front, and then the antero-posterior diameter of the excavation is contracted simultaneously with that of the superior strait, and the sacrum seems to lose its natural curvature and project forward in its whole length.

Sometimes the shortening of the antero-posterior diameter of the superior strait is accompanied by an enlargement of the corresponding one at the inferior strait. This indeed is the arrangement most usually met with, and this is what generally happens when the sacrum, yielding to the weight of the trunk, transmitted to it by the spinal column, tilts—that is, projects forward its base—while pushing backward its coccygeal extremity.

Sometimes the coccy-pubic and the sacro-pubic diameters are shortened at the same time. This happens when the sacrum, instead of

performing the tilting movement just mentioned, yields in such a way that its two extremities are thrown forward, and two consequences are the result of this action—viz., the anterior curvature is greatly

Fig. 56.



THE SHAPE OF THE SUPERIOR STRAIT IN THE FIGURE-OF-EIGHT PELVIS.

increased, and there is an enlargement of the corresponding diameter of the excavation.

Another case of pelvic contraction is thus described by Cazeaux: "In the approximation of the antero-posterior walls the sacrum is nearly always the displaced bone; but, although much more rare, a flattening of the anterior wall is also met with, and then the symphysis pubis, instead of presenting a convexity in front, is perfectly flat, or even (as in one instance represented by Madame Boivin) presents a depression, which seems to protrude inwardly toward the prominence of the sacrum. This double inclination of the pubis and sacrum toward each other gives to the superior strait the form of a figure of eight—that is, its plane is divided into two rounded portions on the sides, corresponding to the iliac fossæ, and is separated in the middle by a restricted part of variable width. If the depression is considerable, the antero-posterior diameter of both straits and of the excavation must evidently be affected by it."

Or again, the extent of the symphysis pubis may be much greater in its vertical direction than usual, giving rise to what is termed the *bar* pelvis, or it may have an excessive inclination backward at its lower end; in both these cases the pelvis is narrowed.

Sometimes the coccyx is elongated, and it takes a nearly horizontal direction. This, as well as an immobility of the sacro-coccygeal articulation, may, it is alleged, contribute to the shortening of the coccy-pubic diameter.

Compression of the lateral walls, by which the transverse diameter is shortened, is the rarest of all pelvic malformations—that is, so far as the superior strait and upper part of the excavation are concerned. As regards the inferior strait, the approximation of the two ischial

tuberosities, by which this species of deformity is produced, is quite as frequent as the shortening of the coccy-pubic diameter. The pubic arch, in this case, assumes the triangular form peculiar to the male sex. Moreover, the inward projection of the spines of the ischia may produce a sensible diminution of the lower part of the excavation in the transverse direction.

"Another variety of transverse contraction is owing to the fact of the pelvis being less developed in one of its halves than in the other, and consequently to its exhibiting a less degree of curvature in that part than upon the opposite side. In this case the articulation of the spine with the sacrum no longer corresponds to the middle of the pelvis, and the vertebral column is found nearer to the hip of the contracted side; the transverse diameter is likewise diminished at the inferior strait by reason of the obliquity of the entering part of the coxal bone. The antagonism before alluded to as existing between the antero-posterior diameters of the superior and the inferior straits, whereby the elongation of one most frequently coincides with a shortening of the other, rarely exists in the transverse direction; the deformity produced by a congenital displacement of the femurs is probably the only condition in which the transverse diameter of the inferior strait augments at the same time that the bis-iliac one diminishes, the enlargement in the lower part of the pelvis in this instance being marked by an unusual width in the pubic arch, a great obliquity of the ischio-pubic ramus, a separation of the ischial tuberosities, etc."—CAZEAUX.

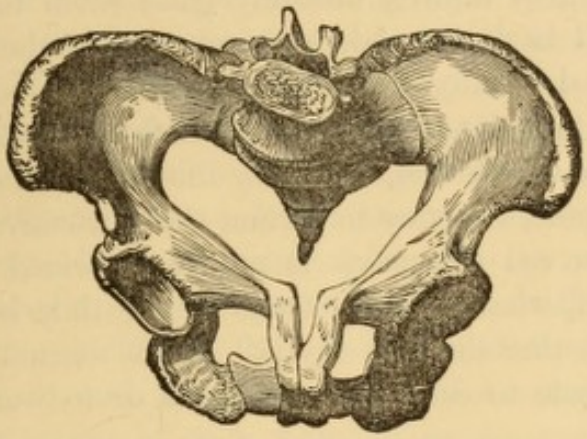
Depression of the Antero-lateral Walls.—The effect of this depression is the diminution of the oblique diameters. It occurs more frequently than the preceding, but not so frequently as the first variety. The essential characteristic of this deformity is the flattening or the inward projection of the coxal bone at the part corresponding to the cotyloid cavity and the junction of its three constituent pieces, whereby the curve described by the pelvic circumference is more or less diminished, even when carried to a high degree to the reversal of the curvature, its convexity being turned toward the sacrum, and the pubis pushes almost directly forward, the coxal bones assuming the form of an italic *S*, instead of presenting a regular arch.

We next proceed to describe the *oblique-oval pelvis*, a malformation produced by an arrest of development on the part of one lateral half of the pelvis, while the other maintains its normal condition. The effect of this, as will readily be seen, is to throw the symphysis pubis to one side of the mesial line of the body, while the sacrum seems to

be on the other side. The consequence of this is, that the cavity of the pelvis will be oval, and will occupy one or the other lateral half.

A very rare form of pelvic deformity is the *funnel-shaped pelvis*, in

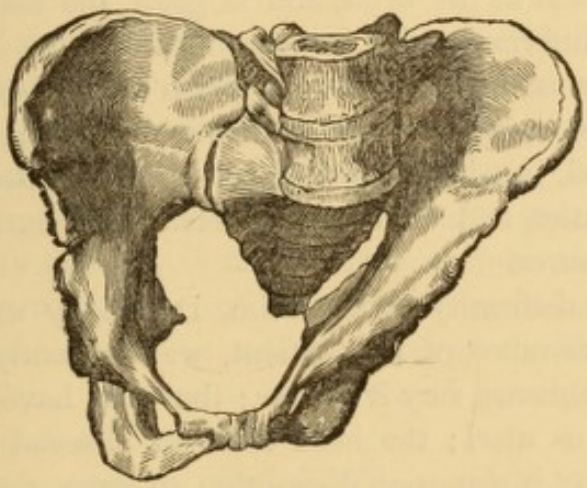
Fig. 57.



A PELVIS IN WHICH THE SINKING IN OF THE ANTERO-LATERAL WALLS EXISTS ON BOTH SIDES.

which, while the brim is normal, the cavity and outlet are contracted gradually from above downward in all diameters.

Fig. 58.



A FIGURE TAKEN FROM M. NAEGELÈ'S WORK, WHICH EXHIBITS THE CHARACTERS OF THE OBLIQUE-OVAL PELVIS IN A HIGH DEGREE.

The influence of these deformities on the pregnant state is rather unfavorable, from the fact that in the latter half of pregnancy the gravid uterus is not so easily and safely supported, and in the earlier period it is often more easily displaced, or it more slowly rises above the superior strait. These and other similar circumstances have a constant tendency to produce abortion or premature labor.

It is of the utmost importance that distortion of the pelvis be de-

tected as early as possible. Naegelè gives the following conditions as presumptive evidence of the existence of malformation: "The lower jaw projects beyond the upper, the chin is very prominent, the teeth are grooved transversely, unhealthy appearance, ashy-pale color of the face, diminutive stature, unsteady gait; when the woman walks the chest is held back, the abdomen projects, and the arms hang behind; there is deformity of the spine and breast, one hip is higher than the other, the joints of the hands and feet are remarkably thick; curvature of the extremities, especially the inferior, even without distortion of the spine, is a very important sign; wherever the lower extremities are curved the pelvis is mostly deformed. It is well to ascertain also if, when a child, it was a long time before she could walk alone; whether she had any fall on the sacrum; whether, as a girl, she was made to carry heavy weights or to work in manufactories."

If, in making an examination per vaginam, the top of the sacrum can be reached with the index finger, there is good reason for believing that there is deformity at the brim of the pelvis; which may be the case elsewhere, however. But it does not follow that because the top of the sacrum cannot be thus reached there is no deformity. If the deformity exist at the brim, and is great, the fœtal head cannot engage in the inferior strait; but the brim may be normal and the deformity may exist in the cavity, in which case the head may enter the cavity and be unable to proceed farther; or, again, the outlet alone may be deformed, in which case it is obvious that the head may descend to the outlet, and then remain fixed until extricated through mechanical measures.

In regard to deformity at the brim, Dr. Rigby writes: "Besides the general appearance of the patient, we frequently find that the uterine contractions are very irregular; that they have but little effect in dilating the os uteri; the head does not descend against it, but remains high up; it shows no disposition to enter the pelvic cavity, and rests upon the symphysis pubis, against which it presses very firmly, being pushed forward by the promontory of the sacrum."

A great variety of circumstances are to be taken into consideration in regard to the course to be pursued by the accoucheur where he meets with pelvic deformities during labor; for it must be evident that unaided nature is able to do very much more in some cases than in others; and in addition to this, the period of pregnancy at which labor takes place, the size of the child's head, its compressibility and its degree of ossification, the presentation, etc., should all receive due

consideration before resorting to any measures to effect delivery by artificial means. It is a good rule, and one that holds good in a very large majority of cases of this kind, to give nature a fair chance to effect expulsion unaided. At the same time it should be borne in mind that there is great danger in waiting until symptoms either of exhaustion of the vital forces or of powerless labor have shown themselves. The mode of treatment where cases of deformity occur does not differ in the first stage from that pursued in the case of well-formed women. Where the os uteri is sufficiently dilated or dilatable, so as to permit the escape of the head, the experienced accoucheur, by a careful comparison of the presenting part with the passage, will be able to decide on the possibility of a spontaneous delivery. When the vertex presents itself, sufficient time should be allowed for its engagement, descent and final expulsion. The contractions should be supported by means of such remedies as the case may seem to require. But should no advancement be perceptible, the forceps may be applied and extraction effected if possible; but if there is no reasonable hope of delivery by this means, craniotomy must be resorted to. And should the distortion of the pelvis be so great that even craniotomy would not avail, the Cæsarean section must of necessity be resorted to.

When the pelvic extremity presents, the same rules apply as in natural labor; but if the deformity is too great to allow a spontaneous expulsion, the blunt-hook must be used, as hereafter to be described. When the body is in the act of being delivered, introduce as soon as possible the index finger into the mouth of the child, and force the chin down upon the sternum as much as possible whilst traction is being made upon the shoulders. In this way the longest diameter of the head will be made to occupy the shortest possible space in the pelvis. If then it is not found possible to deliver the head, the forceps must be applied.

When *the face presents* an effort should be made to convert it into a vertex presentation, as described hereafter; and then, if necessary, apply the forceps. Every effort should be made to change the face presentation to one of the vertex, as it would greatly increase the chance of the child's life, afford relief to the mother and contribute to our satisfaction.

When the child presents by the trunk, an effort should always be made to convert this into a presentation of the vertex; and if we discover that one part of the deformed cavity is broader than any other, the occipital diameter should be directed to that part as much

as possible. If the labor has already continued so long as to make it impossible to bring the vertex into the superior strait, the foot must be seized and the malpresentation converted into one of the breech, when we may proceed as in all breech presentations.

It may be stated in general terms that if there be an antero-posterior diameter of not less than three and one-fourth inches, the forceps may be successfully used. If this diameter, however, should be less than the above, the forceps would not be likely to avail, and if it should be very much less, their use would be altogether out of the question. With an antero-posterior diameter ranging between three and one-fourth inches down to two and one-half inches, it is possible that by turning and bringing the lower part of the wedge that the fœtal head forms—according to Sir James Simpson and Tyler Smith—down first, the thicker part of the head may be extracted. If this diameter should be less than two and one-half inches, but should exceed one and three-fourths, craniotomy is available, and may be resorted to with a good hope of success; but craniotomy need hardly be performed with a smaller antero-posterior diameter than one and three-fourths inches, and in such cases the Cæsarean section alone remains. It is to be borne in mind, however, as before remarked, that much more may be done by nature in some cases of pelvic deformity than in others.

If we could secure a full knowledge of the existence and the extent of pelvic deformity before gestation has gone on to the full term, it is obvious that a resort to the Cæsarean section and craniotomy could be prevented by inducing premature labor.

To determine the existence and extent of pelvic deformity has led to the invention of a great variety of instruments, termed *pelvimeters*, for the purpose of measuring these deformities. French accoucheurs have been especially prolific of these inventions, some of which are quite complicated and apparently useless. A very simple instrument, the invention of an English practitioner, Dr. Greenhalgh, is thus described: "It is intended for measuring internally the antero-posterior diameter at the brim. The principle of the instrument is to assist the finger in measuring this diameter. It consists of a band of flexible metal one inch broad, which forms a ring. This band encircles the hand, passing across the centre of the palm, the size of the ring being adapted to different-sized hands by a piece of elastic india-rubber webbing. On the surface of the band, corresponding with the centre of the palm of the hand, is a projecting pivot perforated sc

as to allow a small metal rod to traverse it. The rod is seven and a half inches long, graduated along its central third; at its distal extremity it is bent at right angles into a form which admits of its gliding along the index or examining finger. It is to be thus used: The right hand having the instrument fitted to it, the forefinger or two first fingers are to be introduced so as to reach the sacral promontory. The curved extremity of the rod lies now on the radial side of the index finger. The promontory having been reached, the rod is drawn outward until the ring-shaped extremity is arrested against the arch of the pubis. The distance at which the rod is thus stopped is shown in the index, and when the hand is withdrawn, the antero-posterior diameter of the pelvis can be obtained by measuring the length between the end of the finger and the extremity of the rod."

If the hand alone be employed, the tip of the index finger should be made to touch the promontory of the sacrum, and the distance from that point to the posterior surface of the pubes can be estimated, although no very accurate measurement can be taken in this way. Or, again, the index and second finger may be introduced, and while the palmar surface of the index finger is placed against the pubes, the second finger may be stretched across toward the sacral prominence and an effort made to touch it. Yet a third plan is to introduce the four fingers within the cavity of the pelvis, and place them on a line between the pubes and the sacrum. The necessity of overlapping these fingers or extending them to fill up the space, will give a fair idea of this diameter. The greater the deformity the more readily is it made out, and hence when there is great difficulty in ascertaining the existence and the extent of the malformation, in skillful hands, it may be accepted as negative evidence of a favorable character.

Causes of Pelvic Deformities.

We now pass to the causes and mode of production of the pelvic deformities. For a long time these, together with other deformities of the skeleton, were referred to a single cause—viz., *rachitis*—but modern researches have clearly proved that the pelvis may be deformed in the absence of rachitis, and from purely mechanical causes, operating at a time when, on account of tender age or feebleness of constitution, they could meet but little resistance. From this view of the causes which produce changes in the form of the pelvis, we might collect deformed pelves into three groups—viz., (1) Those which are deformed from a softening of the bones, either by rachitis or mollities ossium; (2) Those deformed in consequence of a previous deformity

of some other part of the skeleton; (3) Those deformed by absolute narrowness.

(1) *The Pelvis deformed by Rachitis or Mollities ossium.*—These two diseases, however differing from each other, yet produce the same result—viz., they soften the osseous tissue and thereby weaken its power of resistance. But the mere fact of softening the bones, and their consequent weakness, is not of itself sufficient to account for the various deformities presented by the pelvis; for it is very evident that the bones, unless reduced to a gelatinous state, would maintain their general conformation unless acted on by some external force, for rachitis diminishes the solidity of the bones, but does not of itself produce any alteration of shape. This exterior force may be looked for in the muscular action, and still oftener in the weight of the parts which the pelvis has to support; for the pelvis, interposed between the spine which it supports and the lower extremities on which it rests, is most favorably conditioned for the action of deformity. The weight of the trunk in its erect position being transmitted from the lumbar vertebræ to the heads of the femurs in the direction of two lines intersecting the sides of the superior strait, evidently tends to increase the curvature of the posterior part of the ilium, and to depress the osseous circle of the pelvic cavity. In this way the sacrum receives a tendency, by almost insensible degrees, to push forward. By considering the action of the pubic bones under this pressure we may see how it is that the superior strait is oftener affected by the contractions of the pelvis than other parts, and why at this strait the antero-posterior and oblique diameters and the sacro-cotyloid intervals are more frequently contracted than the transverse ones.

When the weight acts more particularly on one side of the pelvis, the collapse is more marked in that direction, because in this case a change in the centre of gravity takes place from the inclination of the spine; and there is also a very unequal pressure of the weight of the body on the two sides of the pelvis, where, on account of a difference of length in the lower extremities, one of the coxal bones is more depressed than the other. In this way the acetabulum of one side is thrown almost directly under the sacrum, and at the same time receives the weight very obliquely. The customary attitude of the individual and the nature of her occupations must be taken into account in considering the irregularity of figure in the pelvis.

Sometimes there is a complete fusion of the sacrum and ilium, and the sacro-iliac articulation on the contracted side disappears. We simply state this fact without attempting any explanation of it.

In estimating the respective influences of mollities ossium and rachitis on the bony tissue, the distinctive characteristics of each should be carefully noted. Mollities ossium affects all parts of the skeleton indifferently, and it occurs in the adult only. The softening produced by this disease is very distinctly marked, and the most considerable retractions must be referred to it. Rachitis affects the bones of the lower extremities and ascends gradually to the upper parts; it proceeds from below upward, so that a deformity of any part by rachitis almost necessarily implies a deformity below. It is peculiar to infancy, and its effects on the skeleton are twofold—it softens the bones and it arrests their development; and as this arrest of development particularly affects the lower extremities, it is a necessary consequence that the ossa innominata should be much less developed in those subject to this disease than in others, and the limits of the pelvic cavity more or less contracted by it.

It is here that we may see the difference again between rachitis and mollities ossium, or rachitis adultorum, as it is sometimes called; for the first, exerting its influence at an early age of the patient, at a period when the pelvis has not yet reached its full development, permanently arrests the growth of this part of the skeleton; but the last, not occurring until after puberty, at a time when the ossa innominata have reached their full development, may soften the bones, but cannot arrest their growth. Moreover, the development and growth of the bones of the skeleton are not only arrested absolutely by rachitis, but their growth is retarded, even after a cure has been effected, during the whole term of development.

(2) *The Pelvis deformed in consequence of a previous Deformity of some other part of the Skeleton.*—These deformities are:

(*a*) *Deviations of the Vertebral Column.*—Rachitis is not the only cause of this deformity. It is now admitted that several other diseases may produce abnormal curvatures in this column. It is thus we establish a line of distinction between those deviations which nearly always attend pelvic malformations and those which often exist when the pelvis is well formed. The former must be referred to rachitis, the latter to some other affection. The shape and direction of the pelvis are subject to the influences of other deviations of the spine than those which depend on rickets, but it is only in subjects of an advanced age that curvatures occurring after the age of infancy exert an influence of this kind. Curvatures produced by rickets, even when not the essential cause of deformity in the pelvis, heighten the degree of contraction and affect the shape of the pelvis.

The aged and the young are alike affected by the spinal deviation, but the effects are brought about more rapidly with the young than with the old. The malformation is more or less similar to that described under the name of the *oblique oval pelvis.*

(*b*) *Congenital Luxations.*—These may cause an arrest of development and subsequent pelvic deformity.

(*c*) *Non-congenital Luxations.*—A luxation remaining unreduced, and which occurred early in life, is sufficient cause for an atrophy of the iliac bone corresponding to the dislocated femur; and it is evident that the malformation of the pelvis will be proportionately great as the luxation occurred at an early age.

(*d*) *Lesions of the Inferior Extremities.*—The curvatures of the lower limbs do not always diminish in length equally, and the pressure which they make on the bottom of the cotyloid cavities is not the same for both sides; the consequence of this is that the pelvis may be affected on that side where the pressure is the greater. The lower extremities may often be curved without injury to the pelvis, provided they maintain the same length, and where they are unequal in length there must result pelvic deformity.

The pelvis may be deformed by a shortening of one of the legs from any cause, particularly if the accident occur in early life, when the pelvis is but partially developed. Where one leg is affected with chronic disease, and the person is obliged to use crutches, bearing the whole length of the body on one leg, or where the thigh has been amputated in early childhood, the pelvis is in either case liable to deformity.

(3) *Pelvis Deformed by Absolute Narrowness.*—The most generally accepted opinion on this topic is, "that we have no positive data concerning the causes that give rise to the general narrowing of the pelvis; and that such pelves, as well as unusually large ones, should rather be considered as a freak of nature, belonging to the same category as a want of proportion in the head, which is not unfrequently found too large or too small relatively to the rest of the body."

The practitioner of homœopathy should bear in mind, in considering these various pelvic deformities and their proximate or remote causes, that a majority of them commence very early in life—some of them perhaps even before birth—and that they are due to a morbific influence which lies even beyond the apparent *causa occasionalis*, perhaps beyond our ken. But, taking into consideration the gravity of these cases on the one hand, and the wonderful efficacy of homœopathic medicine on the other, it becomes a solemn duty of the practitioner,

in treating such cases in infancy or childhood, to spare no efforts to bring about a complete effacement of the dyscrasia, if such it be, that has given rise to the abnormal manifestation, as well as a removal of that local manifestation itself. The so called "*antipsorica*" of Hahnemann act with a benignity almost divine in the various forms of scrofula, and by affecting a *radical* cure through their instrumentality in these cases, not only is present good done, but prospective suffering and even death in childbed may be averted.

Dystocia from Malformations of the Vulva, Vagina and Uterus.

Adhesions of the vulva may occur, hindering the expulsion of the child. In a case of this kind it is only necessary to divide the adhering portion with the scalpel at the moment that the presenting part is pressing down upon the adhesion, if the pressure of the presenting part is not of itself sufficient to break up the adhesion.

The *hymen* also may be so persistent as to hinder the expulsion; this also should be divided with the scalpel if it does not give way under the repeated manual examinations or from the pressure of the presenting part.

Contractions and rigidity of the vulva quite frequently delay the expulsion very much, but I have never found it necessary to operate in cases of this kind. *Aconite* most usually, or some other remedy, has aided the dilatation, and a little patience has always sufficed, and I believe always will suffice, in such cases.

Rigid perineum.—Remarkable cases of resistance on the part of the perineum are met with when the labor has been much delayed. *Aconite* or some other remedy has invariably supported the contractions and aided in the dilatation, and the delivery has been satisfactorily accomplished. In some cases the whole perineum has appeared to fit in such a manner the child's head, and to sink down so low, that it has been found necessary to apply the forceps and simply lift the head directly out of the little sulcus it has seemed to make for itself there.

There may be cases, however, in which interference would be absolutely required to admit of expulsion of the head taking place without laceration of the perineum. It has recently been advised to make small incisions a little on either side of the median line, upon the principle that an incised wound will heal more readily and nicely than a laceration will. It is barely possible that such a procedure might be necessary. If the perineum be properly supported, and the

downward pressure of the head be thereby delayed somewhat, it will be found that the perineum will yield gradually and the danger of laceration will be averted.

The *vagina* may be found malformed or adherent, or the hymen may be double or triple, and thrown across high up in the vagina; or there may be a complete septum in the vagina. These cases should all be treated with the knife if necessary, and according to circumstances present; these will indicate the proper treatment.

Vaginal cicatrices offer a formidable bar to the progress of labor. These may exist from previous disease of the vagina or in consequence of operations performed thereon. They are hard and unyielding, and seldom give way to the pressure of the head. If their existence is known prior to labor, they may be relieved by the use of sponge tents, etc., but during labor, if they exist in any degree, recourse must be had to the knife. The knife should be well guarded, and should only be used on such parts as are on the stretch during a pain, and but little cutting at a time should be done. It may be necessary finally to use the forceps to effect delivery.

Inversion of the vagina sometimes takes place during labor, when the protruding portion from prolonged pressure becomes gangrenous. When this is likely to occur, the forceps should be used at once and the expulsion accomplished. When this condition is apprehended or observed in its incipiency, the accident can be averted by carefully crowding the descending parts back continually as the labor progresses.

Œdema of the labia and nymphæ, so far as my experience goes, presents no formidable obstruction to the progress of parturition. Patience and the administration of remedies will assist the work of nature, and surgical interference will not be required. The parts are liable to become inflamed and slough if puncturing be resorted to.

Tumors are also liable to obstruct the passage, so as to cause great and even fatal delay. These may be osseous tumors or they may belong to the soft parts.

Exostoses may exist, and form some of the most formidable obstacles to a safe delivery. These usually arise from the anterior face of the sacrum, sometimes from the ischium and the pubes. They may be recognized by hardness, immobility, roughness and adherence to the bone. These forms of tumor continue to grow in size from year to year, and consequently to become more and more formidable at every successive pregnancy, unless cured by the proper homœopathic reme-

dies. The only plan of treatment is that to be pursued in deformed pelvis.

Osteo-sarcoma is another type of malformation, quite similar to the one just mentioned. The only difference is that it is somewhat compressible, a mixture of the osseous, fibrous and cartilaginous matter. Even the osseous crepitation can be felt on pressure. The plan of treatment is the same as that in the last case. Fortunately, the existence of both these forms of tumors is of rare occurrence.

Other bony formations are sometimes met with in the pelvic cavity, obstructing the progress of labor. These arise from the imperfect coaptation of fractured bones, or from the head of the femur being forced in upon the acetabulum. If the resistance offered by these should be very great, the plan of delivery must be conducted as in similar cases of pelvic deformity.

Sanguineous tumors sometimes form in the soft parts—in the labia, among the muscles of the pelvis, or even in the neck and lips of the uterus. If the size of these tumors increase gradually, the case should be treated by the administration of *aconite, hammamelis, erigeron* or any other remedy strongly indicated by characteristic symptoms, which will then be sure to arrest the difficulty and facilitate parturition.

Various other tumors are found in and about the track which the child must pursue in its passage to the light of day; many of which need no attention during parturition if they are not obstacles to the expulsion of the child; if they are, they may need to be punctured, incised or removed, as the nature of the case may indicate. It is always best to wait and allow Nature to do her own work, if possible. Many of these tumors are not discovered until the hour of parturition arrives, and note should be made of them and the proper treatment resorted to after the lying-in period has passed.

Ovarian tumors sometimes offer a very serious obstacle to parturition, and at other times do not. Numerous cases are recorded in which labor occurred naturally, the tumor occasioning no serious accident either to mother or child. If their presence is detected early in the first stage of labor, and the size be not too great, the tumor may be pushed up above the brim of the pelvis, and kept there until the head engages in the superior strait. Under such circumstances labor may terminate naturally and without further trouble. Or if this cannot be done, and the size of the tumor admits, it may be pushed to one side and the forceps applied to the head. If the tumor contain fluid, a trocar and canula may be pushed into it through the vagina or rectum, and the fluid contents drawn off. If the tumor should be

large, however, and the above methods should fail, craniotomy or the Cæsarean section will have to be performed. Sometimes, though rarely, the soft character of these tumors allows of their giving to the pressure of the fœtal head in its descent, and labor is terminated without difficulty. Mr. Spencer Wells writes, in the *Obstetrical Transactions:* "I know one woman who during the slow progress of an enlarging ovarian cyst, has gone through five pregnancies, has borne five living children without unusual difficulty, and has never yet had the cyst tapped, nor has labor ever been prematurely or artificially induced. . . . Another patient, upon whom I performed ovariotomy with success in the fourth month of pregnancy, after rupture of the cyst and peritonitis, had borne six living children during the progress of the cyst before its rupture." These cases are of course to be regarded as exceptional.

Polypi and other uterine growths are sometimes found obstructing labor. They are usually recognizable by their pyriform shape, and are generally found attached to the os or cervix by a pedicle. The safest and simplest course to be pursued in such cases is to remove the growth. This may be done by torsion if the polypus and its pedicle be not too large, or a ligature may be thrown around the pedicle and secured, and the growth removed with scissors; or again, the écraseur may be used and the polypus removed at once. The hemorrhage is not usually great.

Fig. 59.

THIS FIGURE, TAKEN FROM RAMSBOTHAM'S WORK, SHOWS THE SITUATION OF THE POLYPUS PRESSED DOWN BY THE ADVANCING HEAD IN PARTURITION.

Ramsbotham mentions what he terms *scirrhous glands* as a cause of obstructed labor. They are found in the hollow of the sacrum, and are to be recognized by "their situation, irregularity and hardness; by their being very sensitive; by their forming a chain of indurated tubercles, external to the vaginal coats; and by their being more or less firmly attached to the surrounding structures." They

are not likely to form any serious obstruction, and should they do so may be pushed out of the way, or the forceps may be applied.

Abscesses situated within the pelvis may likewise obstruct the descent of the fœtal head and retard labor. The evacuation of their contents might be necessary.

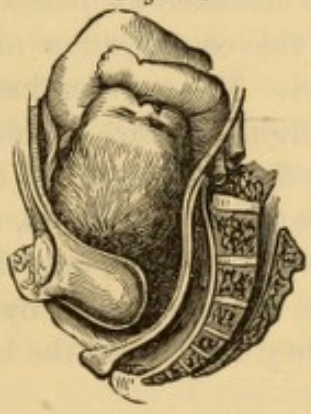
Accumulations of feces in the rectum may sometimes seem a very formidable obstruction to labor, but an injection or two of tepid water soon dissipates them. Sometimes, however, it is necessary to use a scoop or spoon.

Vaginal hernia, which consists in the descent of a portion of the intestine into the cul-de-sac behind the uterus, is mentioned by Churchill as a cause of delay during parturition. If it be possible, it should be pressed up above the brim of the pelvis; long-continued pressure upon the intestine should not be allowed, however, if this cannot be done, and the forceps should be promptly resorted to to effect a speedy delivery.

Over-distension of the bladder may usually be remedied by the catheter, and when it is prolapsed it must be crowded up into its place. If *stone in the bladder* exists, an effort should be made to push it up out of the way should it prove an obstacle to labor. This may be done with greater facility in the early stage of labor, before the child's head has advanced. If this should not succeed, the choice will then lie between vaginal lithotomy and craniotomy.

Vesical hernia, or cystocele, is occasionally found during labor. It gives rise to great suffering if the bladder is full of urine, and the

Fig. 60.



VAGINAL CYSTOCELE, TAKEN FROM RAMSBOTHAM.

pressure of the child's head may occasion its rupture, with fatal results. The male catheter must be introduced at once, and after the urine has been discharged the bladder must be crowded up into its place, and kept there until the head descends and forms a support for it. The

tumor will be found posterior to the pubes, fluctuating and free except at its pubic side, and the os uteri will be found above, in its natural place. The introduction of the catheter makes the case clear and unmistakable. Its correct diagnosis is important.

Dystocia from Morbid Conditions of the Uterus.

Tumors of the Neck and Body of the Uterus.—If *encysted tumors* prove an obstruction to delivery, they may be punctured and the contents drawn off, or if they contain cheesy matter an incision will allow it to pass out, especially from the pressure during a pain. But unless their size prevent the expulsion of the child they need not be interfered with.

Pedunculated fibrous tumors, or *polypi*, have already been treated of. (See page 234.)

Cauliflower Excrescences.—These cancerous or syphilitic growths seldom cause delay, unless their size is very considerable. But when they are large the condition is much more serious. Several cases are quoted by Cazeaux from Puchelt: "In one it was necessary to make incisions upon another part of the hard or scirrhous neck, so as to secure the introduction of the hand; and in a second, to remove the tumor that was attached to the anterior lip and occupied all the vagina by the scissors; gastrotomy was resorted to in a third, on account of a rupture of the womb, and not even the child was saved; in another, the extraction of the child was impossible, notwithstanding the perforation of the cranium, and the woman died before delivery. Only a single mother survived." As these fungous growths are liable to bleed freely, they may be mistaken for *placenta prævia*.

Carcinoma Uteri.—In this complication much depends on whether the child be alive or dead. The mother has a necessarily fatal disease, and if the child be living all care should be bestowed upon preserving its life; although the mother should be spared from suffering. Either incisions should be made into the os, turning may be resorted to, or the forceps may be applied. In case the child should be dead, the mother may be saved much suffering by resorting to craniotomy or other procedure to reduce the size of the head.

Other Abnormal Conditions of the Uterus affecting Labor.

Rigidity of the Os Uteri.—When this exists it may offer a formidable bar to the progress of parturition if not removed by proper treatment. It occurs more frequently in primiparæ than in multiparæ. The orifice becomes dilated to a certain limited extent, and beyond that it does

not yield, notwithstanding the continuance of the proper pains; and hence the strength of the patient becomes gradually exhausted and untoward symptoms set in. It usually depends upon some functional derangement inducing a spasmodic action, but it may be due to organic lesions of the cervical tissues. In the latter case the measures to be resorted to have already been pointed out. Incisions will probably be required, which may be made by using a probe-pointed bistoury carefully guarded by the fingers from injuring the surrounding tissues; and if after these have been made, if dilatation does not progress, india-rubber dilating bags may be used to effect it. But in the ordinary form of rigid os arising from some functional disturbance, homœopathy furnishes a certain relief, and the measures resorted to by the old school of practice—such as bleeding, opium, chloroform and topical applications—are rendered altogether unnecessary. The properly-selected homœopathic medicine restores order to the disordered system, the parts are relaxed and softened, dilatation proceeds as usual, and a happy termination to the labor is the reward. The remedies called for in such cases will be laid down in a subsequent chapter of this volume, in treating of the therapeutics of Labor.

Obliquity of the uterus would throw the orifice of the neck to one side of the axis of the pelvis—either too far posteriorly, anteriorly or yet to the right or to the left laterally. In such cases the first and possibly the only thing the accoucheur has to do is to wait patiently on the operations of nature. Should it be evident that parturition will not be accomplished unaided, the woman should be subjected to "perfect rest on the back when the obliquity is anterior, or on the side opposite to the one occupied by the fundus uteri when it is lateral, and the employment of the hands to support and maintain the deviated organ, or of a large bandage properly applied to produce the same effect. The patient should be advised not to bear down until after the displacement is remedied. If these means are not sufficient, it will be necessary while thus operating externally on the body to act at the same time on the neck, for that purpose introducing two fingers into the uterine orifice and taking advantage of an interval between the pains to draw it gently toward the centre of the pelvis, while the other hand is employed in pressing the fundus of the organ in the opposite direction."—CAZEAUX. In the posterior obliquity the woman ought to remain seated or standing, or, if possible, even inclining a little forward.

Agglutination of the external uterine orifice sometimes occurs, even at the hour of labor. Such a state will be recognized by feeling the outlines of the lips apparently covered over by a thin membrane.

At every contraction the line of demarcation between the lips will become more and more apparent, and allow the thin membrane to sink a little between the lips. Now during a pain the thinnest and most yielding spot must be found out, and the finger forced without much violence through the membrane. If the finger is not sufficient, a more potent agent must be used, great care being taken not to wound the child or the mother needlessly.

The swelling and elongation of the anterior lip is a frequent cause of delay in labor. The anterior lip from some cause may not dilate. It may swell and become paralyzed, and hang down upon the head of the child, whilst the posterior lip kindly dilates, and the presenting part is ready to pass through but for the stubbornness of the anterior lip. Great and often immediate relief is obtained by pushing up with the finger this anterior lip, and holding it firmly, and even crowding it up farther during a pain. It then slips up sooner or later above the head, and the distress of the patient is relieved and the labor progresses finely to its completion. It will sometimes be difficult to distinguish between the elongated or swollen lip and a fold of the vagina. In some cases we may find both. The uterine lip will be found hard and unyielding, while the vaginal fold is soft and pliable. In these cases the fold of the vagina must be pushed up first, and kept up as well as possible out of the way. Then the uterine lip can be made to follow more readily. Sometimes considerable time will be expended in making these manipulations.

Induration and hypertrophy of both lips are found in some cases, when the distress of the patient during labor will furnish the symptoms necessary for the indication of the remedy which will effect the desired dilatation. Incisions may have to be resorted to.

Complete obliteration of the cervix uteri, it is admitted by all medical writers at the present day, does sometimes occur. Of course no os, in this case, can be found by exploring in any direction far back toward the promontory of the sacrum and in other directions; but much care is necessary here, for sometimes it is found at an incredibly distant point toward the promontory of the sacrum. When not the faintest line of demarcation of an os can be discovered, one must be made at the lowest or most pendant point of the uterus.

Hernia of the womb, it is admitted, sometimes takes place by the inguinal or crural rings becoming so much dilated as to allow the escape of the uterus. Pregnancy may continue to the full term, when a reasonable time should be allowed for spontaneous delivery, but it is most likely that a Cæsarean section will be found necessary.

A prolapsed womb may become pregnant, or the womb may prolapse suddenly after conception, and the full term be accomplished; a slow and difficult labor will result, but it may take place fairly, and the uterus return to its place.

Rupture of the Uterus and Vagina.

Rupture of the uterus is one of the most serious complications or accidents which can possibly occur during the puerperal state. It may occur at any time during labor, but is much more frequent in the latter stage than in the former. Primiparæ are much less liable to the accident than multiparæ. It may occur in the body or in the neck: when it occurs in the neck, it almost always involves a rupture of the vagina also. The entire thickness of the uterine parietes may be ruptured, which is the most common form; or the peritoneum may not be involved; or again, the peritoneum may alone be torn.

The cause of so unfortunate an accident may be referred to many circumstances: great thinness, a softening or a diseased condition of the walls, mechanical injuries, the administration of ergot, or too violent contractions may all be enumerated among the circumstances, especially too violent contractions with an undilated os.

When this accident occurs, a sharp, tearing pain is felt, and that so suddenly and severely as to cause the patient to scream out with great force. Sometimes the patient will complain of something having given way, followed by a cessation of uterine action. Cold and clammy sweats break out, the pulse is very small and quick, the presenting part of the child recedes beyond the reach of the hand, and if it escapes into the abdominal cavity, it can be felt through the abdominal walls. Collapse sets in, and there may be convulsions; vomiting follows; breathing becomes quick and labored, the pulse more accelerated; and unless reaction sets in, death shortly occurs from collapse. Hemorrhage to a greater or less extent always occurs.

"Of all these symptoms, the peculiar sharp and sudden pain, the cessation of all uterine action, the recession of the child, and the being able to feel it easily by the abdominal wall, the hemorrhage and the collapse,—these together make up a total which are almost certainly indicative of ruptured uterus. Of course there is not only hemorrhage per vaginam, but a good deal of blood may also escape into the peritoneal cavity—so much, indeed, that this alone causes death in some cases."—Meadows.

When this accident occurs at an early stage of gestation, before the

uterus contains much to be discharged through the rent, the product of conception may dam up the passage and cause the contents of the uterus to be retained for some days; so that when a reaction ensues after the first shock, a calm precedes a more violent set of symptoms after the final escape of the product of conception into the cavity of the abdomen. In the later months of conception the diagnosis is easier to be made, as described above.

Should the patient survive the immediate consequences of a lacerated uterus, after some hours reaction sets in, and the symptoms of collapse are succeeded by those of inflammation of the peritoneum and womb, which is usually very severe, and consequently presents symptoms of peculiar aggravation. If this should abate without destroying life, it may be followed by the formation of abscess or by cellulitis, etc., which will probably carry the patient off. There are cases on record, however, in which recovery has taken place even when the fœtus has not been delivered, but has become encysted in the abdominal cavity.

Terrible as this accident is, therefore, it is evident that nature unaided has been able in some cases to overcome the tendency to death, and much more may be done by proper manual and instrumental interference and by well-directed after-treatment.

The first step to be thought of in cases of this kind is, the delivery of the child where that is at all practicable, for it is to be remembered that it is alive and may be born alive. If the os be either dilated or readily dilatable, the forceps should be promptly resorted to if the head can be reached. But if the child has passed upward, so that the head cannot be reached, or if the condition of the os contraindicates the use of the forceps, turning should be resorted to and the child delivered with promptness. It is humane to the mother to deliver the child as soon as possible, for her best chance of recovery rests on that. Care must be taken, in effecting delivery either by the forceps or by version, that no part of the intestines be drawn through the rent in the uterus, or that it be not allowed to remain thus constricted after extraction has been accomplished. If neither of the above methods is applicable, then the Cæsarean section should be resorted to. This operation has been successfully performed and the mother has recovered even under such unfavorable circumstances.

During the condition of collapse, the use of stimulants is perfectly admissible and perhaps necessary. The after-effects will be all the more successfully combated by a strict adherence to homœopathic

medication. (See the remedies under Puerperal Fever, Metritis, etc.)

Rupture of the vagina may likewise take place independent of any laceration of the uterus. A similar condition prevails in all respects as in rupture of the uterus, except that the pain is not so severe and other symptoms may not be so intense. The treatment to be pursued is similar to that recommended in case of rupture of the uterus.

Rupture of the Bladder.

This can only occur from injudicious management, culpable neglect or ignorance. The laceration may take place either upon the peritoneal or the vaginal side of the viscus. In the former case, urine is extravasated into the peritoneal cavity, and violent inflammation is induced which may destroy life. In the latter case, while the immediate effects are not so serious, yet the consequence, in the shape of a vesico-vaginal fistula, is very severe and distressing.

The evidences of rupture of the bladder will be similar in many respects to those of rupture of the uterus or vagina, but there will be little or no hemorrhage per vaginam; uterine contractions will be continued, the presenting part of the child and the uterine os will be found in their proper places, and the evidence of the child having escaped into the abdominal cavity will be wanting.

This possibility of rupture of the bladder may be averted if the accoucheur sees to it that during a protracted labor the bladder is properly evacuated. Should the natural efforts of the woman fail of accomplishing this, the catheter should be used. If the accident does happen, however, from any cause whatever, delivery should be effected by the forceps or by turning, unless it be apparent that the child will soon be born without mechanical assistance. If urine is poured into the peritoneal cavity, the resulting inflammation should be treated according to the general principles of homœopathic practice, and may thereby be successfully combated. Should vesico-vaginal fistula result, on the contrary, the niceties of the surgeon's art will be required to relieve the suffering woman from her horrible situation.

Laceration of the Perineum.

Laceration of the perineum is more liable to occur in primiparæ than in women who have already borne children. The extent of the injury varies a great deal. It may be a mere nick in the anterior thin border of the perineum, may extend from the fourchette to the sphincter ani, or may involve the sphincter and in some cases the entire

recto-vaginal septum. Again, the anterior part of the perineum may remain intact, and perforation of the perineum take place, the child being actually driven through the perineum from mal-direction of the uterine expulsive force, from disease of the perineal tissues or from deformity of the pelvic outlet.

Sometimes the perineum is preternaturally broad, and in such cases the head pressing downward forcibly distends it in every direction, and becomes, as it were, invested by a perineal cap. Laceration or perforation will be pretty sure to take place unless the head be lifted out of the investing perineum by means of the vectis or blade of the forceps and supported thereby, care being taken that no pressure is made on the perineum by the instrument, the hand of the operator serving as a fulcrum for the lever. Laceration of the perineum may be caused by too speedy delivery, by rigidity of the perineum itself, by narrowing of the pubic arch, or by the use of instruments to effect delivery. It may also be occasioned by degeneration of the tissues of the perineum, or by the woman straightening herself out at the last moment when the head is emerging from the vulva.

The *treatment* of ordinary cases of lacerated perineum, when the sphincter ani is not involved, is very simple. Indeed, the natural restoration of the parts after labor will reduce what at first appeared to be a formidable laceration to a very insignificant one. Rest upon the back for a number of days, and keeping the limbs in constant apposition, combined with perfect cleanliness, will suffice to restore these simple cases. It may be necessary to draw off the urine with a catheter, but as the bowels are not generally moved until the ninth day, fecal matter is not likely to disturb the healing of the wound.

The more serious cases require surgical interference. The torn surfaces are to be coaptated and held in place by sutures—quilled, interrupted or twisted sutures, as may be selected—and perfect rest enjoined. The operation should be performed immediately after labor, for obvious reasons.

No serious case of laceration of the perineum should be neglected by the accoucheur, as prolapsus or procidentia uteri, or non-retention of the fecal matter, may give rise to serious trouble in after life, unless the structures are restored to their normal condition.

Labor Complicated by Previously Existing Disease.

There are certain diseases which may complicate labor that require special and particular attention. Of this kind are *hæmoptysis* and *hæmatemesis*. In these cases the remedies must be resorted to which

are usually employed in treating such diseases. As a general rule, hemorrhages will be controlled and labor will terminate in a regular, natural way. But if we are not thus fortunate, the labor must be terminated as soon as possible by artificial means. In *asthmas, palpitation* and *diseases of the heart*, we should be governed in our action by the principle stated above. In *aneurism*, where there is a great danger of rupture at any pain, immediate resort should be had to artificial means of delivery.

When *hernia* exists it should be reduced as soon as possible, and when it is utterly impossible to reduce it, the best practice is to resort to artificial means of delivery, in order that the hernial protrusion may not be strangulated longer than necessary. When the hernia is liable to return after reduction, it may be kept back by constant pressure. *Syncope* is curable by using the proper medicines. (See *Therapeutics of Labor.*) When there are great *exhaustion* and *debility*, and they cannot be relieved by the proper medicines, resort to artificial means for delivery.

Labor Complicated by Convulsions, Hemorrhage and Placenta Prævia.

These terrible complications of parturition are fully treated of in the latter or therapeutical portion of this volume, under the proper headings.

Dystocia from Abnormal Conditions of the Fœtus.

We now commence the study of those obstacles to its ready expulsion which depend on the fœtus and its appendages, the passage being in a normal condition and the expulsive force sufficient.

Hydrocephalus.—Some disease of the fœtus may develop a true hydrocephalic condition, in which the head becomes so large as to make it impossible for it to pass through the cavity. This state may be known from the cranial bones being separated far from each other, and each seems to swim, as it were, in water when pressing upon them; there is also a wide suture between the bones of the cranium.

The *treatment* in such cases depends on circumstances. Degeneration of the fœtal head may have occurred to the extent that it resembles a membranous bag, and under such condition it may be expelled without operative interference. Such cases are of course rare. Again, the scalp may be ruptured and the fluid contents of the cranium expelled. But should it become evident that labor cannot be completed without assistance, the head should be punctured and its contents discharged. For this purpose an ordinary trocar and canula

or Braun's long obstetrical trephine may be used. The operation should not be delayed too long, as there is danger of rupture of the uterus occurring, or the pressure of the head upon the soft parts of the mother may give rise to very serious inflammation and sloughing.

In some cases the breech or inferior extremities are born first, and a hydrocephalic head is found to be impacted either within the pelvis or above the brim. It would naturally be more difficult to correctly make out the condition of the fœtal head under such circumstances than when the vertex presents, the neck and shoulders preventing to some extent a free examination. But by patiently forcing the finger upward to the head the condition may be made out. Here the trocar may be pushed into the base of the head with similar results. The instrument of Braun will perhaps be safer and more efficient.

Hydrothorax may exist. This disease may be diagnosed after the expulsion of the head or breech by the arrest of progress, by the intercostal spaces being extended, and by the fluctuation of water between the ribs.

Ascites may occur and arrest the further progress of the child. When this is the case fluctuation and enormous distension solve the mystery. In the last two or in similar cases the trocar is the only remedy. A small trocar should be used in these cases, as the abnormal conditions are not necessarily fatal to the child.

An emphysematous condition may occur when the fœtus has been long dead and has become so distended with gas as to hinder its expulsion. The trocar is to be used also in this case. Upon using this instrument large quantities of offensive air escape.

Tumors of the fœtus may also cause a delay until the tumor is removed if solid, or punctured if containing fluid.

We must be on our guard against accidents, and be duly prepared for every exigency which may arise.

Anchylosis of the fœtal articulations has been known to exist, causing great delay. On the application of the forceps and making forcible traction the child will be delivered.

Excess of volume on the part of the child may be a cause of delay; the volume may be so much in excess, indeed, as to constitute the child a monster. The application of the forceps or blunt-hook is the remedy in cases of this kind,—that is if the vital forces are inadequate to effect delivery.

Multiple and adherent fœtuses and other *monstrosities* constitute a very formidable cause of dystocia. We can often ascertain before the time of delivery the fact of the presence of two or more fœtuses in utero,

but we cannot ascertain whether they are separate and independent until the hour of delivery has actually come. If two bags of water are found to be present, it is necessary to rupture the membranes twice. The same must be done if we have evidence of there being two distinct gushes of liquor amnii. We may then be assured that two pouches have ruptured, and it is made certain that there are no adherent fœtuses present; for adherent children are always enclosed in a single set of membranes, and perfect twins are seldom enclosed in a single amnion. If, moreover, the head and feet appear at the superior strait, and particularly if we can draw upon the feet without causing the head to ascend, we may be sure that there is no adhesion. If three or four feet appear at the vulva at the same time, and on pulling at one another moves simultaneously, but the others remain at rest, we may be sure of the fœtuses being detached from each other. If all move simultaneously, we can only ascertain this fact to a certainty by carrying the hand up into the uterus.

In all cases, whether there is an adhesion or not, sufficient time should be allowed for nature to operate unaided, but efficient aid should be rendered the moment that there is reason to believe it to be called for. Whether the union takes place at the head or the breech, the expulsion takes place, the one after the other, without difficulty. But if the union be at the occiput and the full term has expired, craniotomy will probably have to be resorted to.

Where there are two heads to one trunk, one head will engage after the other, and the body will descend subsequently.

Where each head has its body, and the union takes place at any point of the trunk, one head may be born first; the feet belonging to this head may be brought down; next the feet of the other child may be brought down, and lastly the head of this same child.

When there is but one head to two bodies, the head may be born first, and the two bodies simultaneously with each other. If the breech of one body comes first, the hand may be introduced and the feet of the other child brought down.

But it is impossible to lay down positive rules for all the anomalies which may arise. In special cases the accoucheur, in deciding on his course, must be led by general principles.

Multiple and *independent* fœtuses, *twins*, *triplets*, *etc.*, are often delivered one after the other, promptly and with but little delay, but usually these cases are more tedious. The child first presenting cannot be acted on as efficiently as if there were but one, for the uterine contraction must force one by acting upon the other

Moreover, the over-distension of the uterine walls serves to weaken the contractile powers for the first child. When the first child presents by the breech, there is likely to be more difficulty in the birth of its head on account of the remaining child's hindering the direct application of the uterine contractions upon it. Hence we must not overlook the importance of introducing a finger into its mouth in order to flex the chin upon the chest, and make sufficient and prompt traction for a safe delivery. Soon after the birth of the first child, in the course of twenty minutes, the contractions return, feebly at first, but soon more efficaciously, and the next child and the next are promptly expelled. The accoucheur, as soon as one child is born, should always place his hand on the abdomen of the mother, to ascertain whether others are present there, and so on successively until all the births are effected. If another remains, the abdomen will seem to be but a little smaller for the expulsion of one or two: the presence of more will be unmistakable to both sight and touch. Sometimes, after one child has been born, a rest of some hours seems necessary before the exhausted fibres are sufficiently recovered to renew their contractions. Sometimes even days elapse before labor is renewed. The accoucheur should not interfere in such cases unless it be absolutely necessary to do so. Nature is generally competent unaided. All troublesome symptoms, such as flooding, fainting, etc., may be relieved by the proper homœopathic remedies, according to the principles already mentioned. If the pains are delayed very long, they may be reproduced if necessary by resorting to the remedies referred to under the head of Therapeutics of Labor. Sometimes it may be necessary to rupture the membranes for the passage of the second child, in order to excite contractions, and sometimes to tickle the os with the finger in order to excite a reaction.

Sometimes both heads incline to present at the same time, in which case one must be pushed aside to allow the other to descend. The same course must be adopted in case the breech presents. If either child presents by the shoulder, and version is determined upon, great care must be exercised to seize the feet of the child to be turned; this is an easy matter by constantly keeping the hand on the child whose shoulder presents.

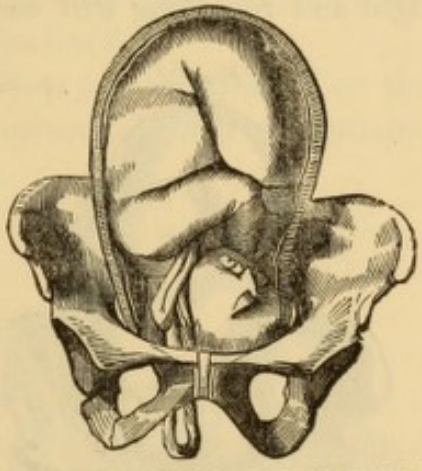
When two feet appear at the vulva, and it should seem advisable to interpose assistance, but one foot should be drawn upon, and that very gently at first, in order to ascertain whether the other moves simultaneously as belonging to the same body; and if this is found not to be the case, every effort should be made to return that which

does not. A good and perhaps the only way to accomplish this is to suspend the patient by the feet, at the same time holding on to a leg of one of the children; the others would then return into the uterus, to be extracted after the expulsion of the first.

No attempt should be made to deliver the placenta of the first child before the second is expelled, as hemorrhage would certainly result; and care should be taken that no traction is made upon the cord for the same reason.

Prolapsus of the cord is a serious complication for the child, whilst it brings no harm to the mother, the life of the child being alone endangered: Fig. 61 exemplifies a case of this kind. The first evidence

Fig. 61.



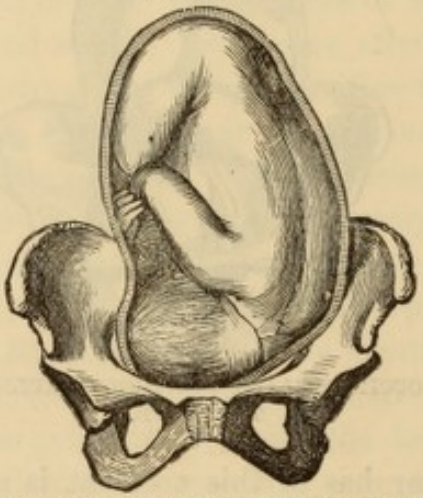
THE RIGHT POSTERIOR OCCIPITO-ILIAC POSITION COMPLICATED BY A FALLING OF THE CORD.

which the accoucheur has of this accident is actual presence of the cord with the presenting part of the child. The fold of the cord hanging may be of different lengths, simply hanging below the superior strait or it may be six inches long or more. If the child is living, the cord will be felt to pulsate one hundred and twenty to one hundred and forty beats a minute, and it will be felt to be firm and like a living tissue. But if dead there will be no pulsation, and the cord will feel shriveled, soft and lifeless.

The treatment of this complication needs to be very prompt, lest the presenting part descend and cause strangulation and consequent death of the child. The only plan of safety possible is to take a piece of wet sponge, about twice the size of a hen's egg, and cut entirely through its centre a hole large enough to receive the fold of cord. Then pass a string through the loop of cord, and next pass the same string through the sponge. Now by holding on to the string and slipping the sponge upward the fold of cord is drawn into the sponge.

Slip the sponge well up, so as to secure a full introduction of this fold into the sponge. Then with the fingers crowd the sponge and all well above the superior strait. The sponge will dilate and retain all above the presenting part safely. It may be well to be always prepared with a small piece of sponge ready for the occasion. If the presenting part of the child has become so firmly engaged in the superior strait as to render the return of the cord impracticable, the labor should be terminated either with the forceps or the blunt-hook. Should the shoulder present, and podalic version become necessary, the cord should be carried up with the hand used for this purpose. When the breech presents, it may become necessary to hold the sponge at the superior strait until the part becomes so engaged as to retain the sponge without further effort. A little thought and reasoning will enable the accoucheur to

Fig. 62.



THE LEFT OCCIPITO-ILIAC POSITION STRONGLY INCLINED ON ITS POSTERIOR PARIETAL REGION.

quickly adapt himself to any variation which may occur. He should always endeavor to adapt himself quickly to circumstances as they arise.

Shortness of the cord may occur as a complication, and delay the labor very much. It has been known to be not more than four or five inches in length. The strongest symptoms of this state of things are found in the continued retraction of the child, time after time, after the cessation of each pain, without any perceptible advancement.

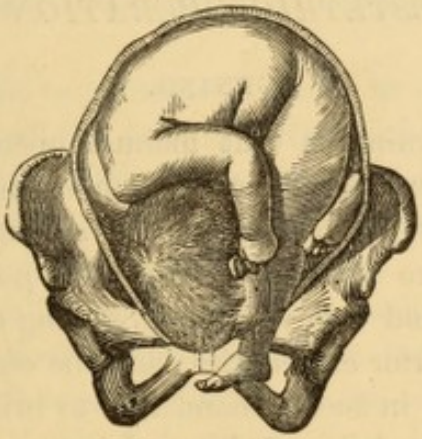
If this condition of the patient continues too long, so as to endanger the welfare of the mother or child, the aid of instruments must be invoked. When the presenting part has advanced so far as to expose the cord, it should be severed at once, about an inch and a half from

the child's body. It may be tied, or held tightly between the fingers of an assistant, until a complete delivery takes place. There is danger of a rupture of the cord or of a separation of the placenta, exposing the child and mother to a severe loss of blood before the child is sufficiently far expelled to expose the cord; in this event the treatment is still the same; apply the instrument necessary for hastening the expulsion of the child.

Inclined position of the fœtus constitutes another cause on the part of the child of its tardy birth. Fig. 62 illustrates a case of this kind. In making an examination per vaginam, one ear, the side of the head and the neck are felt. In all similar cases it is only necessary to turn the patient so that she shall lie on the side opposite to the place where we feel the neck of the child. The body falls down on the same side, and soon rectifies the inclination.

Inclined breech positions can be managed on the same principle, the mother being always turned in such inclinations upon the same side as the anus points to.

Fig. 63.



THE LEFT POSTERIOR MENTO-ILIAC POSITION COMPLICATED BY A DESCENT OF THE LEFT FOOT.

Inclined facial positions should always be managed in the same way as any facial presentation; they should be converted at once and without delay into vertex presentations, as will hereafter be described.

Inclined positions of the trunk must also be interfered with at once, and converted into vertex presentations or delivered by the feet, as directed a little farther on.

Complicated presentations, something similar to Fig. 63, must be managed by the application of general principles.

The child is forced quite closely down into the superior strait.

Now, it is evident the trunk cannot go back and the head be brought down, because one foot has advanced too far. If the feet were farther up, the forceps might perhaps be applied, and the head brought down, and the cord would be less liable to become compressed. All things being considered, then, it is very evident that the best course to be pursued is to use a linen handkerchief as a fillet on the foot most advanced. An assistant should make powerful but steady and careful traction upon it, whilst the accoucheur steadies the uterus with both hands placed upon the abdomen. The labor will then terminate in the most favorable manner. The exercise of sound judgment is called for in all these unusual conditions.

CHAPTER XV.

OBSTETRIC OPERATIONS.

Turning.

VERSION, or turning, is that manual operation by which we change one presentation for another more favorable to delivery. It is, when carefully performed, a great saving of life in difficult labors. There are two kinds of version: the *podalic*, which consists in introducing the hand into the uterus, seizing one or both feet and delivering by the inferior extremities; and the *cephalic*, which consists in changing the head in such a manner as to bring a more favorable part of it to present, and thus facilitate delivery.

It is proper to be remarked here that when the history of a given case of parturition indicates a probable malposition in a future pregnancy, the woman should be subjected to careful medical treatment, with a view to curing that abnormal condition of the system which led to the previous difficulty. If a malposition be detected near the close of gestation by means of auscultation or palpation, it is claimed —and has been often verified by Mercy B. Jackson, M. D.—that *pulsatilla* will so affect the uterus or the fœtus, or both, as to bring about a change to the normal situation of the fœtus in utero. Considerable evidence has been given as to the truth of this assumption—to the extent, indeed, that a mere negative theoretical opinion does not suffice to disprove it. It is, at all events, worthy of careful trial.

PODALIC VERSION.—When it is deemed necessary to change the presentation of the child by bringing down the feet, there are certain rules which under all circumstances must be observed:

1. The patient should by all means be apprised of the nature of her case, and as simply and kindly as possible be made acquainted with the nature of the operation to be performed. When she is once made to understand that the proposed operation is for her safety and that of her child, she will the more cheerfully submit; her free consent must in the first place be obtained.

2. Her position must be upon the back, with the breech near the edge of the bed, her feet also near the edge of the bed, the thighs flexed at right angles with her body; the head and shoulders must be elevated to a reasonable height.

3. The accoucheur should slip off his coat as gently as possible, in such a manner as not to make a great flourish and thereby alarm his patient. The hand and wrist to be used in the operation should be rubbed with lard until perfectly smooth, that hand always to be employed whose palmar surface corresponds with the face of the child. For obvious reasons care should be taken not to lubricate the palmar surface.

4. The os uteri must be sufficiently dilated or dilatable to admit of the free introduction of the hand and the passage of the child. If there is the least rigidity of the fibres, we must defer the operation a little longer, otherwise we incur the risk of rupturing the uterus or of badly injuring the patient in other respects.

5. The introduction of the hand can be easily effected by placing first the fingers and then the thumb within the vulva, at the same time bringing them all together into the form of an elongated cone. Now press carefully, slowly and steadily from before backward and from below upward, and the hand will enter the vagina and soon come in contact with the child. Great care must be exercised in passing the vulva and entering the vagina, especially in primiparæ, as this is sometimes the most painful part of the whole operation. The fingers should be straightened as the hand passes the os externum, to prevent the knuckles giving unnecessary pain, and this may have to be observed likewise in passing the vulva. The palmar surface must be spread out and kept upon the anterior surface of the child until we come in contact with one foot. If there is difficulty in finding the foot, carry the hand upward to the thigh, and then the hand can follow the thigh and leg along to the foot. Having ascertained that it is really the foot, make a firm grasp about the ankle close down

to the foot. If action is taken before the rupture of the membranes, the hand should be insinuated gently between the membranes and the uterus, and passed upward until the foot can be felt. The membranes should then be ruptured by scratching with the nail, and the foot seized. By this means we gain the advantage of having the fœtus floating in liquor amnii, for that fluid cannot escape in any quantity when ruptured in this way. Care should be taken that the membranes are not ruptured prematurely. All this stage can be accomplished from time to time during the intervals of the pains. During each pain the hand should remain perfectly quiescent and

Fig. 64. *Fig. 65.*

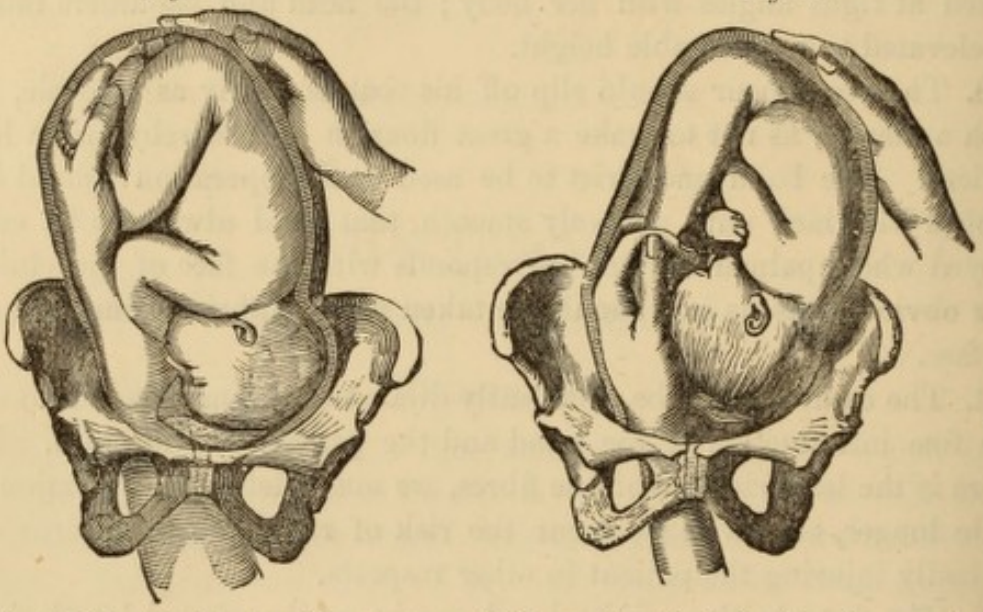


Fig. 64. In this the head has been pushed up into the left iliac fossa, and one hand takes hold of the foot while the other supports the organ externally.

Fig. 65. The same position, in which the version is commenced by drawing down the foot.

spread out flat upon some part of the child, any part being preferable to the abdomen.

The surest way to succeed in finding a foot, especially when the liquor amnii has been discharged, is for the hand to traverse the body, thigh and leg. Never feel for the foot until the body, thigh and leg lead on to it. The free hand must be placed upon the abdomen in order to steady the uterus, or this office may be performed by an assistant. Having secured a foot, then, during the absence of a pain, the hand should be gently and carefully withdrawn. If we have been careful to carry the hand upon the anterior surface of the child and secured a foot there, we shall succeed in turning the child by doubling it more and more upon its anterior surface. By doubling

the child upon its anterior plane we run no risk of breaking its back or neck, as in doubling it backward. Moreover, by bringing down only one foot and allowing the other to remain in its usual position, we leave the breech to occupy a bulk nearly as large as the head, so that as it passes through the organs more dilatation is effected, which the head requires in order to pass freely, and with less compression upon the cord, and of course with less danger of strangulation.

Fig. 66.

Fig. 67.

Fig. 66. The version is here completed, and the occiput, which was placed in the left iliac fossa at the commencement of the operation, will now come down behind the right acetabulum.

Fig. 67 shows the mode of management of the cord.

Further, as one leg is left distended upon the abdomen of the child, it serves to protect the cord during the passage of the body. This is a self-evident fact.

After the turning of the child is fairly accomplished, the labor may be effected by the natural process alone, or we may continue to act as occasion requires. Wait, by all means, if it will seem to answer to do so, but if not make traction upon the leg, but act only in concert with the pains. "The pains sometimes do not return for a whole hour, but then so powerfully and quickly that the child is born in full vigor and activity."—WIGAND. Do not draw down the other leg; wait until it is fairly expelled, foot and all, for it may be the saving of the child's life to do so, the cord being in this manner protected. Now

the chief danger arises from the strangulation of the cord by its being compressed between the head and the bony walls of the pelvis. So long as we can feel the pulsation of the cord all is well. Should the pulsation cease, a slight effort may be made to draw it down a little. If this can be done, pulsation will often become re-established, and, all things being equal, we can still wait. If it cannot be drawn down and pulsation ceases, we must hasten delivery as much possible by making careful traction upon the body of the child. As soon as possible we must hook down the arms by placing the index finger in the bend of the elbow, and then as soon as possible hook the same finger into the mouth of the child and flex the head as strongly forward as possible; hold it thus while with the other hand placed upon the shoulders make steady and strong traction, and the patient will soon be delivered. Manage all breech presentations in this way when interference appears necessary in order to save the child or mother; otherwise trust to nature.

It sometimes happens that the arms slip up by the sides of the head, when it will be necessary to disengage them before the head can engage. This can be done by slipping two fingers up from the shoulder along the humerus, and allowing these fingers to lie along on its whole length; we can pass them forward and downward on the child's face, and in this manner run no risk of fracturing its arm. The posterior arm should be disengaged first, and the sub-pubic afterward. In all cases of difficulty in the introduction of the hand to perform this operation from rigidity of the uterine neck, the difficulty can be overcome by the administration of the proper remedies for rigid os. It should be further observed that complications from hemorrhages, etc. can all be controlled by suitable medication, and in this way time can be obtained for dilatation and other necessary advantages without resorting to brute force or allopathic measures. *Let it not be forgotten* that version must *never* be attempted until the os uteri is *fully* dilated or *freely* dilatable. It can then be safely performed, both to mother and child, whether the membranes are ruptured or not; but the fittest moment for the operation is when the os uteri is fully dilated and the membranes are still unruptured. The operation becomes the more difficult the longer the time that has elapsed after the membranes have been ruptured and the less the quantity of liquor amnii contained within the uterus, for then the uterus more closely envelops the child and the hand is passed with greater difficulty.

Some obstetric writers—Dr. Robert Barnes more especially—insist that the knee rather than the foot should be seized and brought

down. On this point Dr. Barnes says: "There ought to be some good reason for going past the knees to the feet, which are farther off and more difficult to get at. Now, I know of no reasons but bad ones

Fig. 68.

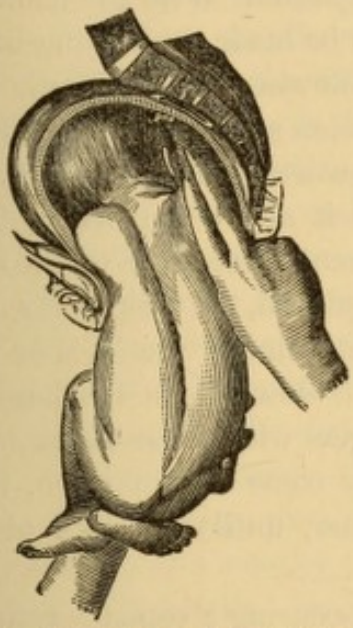


Fig. 69.

Fig. 68. Delivery of the posterior arm first.

Fig. 69. The mode of flexing the head by drawing down the chin and pushing up the occiput. (This mode is several times mentioned or referred to in the text.)

for taking this additional trouble. You can turn the child much more easily and completely by seizing one knee." (BARNES' *Obstetric Operations.*) While it is true that the knee is reached sooner than the foot, and while there are cases in which the seizure of the knee would not only be more easily accomplished, but would be equally satisfactory with a seizure of a foot, still, in a majority of cases where turning is required, grasping one foot and bringing it down is, in my opinion, the safest and most satisfactory procedure.

"*Combined internal and external version* may be practiced in cases where the os only admits the forefinger, provided the membranes be entire or the uterus be not too rigid. It depends for its efficacy upon the mobility of the child *in utero* by mere external palpation, and has the advantage of being simpler, less dangerous and difficult, and of being applicable in cases where ordinary version could not be performed."—RIGBY.

The simplicity and efficacy of this combined procedure in arm, shoulder, neck or transverse positions, when detected at an early stage of labor, will be apparent. The operation consists in introducing one or two fingers of the left hand within the os uteri, in order to reach a

finger's length within the cervix. The position of the child having been made out, and it having been ascertained to which side of the os uteri the head lies, the right hand is placed on the abdomen of the patient over the fundus, and an effort should be made to make out the position of the child's breech by palpation. With the hand on the abdomen, gentle but firm pressure is to be made against the breech to push it over toward the right side, following it by a gentle gliding movement of the hand over the abdomen as it recedes; while at the same time the hand within the vagina pushes up the head in the opposite direction, so as to gradually raise it above the brim. Thus, it will be perceived, by pushing the different extremities of the child in opposite directions by the two hands employed, the child will gradually be turned around within the uterus, until finally the knee or the foot is opposite the os and may be brought down. As the head passes from reach under pressure of the fingers within the uterus, and the shoulder, body and breech successively come within reach, they are to be "moved on" in the same manner, until the knee or foot is felt.

This method might be resorted to in securing a cephalic rather than a podalic presentation where the neck or the trunk presents under favorable circumstances. Dr. Braxton Hicks, who has written more fully on the subject than any other author, says: "We should first of all endeavor to induce cephalic presentation, and then, should there be any difficulty in accomplishing it, to change our plans to podalic." And he thus describes the modus operandi of inducing cephalic presentation: "Introduce the left hand into the vagina as in podalic version; place the right hand on the outside of the abdomen, in order to make out the position of the fœtus and the direction of the head and feet. Should the shoulder, for instance, present, then push it with one or two fingers on the top in the direction of the feet. At the same time pressure by the outer hand should be exerted on the cephalic end of the child."

In regard to the question as to *what limb of the child should be seized* in effecting podalic version, Sir James Simpson has laid it down as a rule that the limb should be chosen which is on the opposite side to that of the presenting part. By so selecting, the action upon the presenting part is more decided, and it readily recedes as the limb upon which traction is made is drawn down. On the other hand, if that foot be chosen which belongs to the same side as the presenting part, there is danger that the limb may be drawn down without causing a corresponding retrograde movement of the presenting part, and thus

complicate the presentation still more. This is a good rule, and its force is more apparent in shoulder and arm presentations.

It is possible that an arm may be seized and brought down, to the great confusion of the accoucheur, who supposes he has an inferior extremity within his grasp. In other words, a hand may be mistaken for a foot or an elbow for a knee. To *distinguish between a hand and foot* we have the following points: The fingers are longer and of more uniform length than the toes. The thumb is much more apart from the fingers than is the great toe from its fellows, and the thumb is more movable laterally than the great toe. The fingers can be folded upon the palmar surface of the hand, whereas the toes merely admit of being curled upon themselves, as it were, and not flexed upon the plantar surface of the foot. The hand comes off from the arm in a line with it, whereas the foot comes off from the leg at a right angle. To *distinguish between an elbow and a knee* we have the following points: The knee is larger, rounder and apparently more of a square than the elbow, while the elbow, on the contrary, is sharper and smaller than the knee. Again, in the knee we find the movable patella, which can readily be distinguished from the olecranon process of the elbow. "We distinguish a knee from an elbow by there being two round prominences (condyles), with a depression between them; the elbow presents also two similar prominences, but there is a sharp projection (olecranon) between them."—RIGBY. The outer and inner hamstring, with the popliteal space between, is also a good point in making out a knee.

Dr. Rigby lays down the following excellent advice: "When the arm presents, we should pass our hand, if possible, along its inner surface, as this will guide us to the breast and abdomen of the child. If the hand protrudes, the *palm is almost certainly turned* in the same direction as the abdomen of the child.

"If you can just reach the extremity of the foot, hold it still during a pain; you will find that you can get further hold of it when the pain has ceased."

CEPHALIC VERSION is seldom practiced, although it may be very useful in some malpositions of the head. It consists in substituting a more favorable presentation of the head for one not so favorable. The different steps of this operation must necessarily vary with every case in which it is resorted to. In all cases the patient should lie on her back with her limbs drawn up, in order that as much muscular relaxation as possible may be gained. Manipulation with the fingers within the os may be aided by the hand applied to the abdomen, and

used after the method described in the combined method of effecting podalic version.

General Directions to be Observed in all Cases where the Head, Face, Breech or Trunk presents.

When the head presents do not change it for the feet. If hemorrhage occurs and there be placenta prævia, manage as directed for that condition. If there is not placenta prævia, control the hemorrhage by medicines. (See *Uterine Hemorrhage.*)

Remove all other difficulties by medicine if possible. If not, apply the forceps or resort to craniotomy, as the case may seem to demand. It is a very unsafe plan to exchange the head for the feet if it can possibly be avoided. It is much safer in all respects for the child, as well as for the mother, to deliver by the aid of the forceps. In case of malformation of the pelvis, the advice of Simpson to turn and bring down the lower side of the fœtal cephalic wedge, upon the ground that the head can thereby be more readily delivered, should be taken with a good deal of caution, and his proposition should be regarded as problematical. As a principle, then, worthy of all confidence, never exchange the head for the feet.

If the face presents, and we are called before it has become fairly engaged in the cavity of the pelvis, if it be in the right mento-iliac position, we must introduce the left hand, when the face will rest in the palm, and by proper manipulation with the fingers the face can be rotated upward so as to flex the chin upon the sternum, and thus bring the vertex into the superior strait, when the labor can be abandoned to nature.

If the position be one of the left mento-iliac, the right hand is to be used and the same result brought about.

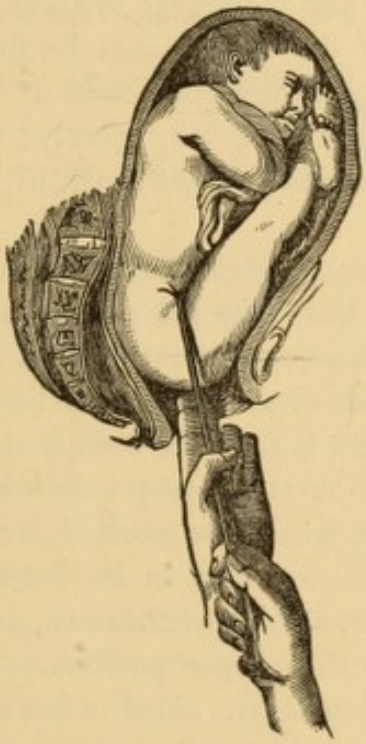
If the face has become too much engaged to admit of a reasonable doubt as to final success, resign the case to nature, at the same time warding off hindrances and complications, as in vertex presentations.

In these facial presentations we must wait with great patience, supporting in the mean while the vital energies for expulsion with such remedies as each individual case may seem to require. We must wait until rotation is effected, bringing the chin under the arch of the pubes. When the chin is even found exactly posterior, by waiting and prescribing such medicines as may be indicated the chin will rotate to the front and spontaneous expulsion take place. Ramsbotham says of all face presentations that there is little doubt that originally they

were presentations of the head which have been changed by the action of the uterus.

It does sometimes occur, however, that when the chin is posterior, instead of being transverse or anterior, it seems as descent takes place to lodge in the great sciatic foramen, and be retained there until the presentation is converted into one of the vertex; this should be regarded as a very happy event. When it becomes necessary to offer instrumental aid to facial presentations, the forceps must be applied in such a manner that the chin may be in harmony with its concavity. This would favor the rotation which brings the chin under the pubic arch. After the chin has engaged under the pubic arch very great assistance is often afforded by applying the forceps in such a manner as to gently aid the process of flexing. It will be recollected that at this stage the occiput is lying back in the cavity of the sacrum, and the expulsive forces are so applied as to render the flexion of the head very tedious, so that the life of the child may often be saved by producing flexion of the head by artificial means.

Fig. 70.



THE MODE OF USING THE BLUNT-HOOK IN BREECH PRESENTATIONS.

When the breech presents it may be allowed to descend, turning being rarely admissible in these cases. If artificial means are thought necessary, the blunt-hook may be used. It can be applied by putting one finger on the presenting part as a guide to the point of the hook,

the handle being held in a perpendicular posture. Now, whilst this point is kept in contact with the breech, the handle should be depressed until the hook is slipped over the thigh and into the groin. Before traction is made one finger must be slipped up between the thighs of the child and placed upon the point of the hook, where it must be kept during each traction, for fear of accidents. The hook must be kept closely applied to the groin, for fear of fracture to the femur if it slips down upon the thigh. However, later experience proves most conclusively that it is much safer and better practice to apply well-curved forceps such as Bethell's, instead of the blunt-hook; well-curved forceps apply to the breech very nicely, and will not slip off.

When the trunk presents we always know at once that the intervention of art is inevitable, and we must at once determine where or in what position is the anterior surface of the child, so that we may be able to choose which hand is to be used, always remembering to use that hand whose palmar surface corresponds to the face of the child. In these cases we should generally resort to podalic version by introducing the hand into the uterus, seizing a foot and bringing it down. Version by the combined method may, however, in some cases, be effective. If the child's arm be found hanging from the vagina, we must attempt to turn the child at once by introducing the proper hand. Seizing a foot very gently, withdraw the hand as before directed. No attention need be paid to the arm hanging in the vagina.

If the arm is not hanging externally, the shoulder being felt in the superior strait merely, introduce the proper hand and make an effort to push up the child, so as to allow the head to fall into the superior strait in place of the shoulder. We may be aided in this operation by gravity. If the head is found to occupy the right iliac fossa, after crowding up the child as much as possible allow the patient to lie over upon her left side, whilst the accoucheur is still holding up the child, and the head will be aided in its descent to its proper place. The hand may then be partially withdrawn, and at the same time aid in placing the head in the proper position. If we succeed, the case can then be abandoned to nature, aided, when requisite, by the forceps. If we fail, the hand should not be withdrawn, but should pass on upward, and, seizing a foot, bring down the breech. All we have to think of in any position is to diagnose the child's relative position, select the hand accordingly, and proceed as above directed.

In those very difficult cases where the body is so crowded into the superior strait as to make it almost impossible to introduce the hand,

and quite impossible to hold on to the foot, when once secured, to produce version, we must hold the foot, form a slip-noose with a strong handkerchief around the arm holding the foot, and then slip the noose up little by little with the other hand, on to the ankle,

Fig. 71.

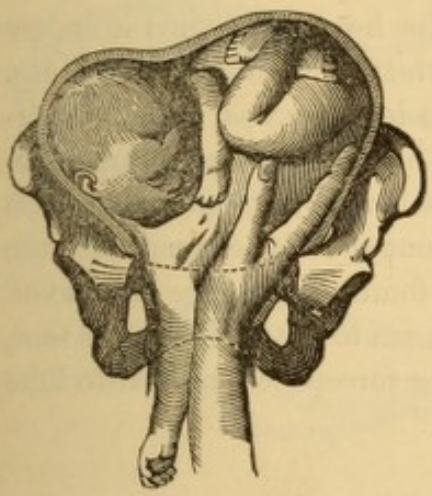


Fig. 72.

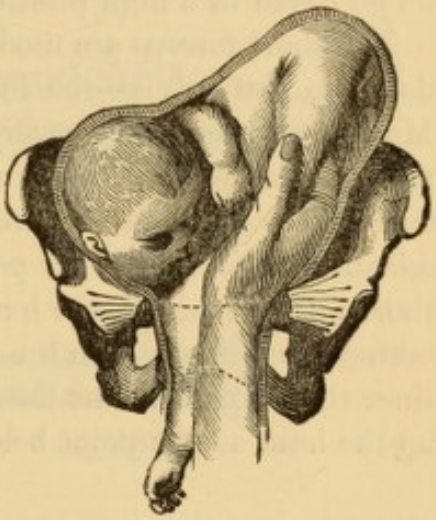


Fig. 71. Introduction of the hand in the second position of the right shoulder.
Fig. 72. Mode of seizing the foot in the same position.

taking care to secure the noose properly and firmly, when powerful traction can be made and version produced. All these manipulations should be slowly and very carefully performed.

The Forceps.

We now come to treat of the forceps. Of all the artificial means resorted to for the relief of women in childbed, the use of forceps is the most effective and results in the greatest saving of life to both mothers and children. Although the instrument has undergone a great variety of modifications since its invention by Chamberlen, its general principles remain unchanged. Its power is exerted in three different ways—as an extractor, compressor and lever.

Forceps are commonly described as being of two kinds, *Long* and *Short Forceps*, though the difference in length of the two varieties lies more in the handles than elsewhere. They consist of two branches or blades, each of which is divided into three portions—viz., the handle, which allows of their easy introduction and the tractive efforts of the accoucheur, and which is variously constructed and shaped; the cephalic portion, which is intended to grasp the fœtal head, and which is curved in two directions—one to accommodate the blade to the cephalic globe, and the other to accommodate the blade to the curve

of the pelvic axis; and an intermediate portion or shank which joins the other two portions, and which usually furnishes the "lock" by which the two blades are held in apposition when adjusted. *Straight* forceps are such as have only the cephalic curve. These are preferred by some practitioners, but we are at a loss to understand how they can be preferred in a high position of the head.

The short forceps are used to deliver the head only when it is low down in the pelvis—the long forceps when it is situated high up. Many obstetricians, however, use only the long forceps, as the instrument is adapted to all cases where the use of forceps is indicated, however low or high the head may be. "The long forceps possess a more scientific adaptation to the pelvis throughout the whole canal than the short forceps; and if the long forceps is found in practice capable of taking the head through the pelvis from brim to outlet, it follows that, since the whole contains the parts, the long forceps is qualified to take up the head at any point below the brim."

Fig. 73.

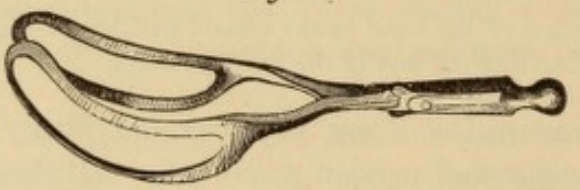


Fig. 74.

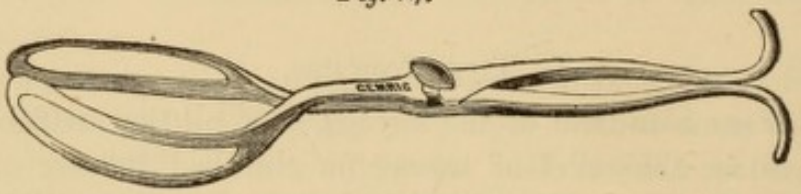
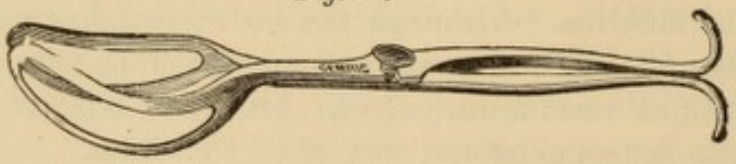


Fig. 75.



The short forceps in most common use, and undoubtedly the best instrument of its kind, is Davis's (Fig. 73). Of long forceps, Hodge's (Fig. 74), or Hodge's as modified by Wallace (Fig. 75), can be very highly commended. Bethel's forceps, likewise a modification of Hodge's instrument, I have long used with great satisfaction. The "St. Louis forceps" (Fig. 76), the invention of Professor T. G. Comstock of St. Louis, appears to be constructed upon sound principles, and has been highly spoken of by those who have used the instrument. Each blade is numbered—the left or *male* blade, which is to

be introduced first, is marked plainly No. 1, and the right or *female* blade, which is to be introduced last, is marked No. 2. They may be applied in all cases where the long forceps are required, and consequently where the short forceps are required also. This instrument

Fig. 76.

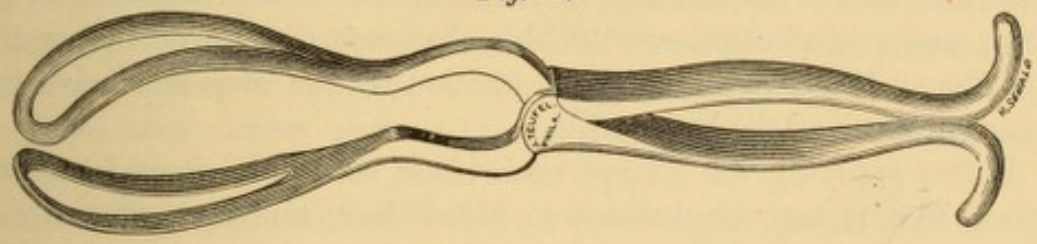
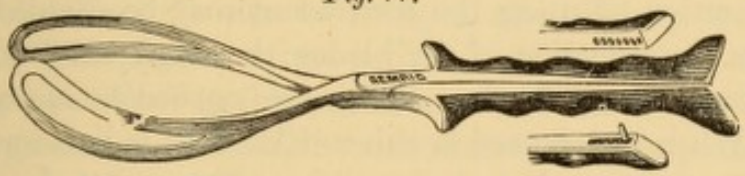


Fig. 77.



is very nicely made by Mr. J. J. Teufel of Philadelphia. Elliot's forceps (Fig. 77), the invention of Professor Elliot of New York, by means of an adjuster in the handle gives the advantage, if it be an advantage, of lessening the amount of compression exerted by the instrument upon the fœtal head.

When the forceps are required to be used the woman should be apprised of the fact, though in as gentle a manner as possible. The accoucheur might speak of having artificial hands in his possession which would enable him to reach the child's head and hasten its deliverance, thereby relieving her more speedily of her sufferings, as well as rendering the saving of her child's life more certain. At all events, her full and free consent to their use should be obtained.

Application of the forceps having been decided upon, and the consent of the patient having been gained, she should be placed in the following *position:* She should lie upon her back, with her hips well down to the edge of the bed (if the child's head is in the superior strait, the mother's breech should be brought down quite to the edge of the bed, so that the handles of the forceps when locked may hang over the side of the bed); the thighs and legs should be flexed, separated and supported on two chairs or by two assistants; one hand of each assistant should be placed upon a knee while the other holds a foot. The accoucheur takes his place between the separated limbs of the patient, and stands, kneels or sits as he may prefer. Care should be taken that the position of the patient is made as comfortable to her as

circumstances will permit. The forceps may be applied while the woman is lying upon her left side in the usual position of parturition, but the dorsal position is for all reasons by far the best. When the forceps are applied to the head at the outlet, it may not be necessary to subject the patient to the inconvenience of being placed on her back and moved to the edge of the bed, but it will be found in a great majority of cases, even of this character, that an adherence to the above directions in regard to position will be most conducive to the proper use of the instrument.

Before applying the forceps each blade should be dipped in hot water, that it may be warmed to blood heat, and the external or convex surface should be anointed with lard.

The operation of using the instrument may be divided into four stages—viz., introduction of the blades; locking; traction and leverage; removal of the blades. They are *applicable in the following cases:* 1. When the os uteri is either dilated or is soft and yielding, and there is a proper degree of moisture of the parts, but the action of the uterus appears to have subsided or ceased altogether, and the patient is becoming exhausted. In such cases, after a reasonable use of homœopathic remedies without avail, the child should be delivered either altogether or partially by the forceps. It may not be necessary to continue the tractive force so as to complete the labor, for Nature sometimes seems to rouse from her sluggishness under a moderate degree of traction by the instrument, and is able to complete the act of parturition without further assistance. 2. In some cases of facial presentation, where the diameters of the head are opposed to those of the pelvis—the long diameter of the head lying in the short diameter of the pelvis, for instance—and a reasonable waiting on the efforts of Nature or other measures have failed to bring about a favorable change. 3. Where there exists disproportion between the cephalic globe and the maternal pelvis, yet not to a degree requiring craniotomy or other more serious operative interference. In these cases the compressive power of the blades reduces the size of the head, while tractive efforts draw it through the pelvic cavity. 4. Where the hand, foot or cord presents with the head, the forceps may be needed to bring down the head and effect delivery. 5. When certain emergencies which complicate the labor occur, such as convulsions, rupture of the uterus, etc., and it is necessary to effect a speedy delivery to save the life either of mother or child. 6. When the after-coming head in breech presentations is compressing the cord, and the head cannot be delivered by manual aid alone. Here the forceps must be

promptly applied and delivery quickly effected, or the life of the child will be sacrificed.

The use of the forceps is *contra*-indicated when the os is undilated and the soft parts are rigid and unyielding, and again when the disproportion between the fœtal head and the pelvis is so great as to give no reasonable hope of effecting delivery, either from the amount of compression the instrument is capable of exerting or the amount of traction that may be applied. In serious malformations of the pelvis, or where bony tumors obstruct the pelvic passage-way, its use is out of the question.

The *mode of application* of the forceps varies slightly in different cases, although the general principles regulating the introduction and adjustment of the blades are the same in all cases, whether long or short forceps be used. The position of the patient has already been described. Now, having placed her in this position, and the forceps having been warmed and greased as directed, the accoucheur takes his position, and, having ascertained the position of the fœtal head and its relation to the surrounding parts of the mother, proceeds to introduce the *male blade first*—that is to say, that blade the convexity of the cephalic curve of which will adapt itself to the concavity of the left iliac fossa of the mother. This he does in the following manner: The blade is to be held in the left hand and in a perpendicular position; two fingers of the right hand should then be inserted into the vagina and passed up for a short distance within the cervix uteri, between the uterus and the fœtal head; then the point of the blade should be laid against the inside of the fingers thus introduced and slipped along them until the blade reaches the fœtal head. Now the blade is to be introduced still farther, and in such a manner that its concavity will be adapted to the convexity of the fœtal head, and this will be executed by laying the blade flatwise upon the head and gradually lowering the handle, while at the same time the blade is gently pushed onward, or rather allowed to glide onward, until the convexity of the head is well grasped by the fenestrated portion of the blade. This done, the handle should be pushed back still nearer to the perineum, in order to get it out of the way of the second blade. The second or female blade is to be held in the right hand and in a perpendicular position, while two fingers of the left hand are insinuated between the cervix uteri and the fœtal head. The blade is then to be slipped along the inner surface of these fingers until the head is reached, when its further introduction is accomplished in the same manner as before described.

Both blades having been thus introduced, they are to be *locked* by

lightly seizing a handle in each hand and gently bringing the blades into apposition, being careful at the same time to guard against entangling the hair or any of the soft parts of the mother with the lock. It may be regarded as an axiom that if the blades do not readily lock one or both have been improperly introduced. In such a case one or both should be withdrawn and reintroduced, for no force should be exerted in locking.

It is absolutely necessary in introducing the blades to proceed with the utmost gentleness. Force is altogether uncalled for, and great injury may be done by a disregard of this admonition. It may generally be taken for granted that when the blades are introduced easily they are introduced properly. "The rule, then, is this: hold the blade lightly; let it feel its way, as it were; let it insinuate itself into position. It will be sure to slide into the space where there is most room."

Unless the necessities of the case compel us to resort to the most prompt measures to effect delivery, the blades should be introduced only during the absence of pains, and extractive force should be exerted only during the presence of and with the pains.

The general direction is given to apply the forceps to the sides of the child's head, over the ears. This is not necessary, nor is it always practicable. On this point Dr. Ramsbotham says: "In employing the short forceps I lay it down as a rule that the blades should be passed over the ears; the head is more under command when embraced laterally, and there is less danger of injuring the soft parts during extraction. But I confess that I have for many years been accustomed, however low the head may be, to introduce the blades within each ilium, because they usually pass up more easily in that direction." It will be seen from this that this distinguished accoucheur regarded more the parts of the mother than the position of the fœtal head. The above description of the manner of introducing the forceps applies more particularly to the short instrument, but the mode of introducing the long forceps does not differ from it in any great degree. In using the short forceps the position of the fœtal head is to be taken into account, and in some degree regulates the position of the blades, but in the introduction of the long forceps the pelvis only is to be considered. "The position of the head may be practically disregarded. The pelvic curve of the blades indicates that these must be adapted to the curve of the sacrum in order to reach the brim. They must therefore be passed as nearly as may be in the transverse diameter of the pelvis. One blade will be in each ilium, and the

head, whatever its position in relation to the pelvic diameter, will be grasped between them. The universal force of this rule much simplifies and facilitates the use of the instrument. Not only does it apply to the position of the head in relation to the pelvic diameters, but also to all stages of progress of the head, from that where it lies above the brim down to its arrest at the outlet."—Dr. Robert Barnes.

In introducing the long forceps when the head is in the superior strait, the position of the patient is the same as already described, except that the breech must be brought to the edge of the bed, so that when the forceps are applied and locked their handles may hang over the side of the bed, for here the traction at first is downward and somewhat backward. The blades are to be introduced in the same manner as described for the introduction of the blades of the short forceps. As a blade penetrates farther and farther within the pelvic cavity to grasp the head, the handle sweeps from before backward through a curve extending from an imaginary line prolonged upward from the anterior surface of the symphysis pubis to an imaginary line representing the prolongation of the axis of the superior strait or of the coccyx; and conversely, as the head is extracted the handles again sweep through this same curve from behind forward, while the head itself is traversing the "curve of Carus." If the os uteri should lie unusually high up, extra care will be necessary to insinuate the points of the blades within the cervix. If they should slip off into the cul-de-sac between the vagina and cervix, very serious injury might be done by pushing them through the vaginal wall into the cavity of the peritoneum. When the blades of the long forceps have been introduced, an easy locking indicates not only that they have been properly adjusted, but that the case is one suitable for their use; for their not locking without a resort to force shows either that they have not been properly applied, or that there is pelvic deformity to that extent that the blades cannot lie opposite to each other in the same diameter of the pelvis. Being firmly locked, pressure should be made upon the handles, and if this occasions no pain to the patient, we may feel assured that no part of the soft parts is included between the blades.

Traction should then be made with a view to accomplishing delivery. The direction of the handles will to a great extent indicate the direction in which the tractive force is to be applied. When the head is in the superior strait and the instruments are locked, the handles will always be at the extreme posterior commissure of the vulva, which shows (the

woman lying on her back) that the tractive force is to be made downward and backward, just as the handles point. As the head descends into the cavity more and more, the handles will elevate themselves more and more, till at the instant of the disengagement of the head from the vulva the handles will point almost or quite directly upward. While operating, then, it is wise, after any tractive effort, to let go the grasp, that the handles may point in what direction the next effort should be made. But the accoucheur should always bear in mind the curved axis of the pelvic canal through which the head has to be brought to be delivered. Traction should be made with every pain, and only then. The tractive efforts should imitate the uterine contractions as nearly as possible, resting when the uterus rests, and drawing as carefully and gently as possible when the uterus exerts its expulsive force, yet with sufficient force to be effectual. And we should, at the same time, relax the grasp upon the handles between the expulsive pains, to relieve the fœtal head from the consequences of continuous compression. "Continuous compression is opposed to the course of Nature, which intermits the expulsive act, giving periods of rest, during which it is presumed that the brain may better adapt itself and its circulation be maintained. Hence the law that we ought in forceps labors to imitate this intermitting action by interposing intervals of rest, endeavoring so to time our efforts as to be simultaneous with and in aid of the natural expulsive efforts."

Great care should be used not to wound the soft parts by swaying the instrument sideways or upward and downward, as all these movements are unnecessary. As the perineum becomes distended we should proceed very slowly and cautiously, giving the parts time to dilate, so as not to endanger a rupture or laceration of the perineum.

The use of *anæsthetics* in these operations is particularly objectionable, since their use tends to increase the danger; for when pain is produced by pressure with the forceps we know all is not right, and hasten to correct the error; but where the patient is rendered unconscious by the use of anæsthetics, this valuable indication is lost.

The direction to keep the blades of the forceps in introducing them closely applied to the child's head is of considerable importance. It sometimes happens that the cord lies close down to the occiput, and it is possible for it to fall between the point of a blade and the f tal head, and it would in that case naturally be compressed and the child's life endangered when the two blades were locked. If upon making traction the child should be felt to jerk about or struggle (as the squirming of a fish is felt by the angler), this untoward circum-

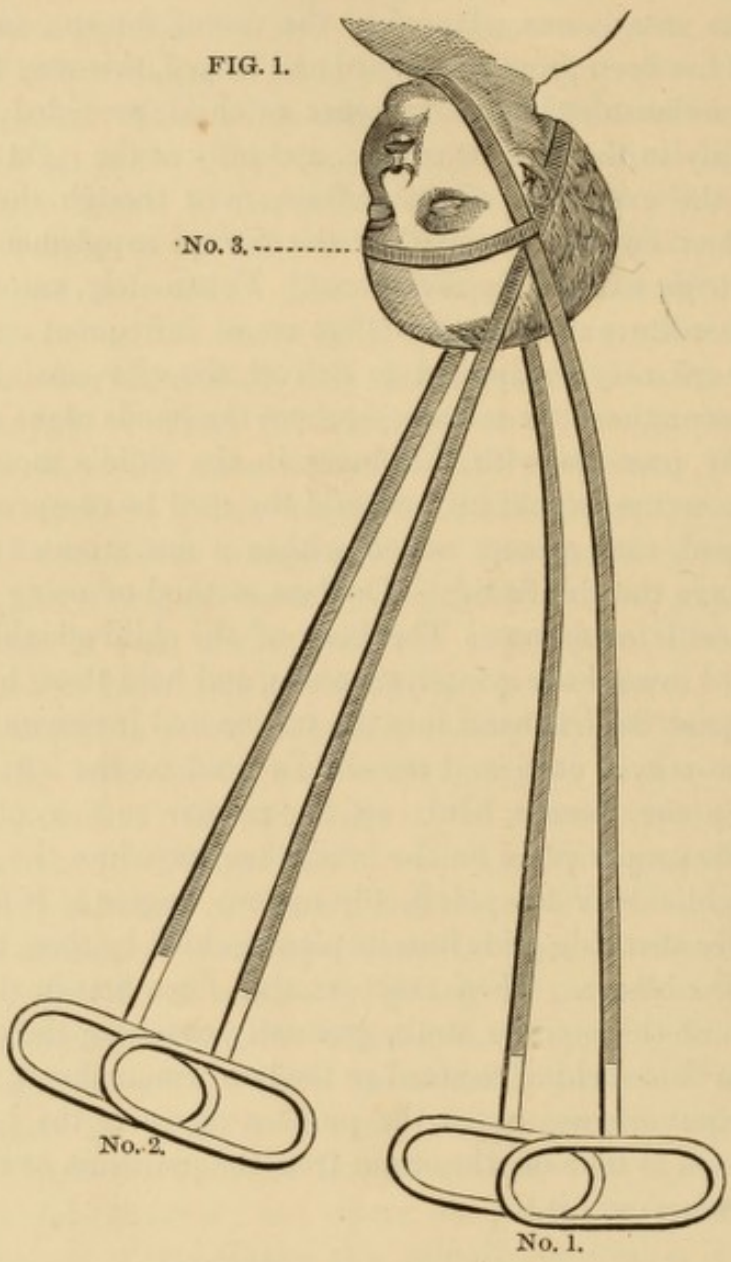
stance may be suspected to have occurred, and the blades should be instantaneously loosened and withdrawn, to be reapplied. It is sometimes necessary to exert very powerful tractive force to effect the delivery of the head. Should the accoucheur have satisfied himself that the case is one adapted to the use of forceps, and that the instrument has been properly applied and locked, this may be resorted to without serious detriment to mother or child, provided traction is made steadily in the right direction, and only at the right time; that is, during the expulsive uterine efforts, even though these may be feeble. The *vis a fronte* exerted by the forceps supplements the deficient *vis a tergo* exerted by the uterus. Fortunately, cases requiring a great expenditure of muscular effort are of infrequent occurrence.

The forceps may be applied to deliver the *after-coming* head—in breech presentations, for instance—where the hands alone and flexing the head by pressure with the finger in the child's mouth are not sufficient to secure expulsion. Should the cord be compressed by the retained head, very prompt action within a few minutes will be requisite to save the child's life. The best method of using the forceps in these cases is as follows: The body of the child should be drawn well forward toward the symphysis pubis, and held there by an assistant; then pass the left hand into the vagina and insinuate two fingers between the cervix uteri and the child's head on the left side of the pelvis; slip the forceps blade up the palmar surface of these two fingers to its proper place on the head, then introduce the right hand into the right side of the pelvis, slip up two fingers as before, and let the blade for that side glide into its place, guided by these two fingers; then lock the blades. Then exert tractive force first in the direction of the axis of the superior strait, gradually changing the direction of the handles from behind forward as the head comes down, and finally, as the occiput appears under the pubic arch, carry the handles well forward, so as to take off the strain from the perineum as the face and forehead sweep over it.

The late Dr. Casanova was in the habit of using, in cases where other practitioners would resort to ordinary metallic forceps, an instrument which he termed a "*Tocological Flexible Forceps*" of his own invention. Dr. Tuthill Massy of England published an article on the use of this instrument and of Casanova's "*Flexible Cephalo-extractor*," in the "British Journal of Homœopathy," vol. xxix., p. 327, with two plates exhibiting the instruments and their application.

The plates are here reproduced, together with their description and that of the use of the instruments as given by Dr. Casanova:

Fig. 78.



"Fig. 1.—Represents the head seized with the double forceps, and the manner in which it is extricated from the pelvic strait.

"No. 1. A single forceps seizing the head round the middle and inferior part of the chin.

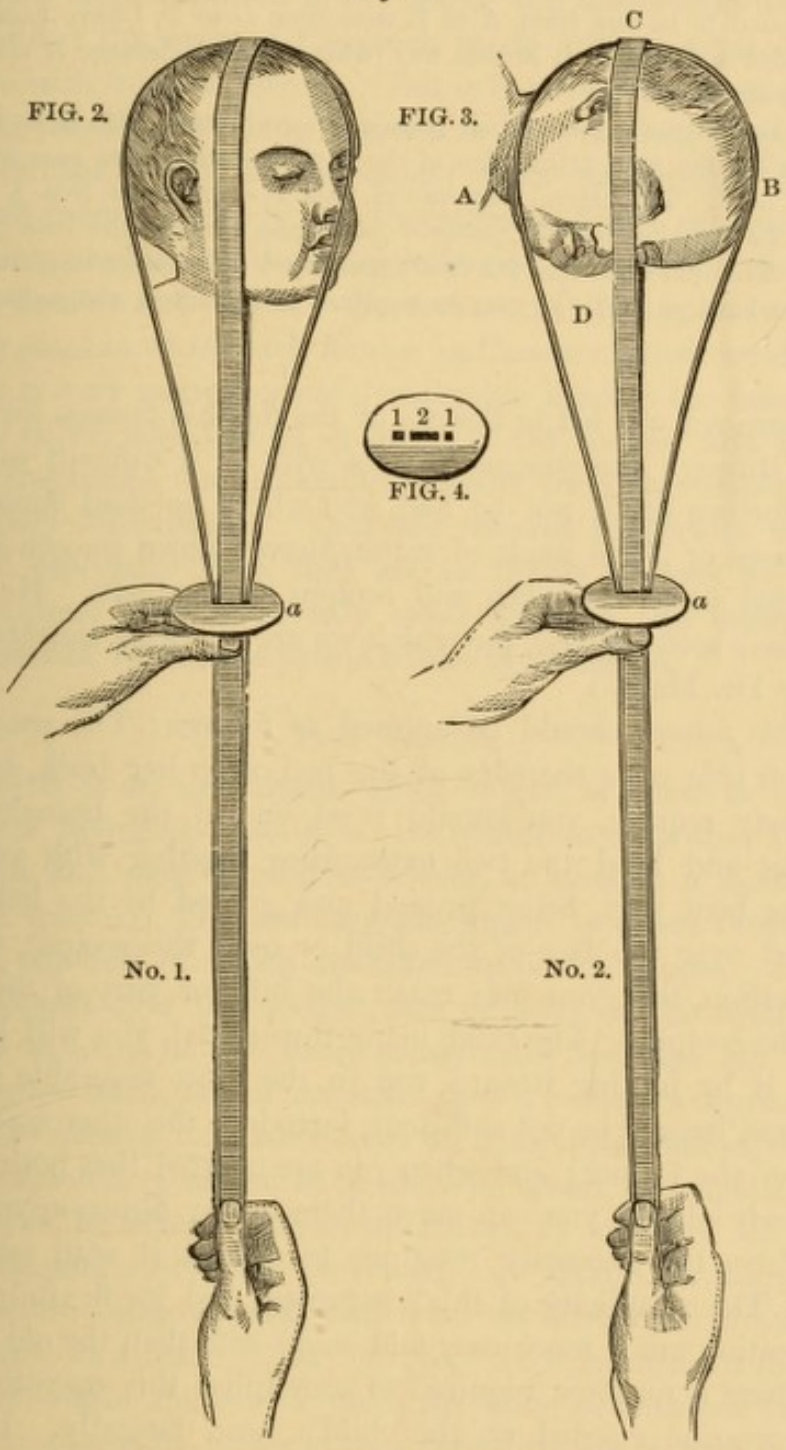
"No. 2. A single forceps seizing the head round the occiput.

"No. 3. A frontal safety check-band, to prevent the forceps from receding and choking the infant.

"Each of these forceps is composed of a piece of whalebone about three feet long, three-tenths of an inch in breadth, and one-tenth of an inch in thickness; of two silver rings at their extremities, well fastened, and the whole well polished.

"The frontal safety check-band ought to be placed at about four inches from the centre of the forceps No. 1 on each side, and it must be well secured. A piece of silk or any other smooth cloth will answer. Its length is from seven to eight inches.

Fig. 79.



"Fig. 2.—Represents the cephalo-extractor seizing the head of the infant after its death and separation from the body.

"This instrument is made of two pieces of whalebone of the same dimensions in every respect, as those of the forceps, without rings in their extremities. These two pieces are fixed by their centre with a silver pin riveted on both sides, flat and

smooth to allow the pieces to move or open and close as the blades of a pair of scissors. (See Fig. 2.) When closed and held by the two extremities, they represent one of the forceps. When opened, and holding the four extremities in one hand (see *a*), they represent Fig. 2.

"Fig. 3. Represents the head seized in a different manner; as the diameter is generally found to be less from A to B than from C to D, I have found it much easier to seize and extract it in that way (when such a difference is clearly manifested) than otherwise.

"Fig. 4. Represents a plain silver plate of an oval shape, with three holes in its centre, to allow the four extremities of the cephalo-extractor to pass when it has seized the head. The lateral extremities pass through holes Nos. 1, 1, one by each, and the anterior and the posterior both pass through the hole No. 2. (See Fig. 2, *a*.) This plate renders the instrument open and immovable, and it serves to press the head as much as may be required to extract it, without injury to the mother.

Dr. Casanova was led to the use of the flexible forceps for effecting delivery, through the success he met with in a difficult case where metallic forceps could not be had, and where he used successfully a pair of loops or fillets made of rattan shaved down smooth and thin, and applied under the chin and occiput respectively. He thus describes their mode of use, for which we are likewise indebted to the article by Dr. Massy:

"*Flexible forceps* should be applied as follows: The patient lying on her left side over the edge of the bed or on her back, as circumstances may require, you should bend one of the branches of the instrument and hold the two extremities together with your right hand; the bent part, being pressed and guided by the left, will be introduced over the face of the child or over the occiput, according to its position, that you may reach the inferior part of the chin or that of the occiput. The head being thus seized, you will be able to extricate it by pulling toward you in the most favorable direction. Should one branch be not sufficient, introduce the other on the opposite side of the former; and when you are assured that both branches are properly placed, you can move them in any direction you please, and perform the necessary rotations to extract it with safety. (See Fig. 1.) The simplicity of this instrument and its flexibility render its application much more easy and more safe than the old iron forceps. There is no force required to accomplish this operation, nor is any compression exerted on the child's head laterally. If you be patient and watch a favorable opportunity when pain is present, you will succeed in bringing forth the infant without any injury to it or to the mother.

"For more than twenty years I have been in the habit of using

this kind of forceps exclusively, and the experience of that time has taught me to appreciate its utility from the successful results I have obtained with it."

Doubtless skill acquired in the use of the above-described instrument enabled the eminent Casanova to do with it what other men would do with metallic forceps. But it is to be remembered that the only force capable of being exerted in any marked degree by the flexible forceps is that of extraction; while compression and leverage, which enter so largely into the valuable forces capable of being brought into use through the metallic forceps, are almost entirely wanting to a flexible instrument. Nevertheless, it is apparent that there are many cases in which such forceps as Casanova used could be made available in very many cases of immovable head in the inferior strait or at the vulva, with less of suffering to the mother and less detriment to the infant than sometimes results from the employment of the ordinary instruments. They are referred to here as worthy of trial, and especially so as they are so highly praised by their inventor, a man who deservedly stood high in the esteem of all practitioners of the homœopathic school of medicine.

The Vectis.

The vectis is an instrument which might be used to advantage much more frequently than it is. It resembles somewhat a blade of the forceps, and may be used as a lever, or even, to a moderate degree, as a tractor. The ordinary instrument is about twelve inches in length, one-half of which are taken up in the handle. It may be readily applied over the occiput, face or sides of the head, and by making a fulcrum of one hand considerable leverage can be made with the other hand, and at the same time a moderate degree of traction may be exerted. In some cases of facial presentation, where the head is impacted, it might be made very useful, and again, in brow presentations, by bringing down the vertex by means of the vectis, a facial presentation will be prevented. It should be warmed and greased before being applied, and is to be introduced much in the same manner as a blade of the forceps. If it is intended to pass the instrument within the cervix uteri, the same precautions should be observed to ensure its going in the right direction as were laid down for introducing the forceps blade—viz., two fingers should be insinuated between the cervix and the fœtal head, and the blade of the vectis should slide along their palmar surface until well within the cervix. After its introduction, and before any power of any kind is

exerted, the free hand should be placed at the vulva in such a manner as to afford a fulcrum for the instrument. In no case should the maternal parts be used as a fulcrum for the play of the instrument.

Craniotomy.

The operation of craniotomy is dictated by that natural law of humanity which commands us to save the life of the mother if possible, even if it involve the sacrifice of the child. It consists in making an opening into the cavity of the fœtal cranium, discharging its contents, and thereby securing a diminishing of the bulk of the head, either by the compression exerted upon it by the soft parts of the mother under the force of uterine contraction, or by additional instrumental resources, thereby rendering possible its expulsion or extraction. It is indicated in cases where the child cannot be delivered with safety to the mother either by the forceps or by version, and yet there is reasonable ground for believing that it might be if the bulk of the head were reduced. If no such hope can be entertained, the Cæsarian operation alone remains to be resorted to. Obstetricians have variously stated the minimum pelvic measurements for the performance of craniotomy. It may be stated, however, that if the antero-posterior diameter at the brim or the transverse at the outlet measures less than two inches, delivery by craniotomy could not be accomplished. But there are cases requiring craniotomy in which there is no abnormality of the pelvis or soft parts of the mother. Here the difficulty is due to the enlarged condition of the fœtal head, as by hydrocephalus. If the head in such a case is not sufficiently moulded by the maternal parts, or cannot be sufficiently compressed by the obstetric forceps, craniotomy must be resorted to.

It is impossible to lay down any fixed rule in regard to the time at which the operation should be performed. If, however, its necessity is apparent from the first, the sooner it is resorted to after the os uteri is sufficiently dilated the better it will be for the patient. The os uteri should be dilated at least sufficiently to admit the instrument used in effecting perforation. If it be dilated more than this it is an advantage.

A variety of instruments have been invented for effecting perforation of the cranium. Of these probably the best in skillful hands is the modified "Smellie's Scissors" (Fig. 80). Braun's Perforator (Fig. 81) is likewise a valuable instrument, and may be used with great advantage, particularly when craniotomy is required to deliver

the after-coming head. The proper method of using the last-named instrument is suggested by the instrument itself.

Fig. 80.

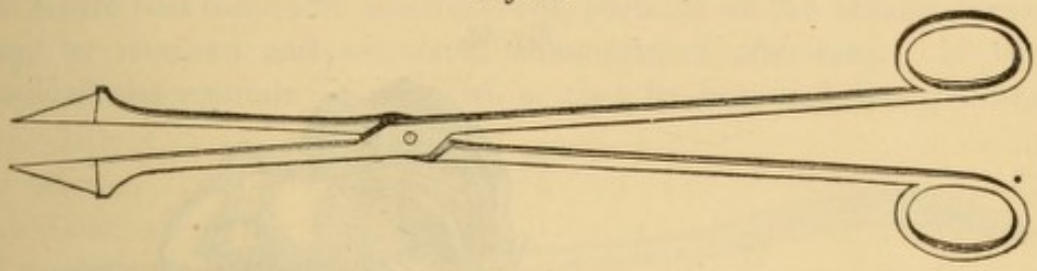
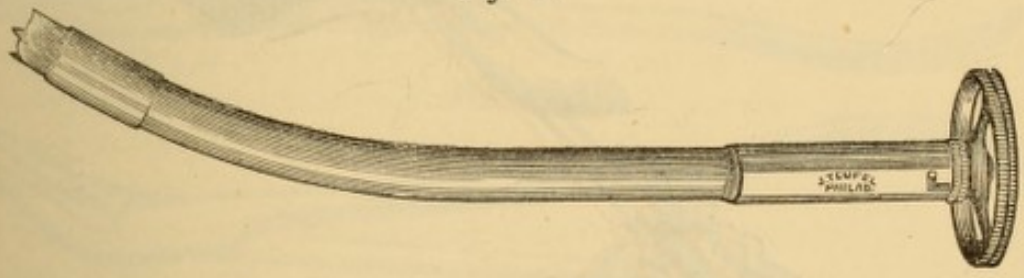


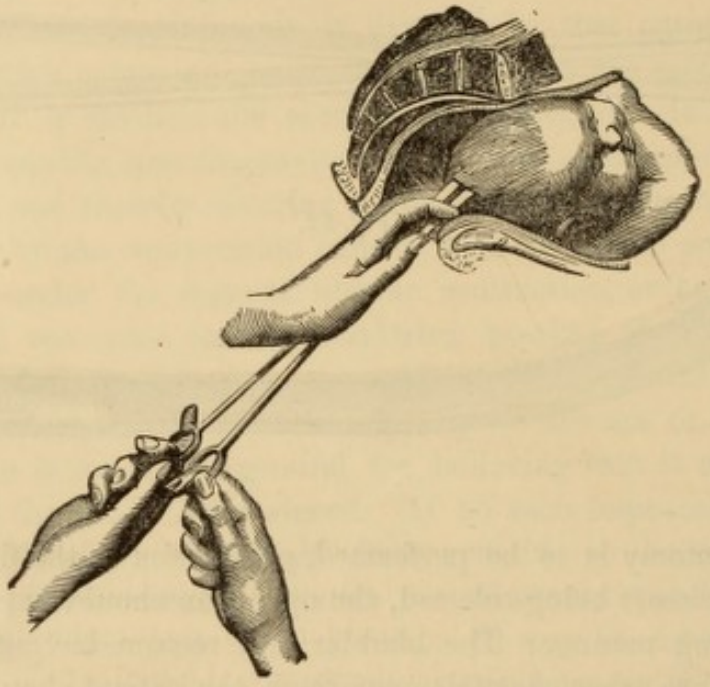
Fig. 81.



If craniotomy is to be performed, *perforation* is the first step, and Smellie's scissors being selected, the operation should be conducted in the following manner: The bladder and rectum having been emptied, as before other obstetric operations, the patient should be placed in the same position as when forceps are applied. Two fingers of the left hand are then to be passed up to the head, keeping the cervix uteri upon their dorsal aspect. The instrument should then be introduced very carefully along the palmar surface of the fingers, which should serve not only as a guide, but as a guard to protect the parts of the mother from injury. In this way it is to be passed up to the head, great care being taken that its point does not touch anything until it strikes the fœtal head. The most depending part of the head is usually selected as the site of the operation. This reached, the instrument by a combined boring and pushing movement is made to pierce the cranium; if a bone is to be perforated, extraordinary care will be requisite to prevent the point of the blades slipping off and doing serious injury to the mother. The instrument is then to be pushed into the head, up to its shoulder, which is about an inch back of the point of the cutting blades. While this is being done an assistant should support the uterus externally, making firm downward pressure, to force the head of the child downward, and keep it fixed, and thus prevent its rolling about or retreating from the pressure of the instrument. The blades are now to be opened, when their outer cutting edges will enlarge the aperture, and if they are

then closed, turned at right angles to their first position, and again opened, a crucial incision will be made which will not readily close, and which will be sufficiently large to discharge the con-

Fig. 82.



MODE OF INTRODUCING AND USING SMELLIE'S SCISSORS.

tents of the cranium, as well as break up the cranial arch. The brain should then be broken up by the perforator, which not only facilitates its extrusion, but at once destroys the suffering of the child. The instrument should then be carefully withdrawn, guarded as before. The second step of the operation consists in *extraction* of the child. Uterine action alone may now be sufficient to accomplish this. At all events, should there be no reason for effecting immediate delivery, it will be well to wait for the "pains" and see what they can do. One authority says: "After perforation wait an hour or two for the pains;" and indeed this may be done if no unfavorable signs be present to indicate a more expeditious delivery.

Should nature not be able to accomplish the expulsion of the child, instrumental aid must be sought. The craniotomy forceps, the cranioclast or the crotchet are instruments devised for this purpose. By their aid the accoucheur effects compression and traction. The greatest care is to be exercised in their use to guard against injury of the maternal parts, either by the instruments themselves or by pieces of the cranial bones that may be broken off and brought away.

The most generally useful of all these instruments is the craniotomy

forceps; of which those invented by Professor Meigs (Figs. 83 and 84) fulfill all that will be required of such instruments. By the craniotomy forceps the perforated head may be seized and extracted, or, where that cannot be accomplished, portions of the cranial bones may be removed and extraction accomplished afterward. If the vault of the cranium be removed, so that its base and the face are

Fig. 83.

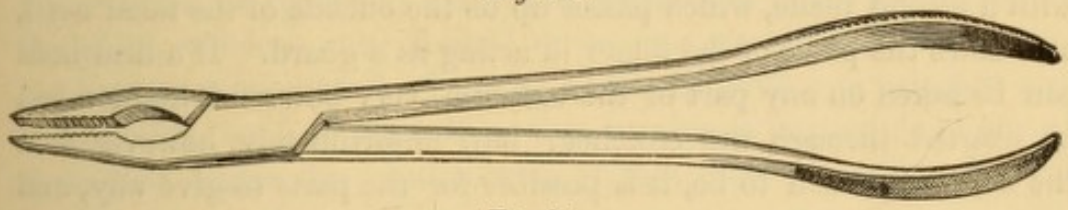


Fig. 84.

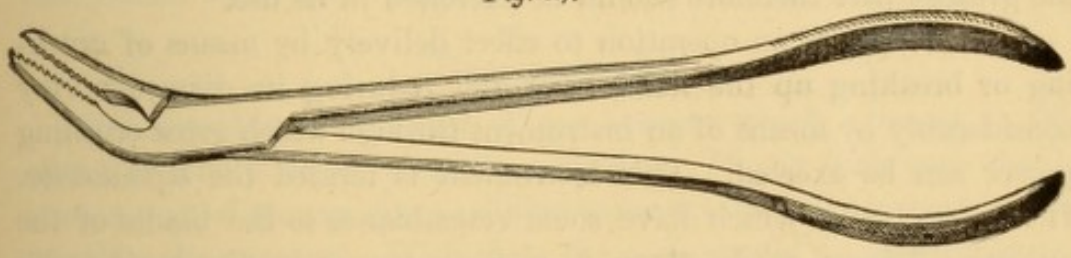
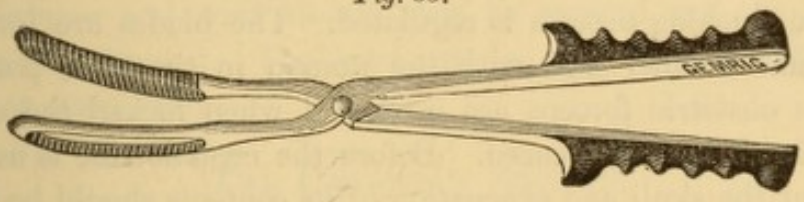


Fig. 85.



alone left behind, the head thus reduced can be seized by the forceps and drawn through a comparatively small opening. But if this removal of the cranial bones should not be necessary, traction may be made by introducing one blade within the cranium while the other passes on the outer side and a hold is thereby taken.

Simpson's *cranioclast* (Fig. 85) is justly regarded as a most excellent craniotomy forceps. It has separate blades, which are to be introduced much in the same manner as the obstetric forceps, and locked after their introduction. Professor Elliot of New York considers it the best craniotomy forceps. With this instrument, one blade being passed into the cavity of the cranium and the other on its outside, the bones of the cranium, particularly the occipital bone, may be broken up, and the size of the head thereby considerably reduced. Traction may then be made by means of the instrument.

The *crotchet* is a dangerous instrument, even in skillful hands. The principle of its application is, to pass it into the perforated cranium and by means of its hooked process to obtain a purchase

upon the head. The hook takes hold of some part of the cranium, or it may be passed through the foramen magnum. The danger to the mother is very great from the liability of this instrument to slip and produce laceration. To guard against this accident, a finger should be passed up on the outside of the cranium, to serve as a guard and support to the sharp point of the crotchet, which is fixed into the bone inside the cranium. The instrument is now constructed with a second blade, which passes up on the outside of the fœtal head, and takes the place of the finger in acting as a guard. If a firm hold can be taken on any part of the cranium, very powerful traction can be exerted through the crotchet; but, unfortunately, however firm the hold may seem to be, it is possible for the parts to give way, and the greatest care therefore should be exercised in its use.

Cephalotripsy is an operation to effect delivery by means of crushing or breaking up the fœtal head and reducing its diameters very considerably by means of an instrument through which great crushing power can be exerted. This instrument is termed the *cephalotribe*. It has two blades which have some resemblance to the blades of the ordinary forceps, while there is a screw-power in the handles by which the crushing process is regulated. The blades are introduced in the same manner and with the woman in the same position as when the obstetric forceps are used, and when locked the crushing process should be commenced. Before the cephalotribe is used, perforation of the skull and evacuation of its contents should be effected, to ensure a more successful compression. This operation, however, can only be regarded as a substitute for the ordinary method of craniotomy, to be resorted to in extreme cases.

Where there is very great pelvic deformity, after perforation and evacuation have been accomplished, it is recommended, in some cases where efforts at extraction have failed, to wait for some time until incipient decomposition has rendered the parts more yielding and capable of collapsing.

Embryulcia.

This formidable obstetric operation consists in perforating and eviscerating the thorax or abdomen of the child, or both. It may be demanded in cases of extreme pelvic deformity, where, the head having been perforated and delivered, the delivery of the trunk in its natural condition is impossible; or it may be called for when the thorax or abdomen is greatly enlarged by dropsical effusions. Smellie's scissors is the best instrument to employ for this purpose.

The instrument should be pushed into the thorax through one of the intercostal spaces, and if necessary one or more of the ribs should be divided; or it should be pushed into the abdomen where that is required; in both instances the instrument should be used with great care and the mother carefully guarded against possible injury.

It has been stated that "this operation is required sometimes in cases of arm presentation, where the membranes have ruptured, the liquor amnii escaped, and where the uterus is so firmly contracted on the child, which is thus jambed down into the pelvis, that turning has become impossible." I am by no means willing to coincide with this opinion, for I do not believe that turning is impossible in any of these cases under the manipulation of that most important obstetric instrument, an educated hand.

Decapitation.

I am not able to conceive of any case in which a resort to this operation would be an absolute necessity. If any such case should arise, a pair of strong, sharp-pointed scissors would be the best instrument for the purpose. With these the neck should be penetrated, the spinal column and cord should then be severed, and the soft parts subsequently divided. The head can be removed afterward by the forceps or other means.

The Cæsarean Section.

This operation consists essentially in delivering a child through an opening made by dividing the abdominal parietes and the uterus of the mother. Its intent is to save the life of one or both when delivery *per vias naturales* is regarded as impossible. Concerning this operation, Dr. Robert Barnes writes as follows: "The Cæsarean section occupies a doubtful place between conservative and sacrificial midwifery. It is conservative in its design, in its ambition; it is too often sacrificial in fact. It is resorted to with a feeling akin to despair for the fate of the mother, which is scarcely tempered by the hope of rescuing the child. It is looked upon by the great majority of obstetricians as the last desperate resource, as the most forcible example of that kind of surgery which John Hunter regarded as the reproach of surgeons, being a confession that their art was baffled. On the other hand it is regarded by some enthusiastic practitioners, dazzled perhaps by its false brilliancy, as an operation deserving to be raised into competition with turning, craniotomy or cephalotripsy."

It is impossible to lay down such rules as will serve as infallible

guides to the obstetrician in making up an opinion for or against the operation, but we may state broadly our conviction that it should be regarded as a *dernier ressort*. "The Cæsarean section is the last refuge of stern necessity." While, however, statistics of the operation show quite a large rate of loss, both of mothers and children—about two-thirds of the former and one-half of the latter—it is to be borne in mind that the recent great advances made in operations upon the abdomen give a much better chance for recovery of the mother and of a safe extraction of a living child than formerly.

The Cæsarean section may be regarded as *indicated* where there is pelvic deformity to the extent that the channel through which the child must pass does not exceed two inches in diameter. Again, it may be called for in some cases of ruptured uterus, where the child is known to be alive, where the mother's life is threatened in cases of extra-uterine pregnancy, or where the mother has died suddenly undelivered. In the last-named case the operation has to be resorted to promptly, and very expeditiously performed, probably not more than eight or ten minutes after the mother's death, in order to secure the extraction of a living child. It is questionable whether the Cæsarean section should ever be performed when the child is known to be dead.

The operation should be *performed in the following manner:* The rectum and bladder having been evacuated, the woman should lie upon her back, with head and shoulders slightly elevated and the pelvis supported and likewise slightly raised. An assistant should give firm and equable support to the sides of the abdomen, to prevent extrusion of the bowels through the incision. An incision should then be made in the linea alba, extending from the umbilicus to within a short distance of the symphysis pubis—about eight inches. The linea alba is selected as the proper place for the incision, because there will necessarily be less hemorrhage, and because also the uterus will be found lying immediately beneath, uncovered by intestines. After this first incision—which should not extend into the abdominal cavity—has been made, an opening into the abdomen should be secured, through which the finger or a grooved director should be introduced, and the abdominal incision then completed by cutting from within outward, to avoid inflicting injury to the intestines or cutting unnecessarily the uterus. This incision completed, the uterus is seen. Before making the uterine incision, the location of the placenta should be made out, that it may be avoided. This may be done, according to Dr. Pfeiffer, by placing the hand flat upon the uterus, when a peculiar thrill or vibration communicated to the hand

will mark the position of the placenta, and, in connection with this, the slight bulging of the part, "as if a segment of a smaller globe were seated on a large spheroid," will likewise serve to indicate the place of attachment of the placenta. The uterine incision should then be made, four or five inches in length, on a line with the cut through the abdominal parietes. Neither the fundus nor the cervix of the uterus should be involved in the incision, which should be limited to the body of the organ, as by dividing either of these portions the subsequent contraction of the viscus would be interfered with. Then "an assistant hooks the forefinger of each hand in the upper and lower angle of the uterine wound, and, lifting them up, fixes them in contact with the corresponding angles of the abdominal wound. This shuts out the intestine effectually, and tends to prevent the blood from running into the abdominal cavity." The membranes should then be ruptured and the child carefully extracted, by seizing it, if possible, by the feet. Should the head of the child be caught and firmly held by the lips of the wound, it will be better to enlarge the incision rather than attempt to extract the head by force. The placenta and membranes should then be removed, together with all coagula, and the operator should ascertain that the os is free to admit of the passage of the lochial discharge. Dr. Barnes directs that a probang be passed through the os uteri and vagina to ensure this. Should the uterus now contract, the incision will be reduced to a small slit, and the hemorrhage from its divided vessels or from the mouths of the uterine sinuses made patulous by the detachment of the placenta will soon cease. If it should not thus spontaneously contract, direct pressure should be made upon it with the hand, or ice may be applied directly to it, and a piece be left in the uterine cavity. Should these measures fail to induce contraction, galvanism must be resorted to, and a proper apparatus should be at hand in case it should be needed.

In regard to securing the uterine wound, authorities appear to be divided as to whether sutures should be used or not. If the contraction of the uterus be firm, they will probably not be required; but on the other hand, in fatal cases autopsy has revealed the uterine wound in a gaping condition where sutures had not been used. Barnes states the case as follows: "If the patient is operated upon at a selected time, if the danger of vomiting is lessened by not taking chloroform, and if the uterus contracts well after the operation, the sutures may be dispensed with; but under the opposite circumstances it would be better to stitch the uterus." If sutures are used, either

the uninterrupted silk suture or interrupted sutures of silver wire may be employed; or any other that may be thought most suitable.

Before closing the abdominal wound, blood or other foreign material that has found its way into the abdominal cavity should be removed. The lips of the wound should be brought together and held together by means of silver-wire sutures, introduced pretty closely together, and passing through the divided peritoneum as well as through the abdominal wall, so that there may be two peritoneal surfaces opposed to each other on the inside of the wound. Adhesive inflammation is soon set up, and union is speedily effected. Broad bands of adhesive plaster should be applied across the abdomen as a means of support, and over these a soft compress should be laid. A broad flannel body-bandage should then encircle the abdomen to secure uniform support. The compress and the bandage should be saturated in the region of the wound with a solution of equal parts of calendula and water.

The dangers arising from this operation are: immediate shock, hemorrhage, peritonitis and septicæmic puerperal fever. Should any of these arise, they should be treated strictly in accordance with homœopathic principles; an adherence to which will greatly lessen their dangers. The patient should be kept very quiet after the operation, and for some hours should be allowed to take little or nothing into the stomach save cold water, which may be freely allowed. To excite vomiting is to add an additional and unnecessary risk. The danger arising from vomiting contra-indicates the use of chloroform; ether will be preferable. Local anæsthesia by means of rhigolene or ether spray has been recommended, and is free from the danger of exciting vomiting. Where this operation is performed under the most favorable circumstances there is a very great probability that the lives of both mother and child will be saved; but where exhaustion from protracted labor or other unfavorable conditions exist, the probabilities run strongly in the opposite direction.

The Sigaultean Operation, or Symphyseotomy.

This operation has been performed with the same object in view as in the Cæsarean section—viz., the extraction of a living child which could not be born by the natural passages. It consists in cutting through the fibro-cartilage which constitutes the symphysis pubis, so as to separate the pubic bones, and by that means to increase the diameters of the pelvis sufficiently to allow of the passage of the fœtal head through the pelvic canal and vagina. As it has been

abundantly proven that the pubic bones, when their symphysis is thus divided, admit of but slight separation, and that this separation adds but very little to the diameters of the pelvis, the operation has fallen into discredit, and is seldom or never resorted to.

Induction of Premature Labor.

The induction of premature labor is admissible under certain circumstances. By premature labor we mean that only which may take place after the viability of the child is established beyond a doubt. This period first occurs immediately after the close of the seventh month.

In all cases where the excavation of the pelvis is so obstructed by any cause, either by pelvic deformity or by tumors of any kind that cannot be reduced or pushed above the superior strait, which will prevent the passage of the child at full term, premature labor may be effected; provided always that such a course will give a reasonable assurance of saving the life of the child, and at the same time of preventing greater sufferings and danger to the mother.

Should the history of the patient prove that she cannot give birth to a child at term, and should the smallest diameter be about two inches and a half, premature labor should be resorted to immediately after the completion of the seventh month. If we could be assured that the smallest diameter is three inches, we may delay the operation till about the eighth month; if three and a half inches, two weeks before full term would suffice.

Under judicious homœopathic treatment no *diseased* condition of the patient would ever render necessary a premature delivery. Neither would it ever prove admissible to induce premature labor because the previous history goes to show that the child perishes at the eighth or eighth and a half month; for all such cases are perfectly curable by medicines.

Various methods of inducing premature labor have been resorted to. The author regards the following as the safest and best: The patient to be operated upon may assume the same position as in labor. The bed should be protected with oil-cloth or india-rubber cloth, arranged so as to guide a stream of water from the vulva into a pail or tub placed near the bed. Another pail must be provided, containing tepid water: with a common syringe the warm water should be thrown directly upon the os uteri. This operation irritates and softens the neck of the uterus, so that contractions set in in the course of an hour or two, and thus labor is provoked and takes place in the most

natural manner possible, except when it occurs in Nature's own way at full term. The operation will fail unless the stream is so directed that it shall fall directly upon the neck of the uterus. It should be repeated in the course of two hours, unless the first experiment is successful. The common pump-syringe is the best for this purpose. The quantity of water used at each operation should be about ten quarts. Another method, and one very highly commended by Dr. Barnes, is to pass an elastic bougie or catheter six or seven inches into the uterus, avoiding the placenta and taking care not to rupture the membranes. The remainder of the bougie should be coiled up within the vagina, and this will serve to keep the instrument *in situ*. Sooner or later uterine action will set in. The os may then be dilated by means of Barnes's dilators, the membranes ruptured, and the rest left to nature if it is found that expulsive pains come on sufficiently. If not, the forceps or turning may be resorted to.

Premature labor should never be induced without grave consideration of the case, and professional advice should be sought by the accoucheur in all such cases, as well for the advice as for a division of the very great responsibility.

Of the production of *abortion* we have this to say: Can it be right under any circumstances whatever? Is it right to commit willful murder under any circumstances whatever? If not, then it is never right to produce abortion under any circumstances whatever, for is not abortion murder?

We have abundance of proof that under homœopathic treatment no state or condition of health demands the production of abortion—that is, premature delivery before the product of conception is viable—for the subject of such a malady as might be thought to necessitate it under allopathic resources may be cured by homœopathic medication, not only of the ills immediately occasioned by pregnancy, but of all ailments reducing the standard of general health. Abortion, therefore, under such circumstances would be a terrible mistake; and not only does it destroy the life of the embryo, but it lowers the standard of health and endangers the life of the mother. Cases in which the least diameter of the pelvic excavation is below two and a half inches had better be allowed to go to term, and then submitted to operative interference. If the Cæsarean operation should then be performed and under favorable circumstances, the lives of both mother and child may be saved; the chances in favor of which are undoubtedly increased by the after-treatment being conducted in accordance with homœopathic principles.

CHAPTER XVI.

DISORDERS INCIDENTAL TO PREGNANCY.

IN a state of perfect health all the functions of the body are so harmoniously carried on—each receiving its proper portion of the vital force in due season—that no one preponderates over another. But where, as in cases of excessive intellectual development in children, any one structure obtains more than its just share, the others must suffer in equal ratio. Gestation is indeed a normal condition, but the remarkable development of vital action in the uterus renders it an exceedingly difficult task for nature perfectly to adjust the balance. But while in general a similar increase of vital action seems to pervade the entire system, the health remaining perfect, there are numerous and sometimes most distressing exceptional cases. The greater number of these appear in connection with the nervous system, and at first take the form of sympathetic irritation.

There are other disorders in the pregnant state which arise from mechanical pressure, and even displacement of the abdominal organs, by the gravid uterus. And there is still another class of disorders, severe functional derangements, and even deeper-seated derangements of the elementary constituents of the blood, which seem to be the result of some of those before mentioned.

All these sympathetic irritations, structural difficulties and derangements of the constitution of the blood, acquire a still greater importance from the fact that they become the occasion for the development of every constitutional weakness and hereditary taint. The way is long and tedious; what wonder then that the heavily-laden system of the pregnant woman sometimes stumbles? How much greater the wonder if the nine months of gestation, even before being concluded by perhaps twice as many hours of almost convulsive effort, should not expose and aggravate every inherent debility and fully develop every latent miasm!

There is yet another class of difficulties, which, if they do not actually make their first appearance during gestation, then at least for the first time become seriously troublesome; this class includes disorders connected with the uterus itself and with its appendages. Some of these are structural diseases of the vagina, os or cervix uteri, unnoticed before, now rapidly developed. And even if there were no morbid conditions, the suspension of the regular catamenial flow could not but

exert an important disturbing influence upon the more delicate female constitution.

But from whatever cause they arise, and to whatever class they may be referred, all the disorders of pregnancy require the most patient and careful attention on the part of the homœopathic physician. The season of gestation is the time given him for sowing the good seed from which his patient may reap a rich harvest of improved health during all her subsequent life. The fact just mentioned, that the almost herculean labors of nature tend to develop and ultimate all the *hitherto latent, hereditary* predispositions to disease, renders this period of gestation at once of the greatest value to the true physician and of the most serious importance to the patient. For even as an hereditary tendency to phthisis pulmonalis may be most readily and radically cured when its temporary development in a bad cold, or even in a severe attack of pneumonia, renders its characteristics more apparent, so the exaggerated manifestation of her constitutional disorders which in one form or another so afflicts the pregnant woman, may be made the opportunity for radically purging them from her own system, and at the same time of purifying the constitutions of all her children.

As already intimated, the tremendous strain upon the constitution during pregnancy finds its crisis in the agonizing labors of parturition. These are rendered all the more terrible, are sometimes followed by the most disastrous consequences, and even rendered immediately fatal, by the culmination of the disorders developed during gestation. Thus, the same sedulous attention on the part of the true physician which will relieve her from present sufferings during the long months of pregnancy, will also render her confinement much more safe and easy, and entirely prevent those consequences which so often fill her subsequent life with wretchedness. And the invaluable means and methods committed to the homœopathic physician will often enable him not only to ameliorate the unfortunate condition of his suffering and despondent patient, but in many instances to secure for her the preservation of the fruit of her womb. In the homœopathic jurisprudence, morning sickness and all other forms of gastric derangement must be entirely stricken from the list of justifiable causes for inducing premature delivery. The most distressing of these cases are relieved and the offspring preserved, where under allopathic régime the health of the mother was often rendered permanently wretched, and the child inevitably sacrificed at an earlier or later stage of pregnancy.

And in many instances in which the mother had suffered for many

months from the disorders of pregnancy incidental to her constitution, and had in consequence greatly deteriorated in her own vital nutrition, the child, if not actually destroyed, became of necessity greatly enfeebled. Such results are too common in allopathic practice to attract much attention, and such offspring go far to swell the bills of mortality to the frightful extent of one-third of all who are born dying within the first three years. Contrast with this the fine healthy child born after the mother has been relieved of her distressing disorders of pregnancy, and in a great measure at the same time cleansed of her constitutional impurities by homœopathic medication, and you have a picture of what has been done in thousands of cases, and of what it is now the duty of the homœopathic physician at least to attempt to do in every case of the kind. He is the true physician who seeks not only to relieve the present suffering, but at the same time to remove its cause in the constitution itself, and thus prevent the return of the evil. He is truly a benefactor of his kind who, not content with curing the generations with whose successive portions he mingles, thus seeks to improve his present opportunities in the light of an advanced and beneficent science, in such a manner that the race may be rendered more healthy in all the years to come.

Our object in these remarks is simply to call attention to the profound importance of most carefully treating the disorders incident to pregnancy; even in cases where their severity does not entail suffering, they may thus be seen to afford most precious opportunities for permanently improving the health of the mother, and of rendering her confinement comparatively comfortable and perfectly safe, and of ensuring the preservation and health of the offspring; and finally, of securing the comfort of both mother and child during the season of lactation. We would state that, for reasons rendered obvious by the preceding remarks, the most valuable and efficient remedies for the disorders incident to pregnancy will be found among the antipsorics; and that in some cases the higher these are given the more good they will do. Such is my own experience in very many cases.

The disorders which appear during gestation vary in almost every possible respect in different women; each individual, however, usually suffering in the same manner whenever *enceinte*, and with the same comparative severity, unless relieved by appropriate homœopathic medication. In some women these disorders appear with but slight intensity, and soon pass away; while others declare they never

have such good health as they enjoy when pregnant. Others, again, dread this condition as bringing with it for them a long train of various and distressing sufferings, by which their health is deteriorated, their strength exhausted, and their prospects in confinement rendered gloomy in the extreme. In some instances these disorders appear very soon after conception, and in different forms continue during the entire period of utero-gestation; in others they are relieved by the third, fourth or fifth month; while in other cases the difficulties make their appearance only during the later months, and continue to increase in severity till confinement.

And while the disorders of pregnancy principally affect individual cases in one or more of their various forms, the entire range of these forms, as collected from the records of many cases, is found to cover every function and particular organized system in the female economy. The principal of these disorders may be classed under the following heads: *Disorders of the digestive system and of the secretions and excretions; of circulation and respiration; of the uterus and its appendages; of locomotion and innervation; and of the affections, emotions and feelings.*

Hygiene of Pregnancy.

A few words on this subject, which is quite as important as the medical treatment of the disorders of pregnancy, inasmuch as it is intended to prevent such disorders from occurring.

In order that this period may be gone through with in a thoroughly physiological manner, all unphysiological and unphilosophical habits must be laid aside and all pernicious practices abandoned. The pregnant woman should strive to cultivate for herself the utmost cheerfulness and tranquillity of mind; she should strive to be at peace with all the world and at peace with herself, for her mental and moral state will surely be engrafted upon her offspring, *the education of the future being commencing while yet in utero.* And in this effort she should be seconded by her husband, whose responsibility is very great at this period—whose conduct toward the wife of his bosom at this period, acting upon her mental organization, will be transmitted to their joint offspring, for weal or for woe. Medical men cannot be too particular in urging this point on all suitable occasions, as it falls to their lot not alone to *cure* diseases, both mental and physical, when they exist, but as well to prevent their occurrence when it is at all possible to do so.

A pregnant woman, during the whole course of her pregnancy, will

require more sleep than at other periods, and an ample allowance of "tired Nature's sweet restorer" should always be indulged in. And yet, at the same time, habits of slothfulness are to be deplored and decried. "Early to bed and early to rise" applies with additional force at this juncture, and nine, or at the latest ten, o'clock at night should always find her in bed, and six, or at the latest seven, o'clock in the morning should find her up. Habits of regularity in all things should be cultivated—regularity as to hours for sleeping and waking —regularity as to meals, exercise, stool, etc. As much exercise in the fresh air as is possible should be taken. Walking is indispensable, and every day should find her taking a walk leisurely and with the mind at ease; and this rule should be observed even in cold and, *cæteris paribus*, unpleasant weather, excepting when the walking is dangerous from snow or ice. A walk is often an excellent remedy for the slothfulness and heaviness that sometimes steals over the pregnant woman like an incubus—a much better remedy than taking a nap, or even than a prescription from the doctor. Useful employment, reading or useful and agreeable conversation should engage the waking hours not otherwise employed. In fact, the physician should enjoin upon his pregnant patients the importance of cultivating a proper condition of mental vitality as well as physical. How important is it that the expecting mother, as a new thread of life is being spun within her, should *think* and *do* that alone which is good and right, for of a certainty her offspring will have woven into the tissue of its existence the resultant of what she *is* and *does* during her pregnancy.

It is a fact worthy of notice that as pregnancy advances the fluids of the body are increased in quantity, and of course an increase of circulating capacity is demanded. This has, in connection with other points, a decided bearing on the question of dress during pregnancy. Unusual looseness about the waist is requisite, and as well about the neck, wrists and lower extremities; even an elastic garter spanning the leg may be injurious, and everything that can retard or in any way interfere with free circulation should be, if possible, avoided. The proper warmth of the clothing should be studied with great care. It should be composed of such fabrics as combine lightness with warmth, so that proper heat of body may be maintained without the discomfort of oppressive clothing. In the later months, particularly, the clothing should not be tightened about the waist at all. The dress should be allowed to fall loosely and gracefully from the neck and shoulders, showing but little waist; and this will be found not

only most becoming, but far better for the mother and the fruit of her womb. One fact in connection with this question of dress is here noteworthy—viz., that women in the later months of pregnancy often complain of, and really suffer from, *coldness of the abdomen*, the protruding abdomen causing the clothing to set off to the extent of almost completely exposing that part of the body to direct contact with the air. In view of this, the clothing should be so adjusted, or an extra garment worn, to obviate the difficulty. Physicians will greatly benefit their patients by giving strict directions in regard to all these matters, which are so apt to be regarded as minor and insignificant points.

The diet during pregnancy should be generous in meats, vegetables and fruits, and at the same time simple. The less tea and coffee are indulged in the better for both mother and fœtus, as these have a tendency to produce nervousness and even convulsions. Sugar, salt and spices should be taken in moderation. *Stimulants of all kinds should be most strictly and religiously avoided.*

Very many of the discomforts arising at this period may be promptly relieved or removed by a strict conformation to the laws of a rational mode of life. If, however, they should persist, and help seems necessary to adjust and properly balance the deranged vital forces, help is to be sought within the pale of homœopathic medication, and the law of the similars—here, as elsewhere, applicable—should be brought to exercise its wondrous health-giving powers. Thus pregnancy judiciously managed prepares the way for the act of parturition, and, it may be remarked, just as pregnancy has been free or freed from sufferings and from complications, will, *cæteris paribus*, the act of parturition and its *post partum* consequences be likewise free from dangers and disorders.*

Disorders of the Digestive System.

The disorders of the digestive function and apparatus may be enumerated under the heads of variations of appetite and taste, gastric disturbances and intestinal affections. Under the first of these heads will be found anorexia, malacia or longing, and bulimy; under the second, nausea, vomiting and pyrosis; under the third, constipation, diarrhœa and fissure of the anus and rectum.

I. *Variations of Appetite and Taste.*

Anorexia, or want of appetite, and even disgust for food, very fre-

* From a pamphlet by the author, entitled "Before, During and After Parturition."

quently makes its appearance at the commencement of gestation; less often it is seen only toward its close. In some cases there is a loathing for some particular kinds of food, especially meats; in other cases there seems to be simply a general loss of appetite. These symptoms are usually supposed to be the results of the sympathetic relations existing between the stomach and the uterus, but their deeper meaning, already referred to, will be particularly stated in connection with that of the other variations of appetite.

Malacia or *longing*, another not uncommon affection of pregnant women, consists in a depravation of taste, in which an almost universal loathing is combined with an exclusive longing for some particular article of food. Where something injurious or not used for food is desired, the abnormity is termed *pica*. Chalk, charcoal, pepper, salt food, acids, alkalies, are sometimes very strongly and persistently craved and eaten. The desire for particular articles of food should be gratified to a reasonable extent. "The common tendency of the appetite in pregnancy is to prefer fresh vegetables, fruits and cooling drinks, and to avoid stimuli of all kinds. In this the taste of pregnancy accords very well with all its requirements."—SMITH.

Bulimy, or inordinate and insatiable hunger, is another affection of pregnant women; which here, as in other persons, generally indicates some disorder of nutrition or assimilation, although it may be due simply to sympathetic nervous irritation. All these morbid conditions of the appetite are but indications of the various hitherto latent dyscrasiæ, developed now by the pregnant state. And the careful exhibition of the appropriate remedies will not only relieve the sufferings of the patient, but will also greatly improve her general health, as already stated.

We give the various remedies which have been found useful in these complaints. These should be compared with those more fully stated under Gastric Derangements, and carefully studied in the Materia Medica, in order to determine which is the appropriate remedy in each individual case.

NOTE.—In arranging these remedies for study, they have been classified and arranged in groups. Those in group 1 are most strongly indicated for the particular symptom or condition under which they are found. Those in group 2 come next in importance, and those in group 3 occupy the lowest scale of relative importance.

But while these indications of the relative prominence of particular symptoms in the *confirmed pathogeneses* of particular remedies are of great value, they will be found infallible only when they lead to the

determination of a medicine in accordance with the totality of the symptoms. *And yet the totality of the symptoms will often be indexed by the characteristic symptom on the side of the patient and by the corresponding key-note on the side of the remedy.*

Finally, and as elsewhere observed in the present work, the characteristic symptom of a particular case may not be the most prominent or even the most distressing symptom: especially is this seen to be the case where it consists in the time of aggravation or other similar circumstance: nor yet will the key-note often be the most violent and painful of the pathogenetic results of the drug. The deepest streams are the most still and silent, and the true vital currents of the human frame are far more subtle, profound and *spirituelle* than the noisy rivers that rush through the arteries and the veins.

Table of Remedies for Variations of Appetite and Taste.

Anorexia—Want of Appetite.—1. Chin., Cycl., Nux v., Rhus tox., Sep., Sil. 2. Ant. cr., Arn., Ars., Bar. c., Bell., Bry., Calc. c., Canth., Cic., Con., Ignat., Lyc., Merc. sol., Natr. m., Op., Plat., Puls., Ruta., Sabad., Sulph., Thuj.

Bulimy—Inordinate Appetite.—1. Calc. c., Chin., Cina, Jod., Lyc., Nux v., Puls., Sil., Verat. a. 2. Ang., Aur., Bell., Bry., Cocc., Kali c., Hell., Natr. m., Oleand., Nux m., Petrol., Phos., Puls., Rhus tox., Sabad., Stann., Staph.

Hunger without Appetite.—1. Natr. m., Op., Rhus tox. 2. Agar., Ars., Bar., Bry., Chin., Dulc., Hell., Magn. m., Sil., Sulph. ac.

Thirst — *Too great.* — 1. Acetic ac., Acon., Ars., Bry., Calc. c., Cham., Chin., Merc. sol., Sulph. 2. Amm. mur., Ant. cr., Arn., Bell., Colch., Cupr. m., Hep., Hyos., Natr. m., Nitr. ac., Nux v., Rhus tox., Sec. corn., Sil., Stram., Veratr. a.

——— *Want of.*—1. Apis, Hell., Merc. sol., Nux m., Puls. 2. Agn., Ars., Asaf., Camph., Con., Cycl., Euphorb., Mang., Oleand., Sabad., Samb., Sep., Spig., Staph.

——— *with aversion to drink.*—1. Bell., Canth., Hyos., Nux v., Stram. 2. Agn., Lach., Natr. m., Rhus tox., Samb.

Aversion to Acid Things.—1. Bell., Ferr., Sabad., Sulph. 2. Cocc., Ignat., Nux v., Phos. ac.

——— *Beer.*—Bell., Cham., Chin., Cocc., Nux v., Phos., Stann., Sulph.

——— *Brandy.*—Ignat., Merc. sol.

——— *Bread.*—1. Natr. m. 2. Con., Kali carb., Lyc., Magn., Nitric ac., Nux v., Phos. ac., Puls., Rhus, Sep., Sulph.

AVERSION TO—*Broth.*—Arn., Ars., Bell., Cham., Graph., Rhus.
——— *Coffee.*—1. Bell., Bry., Calc. c., Cham., Lyc., Nux v., Phos.
——— *Fat Food, Butter*, etc.—1. Petr., Puls. 2. Ang., Ars., Bell., Bry., Carb. an., Carb. veg., Colch., Cycl., Hell., Natr. m., Sulph.
——— *Solid Food.*—Ang., Bapt., Ferr., Staph.
——— *Warm Cooked Food.*—1. Bell., Calc. c., Graph., Lyc., Petr., Sil. 2. Cupr., Ignat., Lach., Magn. c., Merc., Verat., Zinc.
——— *Fish.*—Graph., Zinc. ——— *Fruit.*—Bary. c.
——— *Meats of all kinds.*—1. Mur. ac., Petr., Sil., Sulph. 2. Ars., Calc. c., Carb. veg., Graph., Lyc., Plat., Puls., Rhus, Sabad., Sep., Zinc.
——— *Meal and Flour (dishes made of).*—Ars., Phos.
——— *Milk.*—Æthusa, Bry., Calc. c., Guaj., Puls., Sep., Sil., Sulph.
——— *Breast Milk.*—Cina, Merc., Sil., Stram.
——— *Pork.*—Ang., Colch., Dros. ——— *Salt.*—Carb. v., Graph., Sel.
——— *Sweets.*—1. Caust., Sul. 2. Ars., Merc. s., Nit. ac., Phos., Zinc.
——— *Vegetables.*—Hell., Magn. m. ——— *Sauer Kraut.*—Hell.
——— *Water.*—Bell., Calad., China, Nux v., Stram.
——— *Wine.*—1. Merc. sol., Sabad. 2. Ignat., Lach., Rhus., Sulph.
LONGING FOR—*Acids.*—1. Verat. 2. Ant. cr., Arn., Ars., Bry., Cham., Chin., Hep., Kali. c., Lach., Phos., Puls., Squill., Stram., Sulph.
——— *Beer.*—1. Bry., Merc., Natr. c., Nux v., Petr., Puls., Sabad., Stront. 2. Acon., Caust., Cocc., Lach., Op., Phos. ac., Spig., Sulph., Zinc.
——— *Bitter Things.*—Dig., Natr. m.
——— *Brandy.*—1. Lach., Op. 2. Ars., Hep., Nux v., Sel., Sep., Sul.
——— *Bread.*—1. Ars., Plumb., Puls. 2. Aur., Natr. m., Stront.
——— *Cakes and Confectionery.*—Plumb. ——— *Cheese.*—Ignat.
——— *Chalk, Coal, Slate-pencils*, etc.—Cicuta, Nitr. ac., Nux v.
——— *Coffee.*—1. Ang. 2. Arg. n., Aur., Bry., Chin., Con., Selen.
——— *Fat Food.*—Nitr. ac., Nux v. ——— *Fruit.*—Verat., Ignat., Phos. ac., Sulph. ac.
——— *Liquid Food (soups*, etc.).—1. Staph., Sulph. 2. Ang., Ferr.
——— *Lemonade.*—Sabin. ——— *Meat.*—Hell., Mag. c., Merc. s., Sul.
——— *Meal and Flour (dishes made of).*—Lach., Sabad.
——— *Milk.*—1. Aur., Chel., Merc. sol., Sabad., Sil. 2. Ars., Bov., Bry., Calc. c., Nux v., Phos. ac., Rhus, Staph., Stront.
——— *Oysters.*—Lach. ——— *Raw Potatoes and Flour.*—Calc c.
——— *Refreshing Things.*—Caust., Phos., Phos. ac., Puls., Valer.
——— *Salt Things.*—Calc. c., Caust., Con., Nitr. ac., Thuja, Veratr.
——— *Smoked Things.*—Caust.

LONGING FOR—*Sauer Kraut.*—Carb. a., Cham.

——— *Sweet Things.*—1. Amm. c., Arg., Chin., Kali. c., Lyc., Natr. c., Rhus., Sabad. 2. Calc. c., Ipec., Magn. m., Rheum., Sulph.

——— *Vegetables.*—Alum., Magn. c.

——— *Warm Food.*—Ang., Cyc., Ferr., Lyc.

——— *Wine.*—1. Cic., Hep., Sep., Sulph. 2. Acon., Bry., Lach., Spig., Staph.

TASTE.

TASTE, BITTER.—1. Bry., Cham., Merc. sol., Nux v., Puls., Sep., Veratr. a. 2. Acon., Arn., Ars., Calc. c., Chin., Con., Dros., Ignat., Lyc., Magn. m., Natr. c., Natr. m., Sabad., Stann., Sulph.

——— *Diminished or Lost.*—1. Puls., Sil. 2. Calc. c., Sec. corn., Sulph.

——— *Metallic.*—1. Cupr., Rhus tox. 2. Agnus c., Cocc., Nux. v., Ran. bulb., Zinc.

——— *Putrid or Offensive.*—1. Arn., Merc. sol., Puls. 2. Ars., Bell., Bry., Calc. c., Carb. veg., Cham., Con., Jod., Merc. sol., Nux v., Rhus tox., Sep., Stann., Staph., Sulph., Valer., Zinc.

——— *Saltish.*—Merc. sol., Phos., Puls., Sep. 2. Ars., Carb. veg., Chin., Jod., Lyc., Natr. c., Rhus tox., Sulph., Tart. em., Veratr. a.

——— *Sour.*—1. Bell., Calc. c., Chin., Nux v., Phos., Puls., Sulph., Tarax. 2. Cham., Ignat., Kali. c., Lactic ac., Lyc., Merc. sol., Natr. m., Petrol., Stann.

——— *Sweetish.*—1. Phos., Plumb., Puls., Sabad., Squill. 2. Acon., Alum., Dig., Stann., Zinc.

II. GASTRIC DERANGEMENTS.

NAUSEA AND VOMITING—MORNING SICKNESS.—In many women nausea and vomiting set in at an early period of pregnancy, and are simply the result of a peculiar reflex irritation of the stomach: in these cases this affection usually continues but a short time. Those forms of nausea and vomiting which principally appear in the later months result, not from sympathetic irritation or reflex action, but from the direct irritation of the stomach, and perhaps also of the diaphragm, by the upward displacement. Next to the cessation of the catamenia, and especially in conjunction with it, morning sickness becomes one of the earliest as well as one of the most reliable original signs of pregnancy; while for all those who have ever before experienced it there is little room for mistake in regard to its nature; for in each individual in whom it occurs it has a uniform type and well-remembered character.

The nausea may occur at an early period in the morning with un-

varying regularity, or in the evening, or at any period of the day, or even of the night. For each individual it maintains also its uniformity as to the date of its first appearance: in some it begins very soon after conception, in others it appears toward the third or fourth month, and in others again it comes on only toward the close of gestation: in these latter cases it may have appeared also for a short time soon after conception. In the duration of this affection there is also the same general variety and individual uniformity. Thus in some women it lasts but a few weeks, from six to eight at most; in others it continues for four or five months; while in some few most distressingly severe cases this difficulty assumes the form of a formidable disease, and persists through the entire period of utero-gestation, unless relieved by art. And this unfortunate condition has sometimes been still more fully developed and aggravated by sea-sickness, so that even life itself has been lost where the voyage was tedious, homœopathic treatment not being accessible.

The nausea and vomiting of pregnancy, as already stated, are most apt to occur on *first rising in the morning;* sometimes these symptoms disappear in a few minutes, sometimes they last through the greater portion of the day. In some the vomiting is very easy; in others it is attended with very severe retching, and even with other painful symptoms. Those who vomit upon waking or rising in the morning usually throw up some viscid, glairy matters, which are generally colored with a little bile, especially if the retching has been very severe. Others vomit only after eating, occasionally after only one of the daily meals, but sometimes after all of them. Again, in some unfortunate cases the vomitings continue even in the intervals of the repasts, everything taken into the stomach, whether liquid or solid, being immediately rejected. There are cases, finally, in which the mere thought of food, or the sight or the smell of it, is sufficient to induce the vomiting.—CAZEAUX.

In some cases nearly all the food ingested seems to have been thrown up, even for months in succession, and yet a good delivery succeeds at full term; the repeated and severe vomitings seeming to exert comparatively little influence upon the general health. In like manner, pregnant women may rise from the breakfast-table, vomit and return to their food as if nothing had happened. Such characteristics, so different from vomiting arising from any other cause, almost conclusively indicate the presence of pregnancy. Important complications, however, arise in the greater number of more severe cases, and the health of both mother and child is often greatly injured through

the marasmus and cachectic conditions which ensue. Among the most serious of the symptoms which appear in connection with severe emesis is to be reckoned the *sense of tenderness at the epigastrium.* This may be attended by considerable pain, which is increased by pressure. This epigastric soreness and tenderness, whether observed in the earlier or in the later stages of pregnancy, is due to the profound irritation of the ganglia or plexuses of the sympathetic nervous system which are located in this vicinity. And in this centre of organic life, in the very constitution itself, are planted the psoric elements whose active development in pregnancy occasions these sufferings and innumerable others, whose duration and severity but too well indicate the gravity of the sources from which they are derived. The stomach itself is in no such direct sympathetic relation with the uterus, but the latter organ is in profound sympathy with the organic nervous system which is centred near the stomach, and which entirely controls the compound functions of digestion and nutrition. Hence the marasmus and cachexia which succeed severe cases of morning sickness in the old practice; hence, too, the brilliant successes which in the new school follow the exhibition of *arsenicum* and other powerful and particularly indicated antipsorics. Hence, too, while under the allopathic régime these cases became worse and worse with each succeeding pregnancy, under homœopathic treatment they become better and better, until the woman finds she can pass through the formerly so much dreaded period of gestation with little or no suffering, and terminate her labor in a delivery as easy as it formerly was difficult and painful.

Some of the remoter consequences of the nausea and vomiting, or rather of that morbid condition of the constitution itself which produces these symptoms—such as chlorosis, anæmia and albuminuria—will be more fully described in a subsequent section. In the same connection it will be shown how the disturbance of digestion, nutrition and assimilation is followed by important changes in the constitution and character of the blood and of some of the most important secretions; and how dropsies and other forms of structural disease necessarily supervene.

The diet and regimen of the pregnant woman should be carefully attended to: such articles as best agree should be advised in each individual case, and equal care taken to avoid every unwholesome or irritating influence. It has sometimes been found that the excessive irritability of the stomach in pregnancy is due to the presence of fumes from some neighboring manufactory, which, although in-

sufficient to induce any unpleasant symptoms in the ordinary condition of the woman, very powerfully affect her when *enceinte*. Homœopathic remedies may antidote the effects of these noxious vapors if they are not too powerful, but in the greater number of such cases a temporary removal from the neighborhood may be necessary.

The following medicines will be found to cover the principal forms of gastric derangements of pregnancy; and the indications given should be confirmed by finding in the Materia Medica a full correspondence with the totality of the symptoms and accompanying conditions.

Aconite. Nausea and perhaps vomiting, with thirst; fear of being in crowds or of being in busy places; fear of death, or fear that something untoward will happen. Everything tastes bitter except water. Pain in the stomach after every meal, headache, burning sensation extending from the stomach all the way to the mouth. Decided tingling in the tongue or fauces, or in other parts. Especially adapted to young, full-blooded and active women.

Acetic acid. Intense thirst. Burning in the stomach; frequent vomiting; sensation as if the contents of the stomach were in a state of ferment. Abundance of pale urine.

Agaricus. Gastric derangements, with itching, burning and redness of various parts of the body, as if frost-bitten—of the ears, nose, cheeks, fingers or toes. Much hunger, but no appetite. Constipation; the first part of the stool is very hard, the latter part liquid.

Alumina. Gastric derangements with inactive state of the rectum, so that even a soft stool has to be urged with much force to cause it to pass off; at the same time a condition often prevails in the œsophagus, somewhere in its course, it may be in the chest, as though it were constricted, even small portions of food are swallowed with difficulty. She has to strain at stool in order to urinate. Tingling itching on the tongue; she must scratch it. Potatoes particularly disagree with her. Loss of taste; heartburn; eructations. The peculiar alumina constipation may characterize the whole case.

Angustura. Nausea when walking, as if she would faint; she has to sit down. Stitches in the tip of the tongue, painfully aggravated on moving it.

Antimonium c. Nausea and vomiting, or only nausea, with white-coated tongue. Watery stools, with occcasional hard lumps. Frightful vomiting, with convulsions. Belching, with taste of what has been eaten. Thirst at night. Painful sense of fullness of the stomach, which is sore on pressure.

Apis mel. Irritable heartburn, extending up into the throat. Sensitiveness of the pit of the stomach to pressure, and burning therein. Dyspnœa, with feeling that each breath drawn will be the last. Very scanty secretion of urine. Constipation or diarrhœa. Absence of thirst or great thirst. Pains like bee-stings.

Argentum n. The head sympathizes with the gastric disturbance, and there are pain, vertigo, etc. Time seems to pass very slowly. The stomach seems as if it would burst from flatulence accumulated therein, accompanied with great desire to belch, which is accomplished with difficulty and the flatus is emitted with great violence. Belching after every meal. Belching affords great relief.

Arnica. The derangement is the result of concussion. The motion of the fœtus gives rise to pain. Bruised and sore feeling throughout the stomach and abdomen. Belching, as of rotten eggs. Frequent eructations. Vomiting of blood. At night the head is very hot, while the trunk and extremities are cool.

Arsenicum. Very great debility and exhaustion; the least effort causes exhaustion. *Very pale, white look.* Bitterness in the mouth, particularly after eating or drinking; sensation as of a stone in the stomach. Cold water seems to lie in the stomach as if it did not assimilate, therefore she cannot drink it, although she desires it. Nightly vomiting. Vomiting of fluids as soon as she takes them. Lienteria; exhausting diarrhœa. Feels cold, and wants to be in a warm room, or to be covered up warmly. Very uneasy and restless. Fluids do not agree with the stomach, and cause nausea. Vomiting of blackish or greenish matter.

Belladonna. Face flushed or very pale, eyes red; throbbing of the carotids; dread of light and of noise. A putrid taste arises from the fauces, also while eating and drinking, although the food tastes natural. Nausea in the throat. Vomiting of bile. The symptoms become worse in the afternoon and evening. Sour vomiting. Thick coating on the tongue.

Borax. Dread of a downward motion. Everything tastes bitter, even the saliva. Distension of the stomach after every meal. Vomiting of food and mucus. Symptoms are worse in very warm weather.

Bryonia. Nausea on waking in the morning. Her nausea is usually relieved by keeping quiet. Dry, parched lips, dry mouth and tongue. Splitting headache. Vomiting of food immediately after eating. She desires to keep still. The gastric derangement is ameliorated by keeping quiet. Stool of hard dry feces as if burnt. Worse on sitting up, even sitting up in bed, after being angry, in warm air, from warm

weather or from warm food. Better in cool weather or from taking cool food.

Calc. carb. She cannot sleep after three in the morning. Heartburn and food eructations. Vertigo on running up stairs or ascending. Leucophlegmatic temperament. Soreness of the tongue, either on the tip, sides or dorsum, so that she can scarcely talk or eat. She cannot bear tight clothing around the hypochondria. Stitches in the liver during or after stooping, or at other times. Sensation as if the feet were cold and damp. Vomiting of sour matter. Feels better from warmth, and cannot bear cold air.

Cantharis. Gastric difficulties, accompanied with very frequent micturition, with cutting and burning pains, only a few drops being emitted at a time, and sometimes with blood. Sensation of fullness, extending into the chest and abdomen, after taking coffee. Burning in the region of the pylorus. Vomiting with violent retching and severe colic.

Carbo veget. She has to eructate frequently, which affords only temporary relief of her many sufferings. Sensation as if the œsophagus were contracted or entirely closed. Even the most innocent kind of nourishment disagrees with her. Sensation as if the stomach and abdomen would burst when eating or drinking. Varices of the rectum, vagina, vulva or lower extremities. Itching of the genitals, perineum and anus.

Causticum. Phlegm in the throat, which she is unable to hawk up, and which sickens her. She sits down to the table with some appetite, but can eat scarcely a morsel. Constant sensation as of lime being burned in the stomach, with rising of air. Stitches in the liver for hours in the afternoon. Hæmorrhoids, which cause great suffering on walking. Her upper eyelids are nearly paralyzed, she can hardly keep them open. Fatty taste. Constipation. Stools tough and shining, or hard and in pieces at first and afterward soft.

Chamomilla. The existing pain is increased by eructations. Nausea as if she would faint. Great irascibility of temper—she can hardly return a civil answer. Burning across the stomach into each hypochondria. The epigastrium is painfully bloated in the morning, with a sensation as if its contents were passing into the chest. The belching of wind is painful. She cannot compose herself to sleep; she imagines she hears the voices of absent persons.

Chelidonium. There is a constant pain under the lower inner angle of the right shoulder-blade; this pain may extend into the chest or stomach, or even cause severe gastralgia, nausea and vomiting. Her

nausea causes great heat of the body. Great desire for milk, the drinking of which ameliorates all her symptoms.

China. The abdomen feels full and tight as if stuffed—eructations afford no relief. There may be diarrhœa and dejection of much flatus, but no relief is obtained. In connection with the tightness about the abdomen, she often feels as if her garters were too tight, and loosens them, and as if her waist were too tight; she must loosen that, etc. Bitter taste in the back part of the throat, bitter taste of everything. She craves dainties, but hardly knows what. Flat or sour taste.

Cina. Grinding of the teeth, tumbling and tossing during sleep. Diarrhœa always after drinking (compare Arsenic). Inclination to vomit, with a weak, hollow, empty feeling in the head. Constant pressure in the stomach at night, causing restlessness. Itching of the nose, occasioning boring or rubbing of it. Always hungry. Cross or peevish.

Cocculus. Burning in the œsophagus extending into the fauces, with a taste of sulphur in the mouth. She is scarcely able to raise herself in the morning from nausea and inclination to vomit, it makes her so faint. Metallic taste in the mouth. Sensation in the abdomen as if sharp stones rubbed together on every movement, and the lower extremities seem almost paralyzed. Yellow-coated tongue, with aversion to food. Fetid eructations. Worse from riding in a carriage or from sailing. Painful sensation of fullness in the stomach. Frontal headache. Nausea which is felt in the head.

Conium. Vertigo, particularly on turning over in bed. The urine intermits at every emission. Stinging in the neck of the uterus; scirrhus of any part. Terrible nausea and vomiting during pregnancy in women having scirrhosities. The patient always feels worse after going to bed—so much so that she is obliged to sit up or to walk about to get relief. Bitter taste. Eructations with heartburn.

Crocus. Sensation of fermentation in the stomach, or of motion upward and downward, hither and thither. Feeling of nausea in the chest and throat as if she would vomit. Very violent heartburn.

Cuprum ars. Constant nausea. Vomits everything. Very weak. Pulse quick and full. Spasmodic uterine pains.

Cuprum met. Violent vomiting of frothy mucus. Sometimes green. When drinking the fluid descends with a gurgling noise. Sensation in the stomach as if she had something bitter in it. The violent nausea and vomiting are relieved by drinking cold water. Intense coppery taste. Profuse salivation.

Cyclamen. After eating the least quantity, disgust and nausea in the

mouth and throat. Much dimness of vision, with fiery specks and sparks before the eyes. Intermittent thirst. Violent hiccough. Fatty taste; fat food disagrees. Wants no breakfast.

Digitalis. Nausea, faintness or sinking at the stomach, as if she would die. Very slow pulse. Light-colored stools. Very persistent nausea and vomiting—nausea even after vomiting. Burning in the stomach extending up the œsophagus. Want of appetite, with clean tongue and empty stomach.

Drosera. Nausea after eating fat. The nausea is worse after midnight till morning. The mouth seems in a bitter state when eating. Nausea with inclination to vomit. Vomiting of slimy matter.

Dulcamara. The sufferings are made worse by every cold change in the weather. Empty eructations, with throbbing as from disgust. Frequent eructations while eating. Sensation of retraction in the pit of the stomach, with burning.

Ferrum acet. Vomiting of food, with a fiery red face. Renewed vomiting after eating. Vomiting at midnight. Everything she vomits tastes sour and acrid. Vomiting of blood. Nervous erythism.

Gossypium. Great distress, weakness and prostration. Has been useful in very bad cases. Nausea particularly before breakfast.

Graphites. Itching blotches here and there over the body. Vesicular eruptions, from which oozes a glutinous watery fluid. Sore varices. Constipation or diarrhœa. Feces very large and difficult of passage. Nausea with vertigo, so that she is afraid to walk. Rancid heartburn, particularly after eating. Taste in the mouth as of rotten eggs every morning, which nauseates her. Much headache.

Helleborus. Urine scanty, dark and depositing a coffee-ground sediment. Nausea, yet hungry; still the food is repulsive although the taste is natural. Intensely painful burning in the stomach, extending into the œsophagus.

Hepar. Itching rash in the bend of the arms and under the knees in the popliteal space. Frequent and momentary attacks of nausea. Vomiting every morning. Inclination to vomit, with flow of saliva from the mouth. Constant sensation of water rising in the œsophagus, as if she had eaten sour things.

Ignatia. Great sense of emptiness at the pit of the stomach, with sighing and great depression of spirits. Full of suppressed grief as it were. Sensation as if she had been fasting a long time, with flat taste and languor in the limbs. Hiccough. Flat, sour or bitter taste.

Ipecac. One continual sense of nausea all the time—not a moment's relief. Vomiting of large quantities of mucus. Diarrhœa and colic.

Disgust for food, empty retching; vomiting of food, slime or blood; sour vomiting. Cutting pains about the umbilicus.

Jodium. Continual empty eructations from morning till evening, as if every particle of nourishment were turned into gas. Nausea and vomiting of saltish-tasting substances. A continual taste of salt in the mouth. Offensive taste. Symptoms relieved for a short time by eating. Does not gain strength from her food.

Kali bich. Discharge from the stomach, throat or mouth, or from any of the mucous membranes, of a tough, stringy mucus, inclining to stick to the parts and drawing out in long strings.

Kali carb. Very sleepy during a meal. Nausea as if she would faint, relieved by lying down. Vomiting, with a swoonlike failing of strength; much colicky pain in the abdomen of a stitching character. Disgust for food. "Sickness of pregnancy without vomiting, coming on only during a walk, feeling as if she could lie down anywhere and die."

Lactic acid. Nausea and vomiting of sour substances. Sour taste.

Laurocerasus. Attacks of suffocation, with palpitation and a sort of gasping for breath; must lie down sometimes to find relief. Eructations tasting of bitter almonds or prussic acid. Violent pain in the stomach, with loss of speech. Disgust for food.

Lycopodium. Much rumbling and working in the abdomen; gurgling in the left hypochondrium. Sensation of satiety, on account of which she cannot eat. Red sand in the urine. Great pain before urinating, and relief as soon as the urine begins to flow. Immediately after a meal sensation as of fasting, but no hunger. Much heat in the face after eating, particularly in the left cheek. Heartburn from the stomach, the acidity rising into the throat. After eating pain in the region of the liver and palpitation of the heart. Vomiting of sour matter or of bile. Aversion to bread. Bitter, fatty or sour taste. Varices in lower extremities or vulva.

Magnesia carb. Much sour taste and sour vomiting. All her symptoms are aggravated every third week. Much roughness or stinging or burning in the throat, with desire to vomit. Much loathing without desire to vomit. Eructations tasting of rotten eggs.

Magnesia mur. Constipation of large difficult stools, which crumble as they leave the verge of the anus. A continual rising of white froth into the mouth. Eructations tasting like onions. Fainting nausea, succeeded by coldness and weakness in the stomach and gulping up of water. Loss of taste, or bitter taste.

Mercurius. Much salivation, ulcerated gums, sore and elongated

teeth. Mucous stools, followed by tenesmus. Rancid heartburn after a simple supper. Heartburn all night. Ptyalism with nausea, waking her from sleep, particularly after twelve at night. The pit of the stomach is very tender to the touch. Taste bitter, offensive, saltish or sour. Eructations and heartburn, vomiting of bile or of food.

Moschus. Violent eructations tasting like musk, sometimes of garlic. The sight of food makes her sick. Eructations with hot saliva in the mouth. Heartburn with palpitation.

Natrum mur. Waterbrash like limpid mucus, profuse and constant. She always awakens in the morning with headache. She craves salt. Has a strong aversion to bread. Clawing in the pit of the stomach. Feeling of great hunger, as if the stomach were empty, but no appetite. She always has heartburn after eating. Very much nausea, particularly in women using much salt food. Dreams at night of robbers being in the house; she must have the house searched in order to be satisfied. Loss of taste or flat, bitter or sour taste. Much belching. Heartburn and palpitation of the heart. Vomiting of food.

Nitric acid. Much nausea and gastric trouble, relieved by moving about or riding in a carriage. Constant nausea with heat in the stomach, extending to the throat. Fat food causes nausea and acidity. Exceedingly strong and offensive urine, smelling like that of horses.

Nux mosch. Mouth, tongue and throat very dry, so that they "stick to one another," particularly at night. Sensation of fullness of the stomach, with tightness of breathing; very useful for this symptom in the last months of pregnancy. Disposition to faint. Great sleepiness.

Nux vom. Thinks she would feel better if she could vomit. Nausea and vomiting every morning, with constipation; large, difficult feces. Putrid taste low down in the pharynx when hawking up mucus. Food and drink have a fetid smell to her. She cannot bear the odor of tobacco. Stools very small and frequent, with frequent and painful urging. Not much appetite; restless sleep, particularly after three A.M., with nausea and vomiting in the morning and great depression of spirits. She cannot enjoy reading or conversation. She is irritable and wishes to be alone. Canine hunger; aversion to water and bread. Longing for beer, brandy, etc. Bitter or sour taste. Belching, eructations, hiccoughing, heartburn. Vomiting of food, of bile, of black or sour matter.

Opium. Constipation. Stool consists of round, hard, black balls. Longing for brandy.

Petroleum. In women affected with diarrhœa only in the daytime;

nausea when riding, she cannot ride in a carriage. Flat or sour taste. Vomiting of bile. Aversion to fat food and to meat. Particularly applicable in all gastric troubles of pregnant women.

Phosphorus. Constipation with narrow, long, hard, dry feces, difficult to evacuate. Very weak feeling in the abdomen. Heat up the back. Profuse watery diarrhœa, pouring away as if from a hydrant. Sour eructations and sour vomiting. Saltish, sour or sweetish taste. Vomiting of blood or of sour matter. Vomits water or food soon as it gets warm in the stomach.

Phosphoric acid. Sensation as if the stomach were being balanced up and down. Bread tastes bitter. Nausea, as if in the palate or throat. She frequently rises at night to pass large quantities of colorless urine. Much debility. Great indifference.

Pulsatilla. Pulsations in the pit of the stomach. Vomiting of mucus. Bad taste in the mouth every morning on awaking; she has to wash it out soon, it is so bad she cannot bear it. Nothing tastes good to her. Absence of thirst; she does not relish as much water as usual. Nightly diarrhœa, stools very changeable. Loss of taste, or bitter, fatty, saltish, sour or sweetish taste. Eructations. Nausea.

Rhus tox. Putrid taste after the first mouthful. Pain between her shoulders on swallowing food. Very restless at night, particularly the latter part of the night; she must turn frequently in order to find an easy position. No appetite, or hunger without appetite. Unnatural or metallic taste. Eructations and nausea, with inclination to vomit. Cramps in legs at night very severe.

Sabadilla. No relish for food till she takes the first morsel, when she makes a good meal. A kind of heartburn, the heat commencing in the abdomen and extending upward to the mouth. Much nausea and vomiting, with heat in the abdomen. Vomiting of ascarides. Horrid burning in her stomach, as if it would burn up through into her throat. Aversion to meat. Sweetish taste. Salivation. Frequently spitting insipid water.

Selenium. Violent beating of the pulse in the whole body after eating, particularly in the abdomen. Longing for brandy.

Sepia. Vomiting of milky water or milky mucus. Sense of emptiness at the pit of the stomach; the thought of food sickens her; a sense of weight in the anus. Eructations tasting like spoiled eggs. Taste as of manure. Aversion to meat. In the morning, nausea as if all the viscera were turning inside out. Inclination to vomit in the morning when rinsing her mouth. She cannot take her accustomed ride in the morning on account of nausea. Want of appetite.

Taste bitter or saltish. Eructations. Disgust for all kinds of food. Vomiting of food and bile. Smell of food nauseates.

Silicia. Hungry, but she cannot get down food, it is so nauseous. Prolonged after-taste of food. Nausea, with violent palpitation of the heart. Nausea after every exercise that raises the temperature of the body. Constipation, as if from inactivity of the rectum, the stool receding after partial protrusion. Taste of blood in the morning. Aversion to meat. Loss of taste. Nausea and vomiting.

Staphysagria. Sensation as if the stomach were hanging down relaxed. Shortly after a full and substantial meal she feels very hungry. Extreme hunger even when the stomach is full of food. Flat taste. Constant accumulation of water in the mouth. Very sensitive to all moral or physical influences.

Stramonium. Troublesome thirst, even with very much saliva. Every kind of food tastes like straw; in fact, she has no taste. Nausea, with flow of very saltish-tasting saliva. Fears solitude.

Sulphur. Profuse salivation, the taste of which causes nausea and spells of vomiting. All the trouble seems to be caused by the nauseous salivation. Flashes of heat; heat on the top of the head; cold feet; short sleep at night—she wakes very frequently. Profuse waterbrash. Aversion to meat and craving for brandy. Bitter, saltish or sour taste. Belching; eructations; sour vomiting.

Sulphuric acid. Coldness and relaxed feeling in the stomach; loss of appetite and great debility. Belching; eructations; vomiting. Tremulousness; the weaker she feels the greater the sensation of tremulousness. Is impelled to do things hurriedly.

Tartar em. Vomiting of large quantities of mucus. Belching; disgust for food; nausea; salivation.

Valerian. Heartburn, with gulping up of rancid fluid, which, however, does not rise into the mouth. Nausea, as if a thread were hanging in the throat, exciting attempts to vomit. She feels nauseated, faint, with white lips and body icy cold. Fatty and offensive taste; heartburn; risings into the throat; nausea in the throat.

Veratrum. Much thirst for cold drinks. Craves fruits and juicy articles of food. Wants everything cold. Violent retching. Canine hunger. Craving for acids and salt food. Taste bitter or saltish. Eructations; heartburn; nausea; inclination to vomit. Violent retching and vomiting; vomiting of bile. Cold sweat on the forehead, with all the sufferings. Feels very weak and faint.

Zinc. Taste of blood in the mouth and sweetish risings from the stomach. Terrible heartburn after taking sweetish things. Great

greediness when eating; she cannot eat fast enough, from canine hunger. Much nausea and vomiting. Fidgety feet. Aversion to meat. Metallic taste.

Pyrosis—Acidity—Heartburn.—These distressing forms of gastric disturbance sometimes make their appearance soon after conception, while in other cases they may not appear until after the fourth month. Some women are remarkably subject to these symptoms when *enceinte;* in others they are manifested with less violence; in others not at all. There may be merely a burning sensation—heartburn in the throat—which indicates sympathetic irritation; or the severer forms of pyrosis, with acidity, which arise from more fully-developed gastroses. As in the nausea and vomiting of pregnancy, so in pyrosis, heartburn and acidity, every degree of intensity and variety of manifestation and complication may be seen in different individual cases. Sometimes these disturbances are found accompanied with and greatly aggravating the nausea and vomiting; at other times they seem to appear instead of the vomiting.

As in ordinary cases of dyspepsia, these sufferings are worse after taking particular articles of food or drink, such as meats, fat meats or gravies, milk, fruit. In the more severe cases nearly everything that is ingested becomes but an added fuel to the burning of the pyrosis and acidity. Still, a careful avoidance of all those articles which, whether solid or liquid, are found most to disagree, and a careful administration of the truly-indicated homœopathic remedy, will, as in cases of nausea and vomiting, go very far to remove the most distressing symptoms, and eventually to secure a great improvement in the general health. For these difficulties, when not merely the aggravations by pregnancy of already existing forms of chronic gastritis, are but the developments of constitutional dyscrasiæ hitherto latent, as explained in the case of morning sickness. And while the classes of hereditary dyscrasiæ are but few, still, modified as they are in their actual developments by *individual* peculiarities, they require a great variety of remedies for their proper treatment. Not indeed many remedies for each individual case—for the more skillful the physician the fewer will be the remedies which he will be obliged to administer in any given case, and the greater the number of cases which he will cure with a single remedy, sometimes even with a single dose—but a variety of remedies will be necessary to correspond to the variety of disorders which result in different persons, even from the same cause.

The doctrine of individual specifics is based upon the most profound analysis of the human system and of the law of cure, and is confirmed by the radical and constitutional improvement—an improvement which is found to be the more radical and permanent the higher the potencies of the remedies which are administered. The doctrine of individual specifics is therefore truly scientific, since it harmonizes the results of practical experience with well-established principles, and even with those profounder explorations of our being in which matter is seen to fade into spirit, and physiology to be replaced by psychology. The doctrine of general specifics leads to just the reverse of all this, as well in principle as in the ratio and extent of actual success. For our allopathic and eclectic brethren, and even those of the so-called physiological school among the homœopaths, are so manifestly blind that they totally ignore in therapeutics that predominance of mind over matter which they do not hesitate to admit in all other branches of scientific inquiry. They prove themselves materialists and chemists—anything but true physiologists; while as to psychology, or the doctrine of the connection of the body with the soul, and of the influence of the latter over the former, they seem to regard it as entirely beneath their attention. Hence, what do we see in the practice of all these classes alike but temporary expedients—which often result in manifest disaster, and which always occasion more injury than they are capable of discerning—instead of radical cures? We see chemical antidotes which, if they sweeten the streams, do it at the expense of the fountains; and mechanical appliances which not only fail to assist Nature, but in many cases effectually prevent her from helping herself. Those who thus pride themselves in indulging in allopathic and eclectic modes of thought are greatly to be pitied; they know not what they do. All the advancing progress of modern scientific thought is against them, and the more enlightened of those whom they profess to admire despise them as foolish rejecters of the higher light held up before them.

Table of Remedies for Gastric Disturbances.

(*Compare with the General Indications given on pages* 292–294, *as well as with the Materia Medica.*)

Belchings or Eructations.

Arn., Bell., Bry., Cocc., Con., Merc. sol., Natr. m., Nux v., Phos. Puls., Rhus tox., Sarsap., Sep., Sulph. ac., Sulph., Verat. a., Tart. em.

Hiccoughing.

1. Amm. mur., Cycl., Hyos., Ignat., Nux v. 2. Agar., Bell., Bry., Puls., Ran. bulb., Veratr. a.

Pyrosis—Heartburn.

1. Calc. c., Con., Caust., Croc., Nux v. 2. Amm. c., Caps., Carb. a., Carb. v., Chin., Jod., Lyc., Merc. sol., Natr. m., Phos., Puls., Sep., Valer., Veratr. a. Lactic acid.

Risings into the Throat.

1. Asaf., Merc. sol., Lach., Plat. 2. Con., Phos., Spig., Valer., Veratr. a.

Disgust for Food.

1. Ipec., Kali c., Sep. 2. Ant. cr., Bell., Bry., Puls., Sil., Tart. em.

Nausea ("*Sick at the Stomach*").

1. Ars., Caust., Cham., Hell., Ipec., Natr. m., Nux v., Puls., Rhus., Sil., Sulph., Sulph. ac., Tart. em., Valer., Veratr. a. 2. Acon., Angust., Ant. cr., Argent. nit., Asar., Bell., Bry., Caps., Cham., Cyclam., Calc. c., Carb. v., Chin., Con., Cupr. m., Graph., Kali c., Lyc., Merc. sol., Mosch., Natr. m., Nitr. ac., Phos., Squill., Sep., Stann., Sulph., Sulph. ac., Valer., Tart. em.

——— *felt in the Throat.*—1. Cycl., Phos. ac., Stann. 2. Ars., Bell., Chin., Cupr. m., Oleand., Puls., Staph., Valer.

——— *felt in the Chest.*—Acon., Bry., Croc., Merc. sol., Rhus tox.

——— *felt in the Abdomen.*—Agn., Bell., Bry., Cupr., Cycla., Mang., Puls., Rheum., Samb., Tart.

Empty Retching, Gagging.

1. Bell., Ipec., Veratr. a. 2. Arn., Asar., Bry., Chin., Nux v., Puls., Sulph.

Vomiting.

Vomiting of Bile, Bitter Vomiting.—1. Ars., Bry., Cham., Ipec., Merc. sol., Nux v., Puls., Sep., Veratr. a. 2. Acon., Ant. c., Arn., Bell., Bism., Calc. c., Cann., Chin., Colch., Coloc., Con., Cupr., Dulc., Ignat., Lyc., Petrol., Plumb., Sec. corn., Stann., Sulph.

——— *of Black Matter.*—1. Ars., Chin., Nux. v., Secale. 2. Ipec., Lyc., Petr., Phos., Plumb., Sulph. ac., Veratr. a.

——— *of Blood.*—1. Arn., Ferr., Ipec., Phos. 2. Acon., Argent. n., Canth., Chin., Nux v., Plumb., Puls., Sep., Sulph.

Vomiting of what has been Drunk.—1. Ars., Phos., Veratr. a. 2. Acon., Bry., Cham., Chin., Dulc., Ipec., Nux v., Sil., Tart. em.

——— *of what has been Eaten.*—1. Ars., Bry., Ferr., Nux v., Squill. 2. Amm. c., Ant. cr., Calc. c., Cina, Cupr., Dros., Hyos., Ignat., Ipec., Lyc., Natr. m., Phos., Plumb., Puls., Sep., Stann., Sulph., Veratr. a.

——— *of Fetid Matters.*—1. Sep. 2. Ars., Cocc., Cupr. m., Ipec., Nux v., Op., Stann., Sulph.

——— *of Slimy Matter.*—1. Dros., Puls., Tart. em. 2. Acon., Ars., Bell., Bor., Bry., Cham., Chin., Cin., Con., Dig., Hyos., Ignat., Ipec., Merc. sol., Nux v., Sec. corn., Sulph., Veratr. a.

——— *of Sour Matter.*—1. Calc. c., Chin., Lyc., Nux v., Phos., Sulph. 2. Ars., Bell., Cham., Ipec., Lactic ac., Puls., Veratr. a.

——— *of Watery Matter.*—1. Bry., Caust., Veratr. a. 2. Acon., Arn., Ars., Bell., Cann., Chin., Con., Cupr., Ipec., Nux v., Puls., Sil., Stann., Sulph., Sulph ac.

——— *of Worms.*—1. Acon., Cina, Ferr., Sabad., Sec. corn. 2. Hyos., Sil., Spig., Veratr. a.

III. Intestinal Affections.

Constipation.—This is so frequent an attendant of pregnancy that by some it has been deemed almost its natural consequence. But it is much more apt to occur, and is at the same time much more troublesome and inveterate, in pregnant women who from habits of life and constitutional peculiarities are predisposed or subject to it in their ordinary condition.

The mechanical pressure exerted upon the rectum, by which its calibre is diminished and its action paralyzed, and the habits of inactivity in which many pregnant women indulge, especially in cities, combine to produce costiveness. And as a final result of the constipation, hæmorrhoids, either blind or bleeding, appear in many cases. And the very great amount of vital force consumed in the womb may also tend to draw away from the intestinal canal some of the energy that might have sustained its regular and daily evacuations.

The indications for hygienic treatment will be suggested by the more apparent causes of the difficulty. Not only will the constipation itself be avoided in many cases by suitable and active exercise in the open air, but many of the attendant complications and consequences, such as headache and rush of blood to the head, may in the same way be escaped. The remedies will be indicated by the nature of the discharges and by the accompanying symptoms and totality of

the patient's condition. The constipation being but one of the forms of development of the constitutional dyscrasia in many instances—whether the most prominent symptom or not—requires a careful, radical treatment, by which not only will the present difficulty be relieved, but the general health improved, so that this trouble will not appear in succeeding pregnancies. The following remedies, as well as those detailed under gastric disturbances, should be carefully studied and compared with the totality of the patient's symptoms:

Aconite. Where there is much thirst, a general dryness of the skin, a constant restlessness, and where the same fears appear that are mentioned in this remedy under gastric disorders.

Alumina. Constipation from inactivity of the bowels; much effort must be employed for the expulsion even of a soft stool, so great is the apparent inaction of the rectum. Absence of desire to evacuate.

Agaricus m. Loud rolling and rumbling in the bowels. The stool is very hard and knotty at first, then it becomes soft, and finally diarrhœic, especially if there are red, itching and burning frost-bite looking places on the feet, hands or face.

Anacardium. Frequent and ineffectual urging, the rectum feeling as if stopped up with a plug; if the stool does not pass soon, she feels colicky pains in the abdomen. Inactivity of the bowels.

Antimonium c. Sensation as if a copious stool were going to pass when only flatus comes forth, but finally a very hard stool is evacuated. Incarcerated flatus.

Apis. Stools seldom and very difficult, with stinging pains and sensation in the abdomen, as if of something tight, which would break if too much effort were used. Heartburn. Scanty urine.

Arnica. In cases where an obstinate constipation has remained ever since some severe concussion. Inactivity of the bowels. Flatulency; colic; loud rolling and rumbling in abdomen; foul-smelling flatus; stool seems to be unsatisfactory and insufficient.

Belladonna. Flatulency. Obstruction of the bowels. Much tendency of blood to the head; flushed face; red eyes; throbbing of the carotids; heat in the head; intolerance of noise and of light. With belladonna, high, I have succeeded in cases like this, when the most violent doses of the allopathic school had utterly failed.

Bryonia. The stool is mostly dark, dry and hard as if burned, and is evacuated with much difficulty. The lips are parched and cracked; much thirst. Stinking flatulency; rumbling and rolling in the abdomen. Obstruction of the bowels from hardened stool. Stool too large to be evacuated without pain.

Calc c. Indicated in leucophlegmatic temperaments. Stools very large, hard; sometimes in part undigested. She does not sleep after three A. M. Stinking flatulency. Constipation from indurated stool, which is too white. Sour-smelling stool.

Carbo v. Tough, scanty, not properly cohering stool; it seems to break off, and in consequence to become interrupted and rendered more difficult of expulsion. Stinking stool. Flatulency, with colic and rumbling of gas in the bowels. Incarcerated flatus, smelling very badly when emitted. Patient attributes all her troubles to "the wind." Obstruction from inactivity of the bowels.

Causticum. Constipation, in which the effort to effect a passage causes heat, redness and perspiration on the face. Flatulency, loud rolling and rumbling in the bowels. Obstipation of hardened feces. Stool knotty like sheep-dung, too small in size. Stool shining like grease.

Chelidonium. In cases accompanied by pain under the inner and lower angle of the right shoulder-blade. Stool like sheep's dung.

China. Hard, intermitting stool, with sensation of tightness and fullness in the abdomen; also with burning and heat in the head. Flatulence with colic; loud rolling and rumbling; black stools; obstruction from inactivity of the bowels.

Cocculus. Hard stool every other day, expelled with great difficulty. The lower extremities are nearly paralyzed. Incarcerated flatus; obstruction of the bowels.

Conium. Frequent and ineffectual urging, or a small quantity is evacuated each time; much vertigo, particularly on turning in bed. The urine intermits in its flow at each emission. Flatulency; colic from incarcerated flatus.

Graphites. Large, hard, knotty stool, the knots being united by mucous threads, and much mucus after the stool. Itching blotches about the body, which emit a glutinous fluid. Sometimes the stools are only the size of lumbricoides. Incarcerated flatus; colic; obstipation from hardened stool or from inactivity of the bowels. Stool knotty and too large.

Hepar. Constipation resembling that of alumina: hepar may be given in preference where the skin-symptoms or others seem to indicate it more particularly; for instance, if eruptions appear on the bend of the elbow and on the popliteal space.

Ignatia. Difficult stool, causing prolapse of the rectum. Empty feeling at the pit of the stomach; sighing and full of grief. Flatu-

lency, incarcerated, rumbling and rolling about. Constipation from inactivity of the bowels.

Jodium. Constipation with ineffectual urging, but the stool passes with great facility soon after drinking some cold milk.

Kali c. Unsuccessful desire for stool, with a sensation as if the rectum were too weak to expel it. She feels very strangely and badly an hour before stool. Itching pains in and about the anus and rectum during and after stool. Flatulency. Obstipation from hardness of stool or from torpor of the bowels.

Laurocerasus. Frequent attacks of suffocation about the heart, so that she must gasp for breath. Simple obstruction of the bowels.

Ledum. Great want of vital heat; she can hardly keep warm even with much wrapping; in constipation, where this state of the system prevails, this remedy will be found useful.

Lycopodium. She says her abdomen is like a yeast-pot, so great a fermentation goes on there. Borborygmus and gurgling, especially in the left hypochondrium. Much red sand in the urine. Distressing pain in the back before urinating. Incarcerated flatulence; sharp, shooting pains from right to left across the abdomen. Constant feeling of satiety; but a small quantity of food seems to fill to repletion.

Magnesia mur. Large stool, passed with difficulty, and crumbling as it passes the verge of the anus. Obstipation, of hardened feces. Knotty, crumbling, insufficient and unsatisfactory stool.

Mercurius. Constant and ineffectual desire for stool. Scorbutic condition of the gums. Salivation, sore throat, soreness of the gums and other mercurius symptoms. Constipation from hardness of the stool, blood with the stool.

Natr. m. Hard, difficult stool, and inactivity of the rectum. Bad headaches always on waking in the morning. Craves salt. Aversion to bread. Very vivid and fearful dreams. Sore places in the mouth, which are very painful, sensitive even to liquids. Constipation from inactivity of the bowels. Rumbling and incarceration of flatus.

Nitric acid. Hard, difficult, scanty stool. Urine exceedingly offensive, like horses' urine. She sleeps badly in the latter part of the night. Great feeling of weakness after a stool. Much flatus, incarcerated, stinking when emitted. Bloody stool.

Nux mosch. Great dryness in the mouth and tongue, which sticks to the palate. Slow and difficult stools. Colicky pains from incarcerated flatus. Constipation from inactivity of the bowels. For women disposed to faint or who "bolt" their food.

Nux vom. In women of sedentary habits, accustomed to the use of much coffee, wine and rich and high-seasoned food generally. Stools large and difficult, or small, frequent and painful. Flatulence, colicky pains, incarcerated flatus, or loud rumbling and rolling in the bowels. Constipation from torpor of the bowels, or in persons who have been in the habit of using cathartic pills or other purgatives. Knotty or bloody stools. Insufficient stool. Rush of blood to the head during stool.

Oleander. First diarrhœa, then hard, difficult stool.

Opium. Stools always in round, black, hard balls; in such cases opium in the higher preparations never fails. Constipation occurring either from accumulation of hard, dry feces or from torpor of the bowels.

Phosph. Stools narrow, dry, long, and difficult to expel—very like a dog's stool. Blood with the stool. Rumbling in the abdomen. Constipation from hardened feces.

Phosph. acid. She is obliged to rise frequently at night to pass off large quantities of colorless urine. The stools are hard and in pieces. Flatulency.

Phytolacca dec. Constipation habitual; the patient says the bowels will not move without the aid of purgative medicines. Feeling of fullness in the abdomen before stool, which remains after stool as if all had not passed. Constipation from torpor of the rectum. Persons who are subject to rheumatic pains on change of weather, especially in the hips and thighs.

Platina. The stools adhere to the parts like soft clay, and pass off with difficulty on that account. Obstinate incarceration of flatus.

Plumbum. Constipation, with violent colic. The stools are usually composed of little balls, compacted together like sheep's dung. Sensation as if of a string drawing the abdomen in toward the back. Flatulency, colic, commotion in the abdomen.

Pulsatilla. Obstinate constipation in mild, gentle, tearful women, with very nauseous, bad taste in the mouth in the morning—so very bad that she must wash her mouth immediately on waking. Gastric disturbance; cannot bear the smell of food. Hard, bloody stools. Incarceration of flatus, emissions of fœtid flatus, borborygmus.

Ratanhia. Most obstinate and long-continued constipation, with urging feelings in the small of the back, as if a stool would come down.

Rhododendron. She is rheumatic, and all her pains reappear at the approach and during the continuance of rough, stormy and windy

weather. The stool is not so hard, but it is very tardy, requiring a good deal of urging. Flatulent and colicky patients.

Rhus tox. She is rheumatic, has restless nights on account of not being able to lie long in one position, although she feels quite comfortable for a short time after every change. She has almost constant tenesmus, with nausea and tearing in the intestines.

Ruta. Difficult expulsion of stool, with a large protrusion of the rectum; in fact, the rectum is very liable to protrude before the stool immediately on attempting to go to stool. Constipation from either inactivity of the bowels or from impaction of feces.

Sabadilla. Very difficult stools, with much burning in the abdomen, and a sensation as of something alive in the abdomen. Colic, with violent urging to stool and borborygmus.

Sabina. Hard, difficult, painful stools, with pain extending from the back directly to the pubes.

Sarsaparilla. Obstinate constipation, with violent urging to urinate. Great desire, with contraction of the intestines and excessive pressure from above downward, as if the bowels would be pressed out, when a small stool is passed, and then the same phenomena recur again.

Sepia. Sensation of a weight or of a heavy lump in the anus; this is a very characteristic indication. The stool is very difficult, covered with mucus, and sometimes impossible to pass even with terrible, involuntary strainings. Flatulency, with loud rolling and rumbling in the abdomen. Obstipation from hardened stool. Knotty and insufficient stool. Sepia^{200} was stated many years ago to be specific in the constipation of pregnant women.

Silicia. Very much urging, the stool often receding after having been partially expelled. The stool is composed of hard lumps. Incarcerated and offensive flatus.

Stannum. It exhausts her to talk much or to read aloud. It is more difficult and tiresome for her to descend than to ascend, to sit down than to rise up. Although the stool has been fully accomplished, she does not feel relieved.

Staphysagria. The more trouble she has with her gums and teeth the more constipated she becomes. Colic from incarcerated flatus in the bowels, offensive flatus. Constipation from inactivity of the bowels or from impaction.

Sulphur. The first effort to stool is often very painful, compelling her to desist. Flushes of heat, heat on the top of the head, coldness of the feet, faintness from eleven to twelve at noon, she can scarcely

wait for her dinner. Bloody, knotty, hardened, insufficient stool. Loud rolling and rumbling in the abdomen, with emission of offensive flatus.

Sulph. acid. Hard stool, consisting of small black lumps mixed with blood, accompanied by such violent prickings in the anus that she has to rise up on account of the pain. Sensation of tremor all over the body, without trembling.

Thuya. Very violent pain in the rectum during stool, so violent that she can hardly pass the stool, with sensation as if she could not live any longer.

Veratrum a. Flatulency, colic and borborygmus. Costiveness, owing to the hardness and size of the feces, as well as to the inactivity of the rectum. Cold sweat on the forehead during the movement of the bowels, with exhaustion and faintness afterward.

Verbascum. Stool like sheep's dung, scanty, very hard, and expelled with great effort.

Zinc. This remedy is particularly indicated where there is remarkable dryness of the stools, which are insufficient and difficult of expulsion, and when the bowels, particularly the rectum, seem to be so very inactive, as if all peristaltic and expulsive power was lost.

DIARRHŒA may be developed during pregnancy, like constipation or hæmorrhoids, from some constitutional dyscrasia, which is called into action by the profoundly vital function of gestation. Or it may be developed in consequence of some imprudence of diet or by taking cold.

The condition of the bowels in which diarrhœa makes its appearance is more like actual disease than where constipation is present. The diarrhœa may alternate with constipation, and this is quite a common complication. Or it may be of that character which naturally accompanies acidity of the stomach and great weakness of the digestion. Sometimes it assumes the form of lienteria or discharge of undigested food. In other cases the liver seems involved, and the stools have a bilious appearance; such attacks of diarrhœa may occur in consequence of violent emotions of the mind, to which pregnant women are peculiarly liable. The discharge may be easy and painless, or accompanied by severe suffering, soreness, cutting pains and even tenesmus, as if of actual dysentery. This latter form, approaching inflammation of the bowels, is apt to come on after exposure to the night air, especially if the woman be not clad with sufficient warmth.

It is not necessary to detail all the symptoms of the various forms of diarrhœa which may appear in pregnant women; the most important of them may be found among the indications and characteristics of the various medicines.

There are three directions which should be insisted upon in prescribing for cases of diarrhœa in pregnancy: First, the patient should carefully abstain from every unsuitable article of food; those which are found by experience to be indigestible or to occasion distress, whether immediately followed by aggravation of the diarrhœa or not, should be particularly interdicted. Second, the patient should take care that her whole body is amply protected from the cold and damp, but especially her feet and abdomen. The former should be warm and dry as a matter of course; the latter will often—from becoming so prominent—require extra covering, as of flannel. Third, perfect quiet is absolutely essential in cases of diarrhœa in pregnancy. This condition should indeed be always enjoined in the treatment of diarrhœa, whether it extend to dysentery or inflammation of the bowels or not. But in the case of pregnant women it is if possible still more indispensable. Rest, repose, especially in a horizontal position, will enable the patient to recover her health and strength, under the influence of the homœopathic remedy, in a very short time, when if she continued moving about those cases of diarrhœa which at first were mild and painless might become inveterate and greatly aggravated in character.

Again, it is to be borne in mind that a diarrhœa long continued may bring about abortion or premature labor, and hence the importance of early and judicious treatment and of the due observance of dietetics and rest.

Sometimes the diarrhœa, not very severe and apparently of no great consequence, which makes its appearance in pregnancy, is but the insidious forerunner of phthisis pulmonalis, otherwise held in abeyance by the influence which the state of pregnancy exerts upon the entire economy of the female system.

We give the chief indications for the remedies which are oftenest called for in the diarrhœa of pregnancy. The remedy should always be made to correspond to the totality of the symptoms; and if the simile is not found in one of those here given, a more extended search must be instituted in the Materia Medica. Compare the indications here given with those laid down for the same remedies in gastric derangements and constipation. By such comparison a remedy may be chosen with great accuracy.

Agaricus m. The diarrhœic stools are accompanied with abundance of flatulency, with painful drawing in of the abdomen. The itching, burning and red places upon the skin fade away as the diarrhœa improves.

Aloes. Sensation of weight or heaviness in the rectum, and frequent passage of accumulations of mucus of large or smaller size, sometimes with very distressing tenesmus. Morning diarrhœa, which necessitates expedition in attending to the call, not so much on account of the urgency, as because of a feeling as if the stool could not be retained, but must drop involuntarily. Rumbling and rolling in the bowels previous to stool. Pure mucus is discharged in masses.

Alumina. Diarrhœa with tenesmus; stools bloody and scanty. She has to strain at stool in order to pass water; she cannot pass her urine without straining at stool.

Ammon. mur. Diarrhœa, with soreness of the anus, several pustules are discovered near it.

Angustura. Diarrhœa, with shivering over the face and goose-flesl..

Antimonium c. Diarrhœa at night and early in the morning, with white tongue. Watery diarrhœa, containing hard lumps. Acrid diarrhœa.

Arnica. Involuntary stools, with sore and bruised feeling all through the body. Mucous, offensive or purulent stools.

Argentum nit. Very offensive evacuations, with very profuse emission of flatus, sometimes with noise. Stools watery or of green mucus. Often there is much colicky pain. The diarrhœa occurs more frequently at night. Grass-green flaky stool.

Arsenicum. Exhausting diarrhœa, the stools containing undigested food. The patient is very weak, the least motion occasioning a sense of great fatigue. The diarrhœa is renewed after eating and drinking. Very offensive diarrhœa. Sharp, cutting or burning pains with the diarrhœa. Painless diarrhœa. Stools acrid, bloody or involuntary. The pain is greatest during the stool, and is relieved after stool.

Asafœtida. Watery, liquid stools of the most disgusting smell imaginable. (Also the same in infants and children.) Colic with the diarrhœa.

Aurum. Nightly diarrhœa, with much burning in the rectum. Offensive, painful diarrhœa.

Belladonna. Involuntary diarrhœa. The diarrhœic stool is followed by frequent urging, no more stool being passed. Flushed face; red eyes; throbbing carotids, etc.

Borax. Frequent, soft, light yellow, slimy stools, with faintness and weakness.

Bryonia. Burning diarrhœa. The diarrhœa is worse or aggravated by warm weather. Lips dry and parched; thirst; nausea after eating; nausea on sitting up in bed. The patient wishes to remain very quiet, as every motion aggravates her symptoms.

Calc c. Much crawling and itching, as from ascarides, in the anus. Leucophlegmatic temperament. Does not sleep after three in the morning.

Cantharis. A constant desire to urinate, with cutting, burning pain. Dysenteric diarrhœa. Stools which resemble scrapings of the intestines or water in which meat has been washed.

Capsicum. Much burning and smarting in the anus, as if from cayenne pepper. Pain in the back continuing after the stool.

Carbo v. Much flatulency, with belching, which affords only temporary relief.

Causticum. Hæmorrhoids or fissures, rendering walking almost intolerable. Much suffering after each evacuation.

Cham. Hot diarrhœic stool, smelling like rotten eggs. The stools excoriate the parts. Painless, green, watery diarrhœa, a mixture of feces and mucus. Nightly diarrhœa with colic, causing her to bend double. In all chamomilla cases the moral symptoms are about the same—*i. e.* quarrelsome, obstreperous.

Chelidonium. Diarrhœa, with pain under the inner and lower angle of the right shoulder-blade.

China. Diarrhœa of yellow, watery stools, undigested, and with much flatulence. Sensation of distension in the abdomen, which is not relieved by eructations or dejections. Painless diarrhœa. Lienteria. Very offensive black or yellowish-brown stools. Prostration after each evacuation.

Cocculus. Diarrhœa, with a sensation in the abdomen as of sharp stones rubbing together. Vomiting of bilious matter. Numb sensation in lower limbs, as if paralyzed.

Colocynth. Diarrhœa, with colic drawing one double, and which is very distressing, causing restlessness, writhing and twisting about; pain is relieved somewhat by bending nearly double, and by making hard pressure upon the abdomen. The abdomen and thighs must often be approximated as much as possible during the stool. Aggravation after eating or drinking.

Conium. Heat and burning in the rectum during the stool, and tremulous weakness afterward. Frequent stitches in the anus between

the stools. Painful diarrhœa. The urine intermits during its flow. Vertigo, particularly on turning in bed.

Crocus. Long, dull stitches near the anus from time to time, continuous, and painfully affecting the whole nervous system. The stool contains dark stringy blood.

Cuprum met. Violent diarrhœa, with cramps in the stomach and chest, the cramps extending upward. Much flatus escapes with the stool.

Digitalis. Violent diarrhœa, the stools being ash-colored or very light. Very slow pulse. Accompanying the diarrhœa is violent beating of the heart—not rapid, but too violent. Nausea. Despondency. Vomiting of food. A very depressing sensation of sinking at the stomach.

Drosera. Loose stool almost continually, but rather worse after midnight. Bloody, mucous or offensive stools.

Dulcamara. Stools yellowish, greenish, whitish, mucous or bloody; often attended with prostration or with colicky pains around the umbilicus. Worse after every cold change of the weather.

Elater. *Dull olive-green discharges.*

Euphorbium. Stools like glue prepared for use, painful and flatulent.

Ferrum. Frequent diarrhœic stools, corroding the anus, the face being fiery red. Lienteria. Painless diarrhœa. Vomiting of food soon after eating. Debility and emaciation.

Gelseminum. Diarrhœa occasioned by fright. Disposition to go to stool whenever anything startles her.

Graphites. Diarrhœa, with varices, and a smarting, sore feeling after the stool when wiping. Stool brown, very fetid, often undigested. In the morning taste in the mouth as of spoiled eggs. Abdomen distended, often with a sensation of fullness and hardness. Much flatulency. Much white mucus with the stool.

Helleborus. In cases of diarrhœa in which the urine is found to be scanty and to contain a deposit like coffee-grounds. Stools of white mucus, often tenacious or jelly-like.

Hepar. Diarrhœa, with tenesmus, and an itching rash in the bends of the elbows. Stools of a lightish color, often undigested and of a sour smell. Sour regurgitations of food. Empty sinking feeling in the stomach, relieved by eating. The diarrhœa is worse during the day, after eating, or after drinking cold water.

Hyoscyamus. Diarrhœa, with involuntary jerks of the muscles immediately before, during or immediately after the stool. Involuntary stools. Yellow, watery, painless diarrhœa.

Ignatia. Empty, weak feeling at the pit of the stomach, with disposition to take a long breath frequently, a sort of sighing inspiration.

Ipecac. Diarrhœa, with one continual sense of nausea—not a moment's respite. Fermented stools, looking like yeast. Sometimes the diarrhœa is accompanied with vomiting of mucus or of grass-green substance. Stools frequent, of greenish mucus.

Iris versicolor. Gastric disturbance and headache. Severe burning at the anus during and after liquid stools. Burning extending from the mouth to the stomach. Diarrhœa worse at night. Emissions of very fetid flatulence, accompanied with slight discharge of liquid fecal matter. Very soft, yellow stools, with rumbling in bowels.

Jodium. Diarrhœa of watery, foaming, whitish mucus, with pinching around the navel and pressing pain in the vertex.

Kali c. Diarrhœa, with sharp shooting and stitching pains all over the abdomen. Stools of a light gray-color. Persistent stitching pain in the region of the liver. Suitable to cachectic persons with sacculated swellings over the eyes. Diarrhœa 3 or 4 o'clock A. M.

Lachesis. Diarrhœa always worse after sleeping, and with frothy urine. Diarrhœa in the evening, preceded by pain *in ano.*

Laurocerasus. Diarrhœa, with peculiar suffocating spells about the heart. She is often obliged to lie down on account of this peculiar sense of suffocation. Green, liquid stools. When drinking the fluid rolls down the œsophagus with a peculiar rumbling noise.

Ledum. Diarrhœa, with a sensation of great coldness; she has great want of vital warmth, and can hardly keep warm. Between the anus and coccyx a red humid spot, smarting, sore and itching.

Leptandria. Black, fluid stools; great urging, with difficulty of retaining the stool. Cutting about the umbilicus after stool. Stools like tar in color and consistency, very fetid, and worse in the afternoon and evening.

Lycopodium. Diarrhœa, with a constant sensation as of fermentation in the abdomen like yeast working. Sensation of fullness up to the throat after eating even a small quantity. Rumbling of flatus resembling a loud croaking.

Magnes. c. A green, watery diarrhœa occurs regularly every three weeks. The stools appear sometimes like the green scum covering a frog-pond. Sometimes white masses, like pieces of tallow, are found floating in the green stools. Sharp pain in the abdomen before stool.

Mercurius. Morning diarrhœa, composed mostly of slime and fecal matter, with tenesmus before and during the stool. Diarrhœa preceded by a faint sickish pain in the abdomen, entirely relieved by

stool. The stools are often mixed with slime and blood, and are attended with tenesmus. Yellow stools of the color of sulphur. Salivation, sore, ulcerated gums, loose and sore teeth, aching of the jaw-bones, etc. Frequent urging to stool, a small quantity only being passed at a time, often of green or bloody mucus. Mouth and tongue moist, and plenty of saliva, yet great thirst for cold water. Disposition to remain at stool, as if she "could not get done."

Mezereum. Diarrhœa, with prolapse of the rectum; the anus becomes constricted about the prolapsed rectum, which is very painful to the touch.

Muriatic acid. Diarrhœa, with intolerable itching of the anus, which is sometimes so sore that it can scarcely be touched. Dark purple-colored varices, excessively painful to the touch. Very weak and languid. Great tenderness of the anus after stool—so great that the slightest touch or pressure is very painful.

Natr. mur. Diarrhœa, like water. Disgust for bread. Severe headache on waking in the morning. Very vivid dreams; they seem like a living reality.

Nux mosch. Chronic diarrhœa during pregnancy, with unusual sluggish flow of ideas, so much so that it takes her a long time to answer any simple question. Diarrhœa, with fainting.

Nux vom. The stools are very frequent, but small in quantity, with sore pain in the anus. She often feels as if something yet remained to pass, although a fair quantity may have been evacuated. Stools usually dark. Alternation of constipation and diarrhœa. Irritable, morose and sullen; apt to be quarrelsome if disturbed. Sleeplessness, particularly toward morning. Want of appetite.

Opium. Black, watery diarrhœa, sometimes frothy. Diarrhœa in consequence of a fright. Drowsiness, but refreshing sleep cannot be obtained.

Petroleum. Diarrhœa only in the day-time.

Phosph. Watery diarrhœa, pouring away as from a hydrant, with great sense of weakness in the abdomen, and general debility. Stools of green mucus or of whitish fluid; little grains like boiled kernels of rice are seen with the stools. Sharp shooting pains in the abdomen.

Phosph. acid. White, gray diarrhœa; copious, yellow, watery diarrhœa, with rumbling in the abdomen. Diarrhœa painless, but not exhausting. Mental state characterized by decided indifference to external influences or surroundings.

Podophyllum. Morning diarrhœa, or diarrhœa occurring in the

latter part of the night; profuse, frequent, gushing, and painless or not very painful.

Pulsatilla. Watery diarrhœa, only or usually at night—sometimes unconsciously evacuated. She has no thirst; a bad taste in the mouth, nothing tastes good. Blue eyes, tearful disposition. Stools very changeable in appearance, so that no two are alike.

Rheum. Sour diarrhœa, with cutting and colicky pains about the navel. The emanations from the body are all sour-smelling. Repugnance to food as soon as a small quantity has been eaten.

Rhus. Diarrhœa, with drawing and tearing down the legs with every evacuation. Stools reddish, bloody. Restlessness, frequent change of position, with temporary relief.

Sabina. Diarrhœa, with pain extending from the back to the pubes.

Secale c. Painful diarrhœa, with great prostration. Putrid, fetid, and colliquative diarrhœa. The patient does not wish to be covered up warm or to be near the heat, but prefers to be in the air or wishes to be fanned. Involuntary diarrhœa.

Sepia. Sense of weight in the anus, and an empty, sore feeling at the pit of the stomach; much burning at the anus and rectum. The diarrhœa soon becomes exhausting. Jerking pains from the anus upward through the rectum.

Stramonium. Diarrhœa, the stools having a cadaverous smell; great thirst; food tastes like straw. The mental symptoms are worse in darkness and solitude. Great loquacity.

Sulphur. Diarrhœa in the morning, driving her out of bed; has to hurry, and barely escapes soiling her clothing. Very hungry about eleven o'clock in the morning; she cannot wait for her dinner, she is so faint and hungry. Very sleepy during the day-time; awakens often during the night; gets wide awake, as though she had not slept at all.

Sulphuric acid. Diarrhœa, with great debility; sensation of general trembling without any actual trembling. Cannot do anything deliberately, hurries as if impelled to do everything hastily.

Tabacum. Diarrhœa, the stools consisting of yellowish or greenish slime; sudden attacks of extreme faintness, often with cold perspiration. Beclouded condition of the mind, she cannot read or study satisfactorily. Feeling of oppression around the cardiac region.

Tartar em. Colliquative diarrhœa, with meteorism. Nausea, with faintness; warm perspiration on the forehead and head from efforts to vomit and vomiting.

Veratrum alb. Very exhausting diarrhœa, she feels very weak after

every movement of the bowels, with cold sweat on the forehead, and sometimes cold general perspiration.

Table of Remedies for Intestinal Affections.

Incarcerated Flatulency.

1. Carbo veg., Cham., Cocc., Graph., Ignat., Kali c., Lyc., Nitr. ac., Nux v., Plumb., Puls., Staph., Tart. em. 2. Ant. cr., Arn., Asar., Canth., Chin., Coloc., Con., Natr. c., Natr. m., Nux m., Phos., Phos. ac., Plat., Rheum., Squill., Veratr. a.

Borborygmus.

1. Caust., Chin., Hell., Lyc., Nux v., Phos., Phos. ac., Puls., Sulph. 2. Aloes, Agar., Arn., Bry., Canth., Carb. veg., Cham., Ignat., Natr. m., Plumb., Sassap., Squill., Sep., Spig., Staph., Tart. em., Veratr. a.

Flatulent Colic.

1. Carb. veg., Chin., Lyc., Nux v., Puls., Rhod., Staph., Veratr. a. 2. Anac., Arn., Asaf., Aur., Cham., Con., Graph., Hyos., Ignat., Nux m., Phos., Plumb., Rheum., Squill., Tart. em.

Constipation (*Simple*).

1. Bry., Calc. c., Cocc., Lyc., Nux v., Op., Phytol., Plumb., Sil., Graph., Sulph. 2. Alum., Bell., Canth., Carb. veg., Con., Creos., Dulc., Graph., Kali c., Laur., Meny., Merc. sol., Nitr. ac., Phos., Plat., Sabad., Sep., Stann., Sulph., Sulph. ac., Veratr. a., Verbas.

——— *from Inactivity of the Bowels.*—1. Alum., Hep., Kali c., Natr. m., Nux v. 2. Anac., Arn., Camph., Carb. veg., Chin., Cocc., Staph., Ignat., Natr. c., Nux m., Op., Phytol., Petr., Puls., Ruta, Staph., Sulph., Thuj., Veratr. a., Zinc.

——— *from Induration of the Stools.*—1. Bry., Magn. m., Op., Plumb., Verb. 2. Amm. c., Aur., Carb. an., Caust., Chel., Graph., Kali c., Magn. c., Merc. sol., Nux v., Petrol., Ruta, Sep., Sil., Sulph., Sulph. ac., Thuj.

Diarrhœa (*Simple*).

1. Ant. cr., Cham., Chin., Merc. sol., Phos., Phos. ac., Puls., Rhus tox., Sulph., Veratr. a. 2. Acon., Amm. mur., Ars., Asaf., Bor., Bry., Calad., Calc. c., Carb. v., Dig., Hyos., Lach., Natr. m., Nitr. ac., Petr., Rheum, Sep., Sil.

——— *Painful.*—1. Rheum, Rhus tox. 2. Ars., Bry., Caps., Cham., Dulc., Merc. sol., Nux v., Petrol., Puls., Sec. corn., Sulph., Veratr. a.

DIARRHŒA, *Painless.*—1. Chin., Ferr., Hyos., Lyc., Phos., Phos. ac., Podoph., Stram. 2. Ars., Bell., Cham., Chel., Op., Plat., Sulph.

STOOLS.

——— *Knotty, like Sheep's Dung.*—1. Magn. m., Merc. sol., Op., Plumb., Sulph., Verb. 2. Amm. c., Carb. an., Caust., Chel., Graph., Nux v., Sep., Sulph. ac., Thuj.

——— *Acrid.*—1. Ars., Chin., Ignat., Merc. sol., Puls., Sulph. 2. Ant. cr., Cham., Dulc., Ferr., Graph., Kali c., Lach., Nux v., Phos., Staph., Veratr. a.

——— *Bilious.*—1. Cham., Puls. 2. Ars., Dulc., Ipec., Leptand., Merc. sol., Podoph., Veratr. a.

——— *Black-colored.*—1. Ars., Bry., Chin., Leptand., Sulph. ac.

——— *Bloody.*—1. Canth., Merc. sol., Ipec., Nux v., Puls., Sep., Sulph. 2. Apis., Arn., Ars., Asar., Bry., Calc. c., Caps., Carb. veg., Chin., Dros., Ferr., Led., Lyc., Merc. sol., Merc. corr., Nitr. ac., Phos., Rhus tox., Sabin., Sassap., Sil.

——— *Frothy.*—1. Chin., Coloc., Magn. m., Merc. sol., Rhus tox.

——— *Green.*—1. Cham., Phos., Puls., Rheum, Sulph. 2. Arg. n., Dulc., Elat., Merc. sol., Phos. ac., Stann., Veratr. a.

——— *Whitish.*—1. Dig. 2. Calc. c., Lach., Spong., Sulph.

——— *Involuntary.*—1. Phos., Phos. ac., Veratr. a. 2. Ars., Bell., Mur. ac., Natr. m., Sulph.

——— *Mucous.*—1. Asar., Bor., Caps., Cham., Nux v., Phos., Puls., Sulph. 2. Arn., Ars., Carb. veg., Graph., Hell., Ipec., Kali c., Magn. m., Merc. sol., Petrol., Rheum., Rhus tox., Ruta, Sep., Spig.

——— *Purulent.*—1. Merc. sol., Sil. 2. Arn., Canth., Lyc., Puls., Sulph.

——— *of a Sour Smell.*—1. Calc. c., Cham., Graph., Hep., Lactic ac., Merc. sol., Natr. c., Rheum, Sulph.

——— *Stinking, or of a Putrid Smell.*—1. Ars., Asaf., Carb. veg., Puls., Sil., Sulph. 2. Arn., Aur., Bry., Calc. c., Cham., Chin., Dulc., Graph., Nitr. ac., Nux v., Oleand., Plumb., Squill., Staph., Stram.

——— *too Large.*—1. Bry., Kali c. 2. Graph., Ignat., Veratr. a.

——— *too Small.*—1. Caust., Graph., Merc. sol., Phos., Sep., Sulph.

——— *Undigested.*—1. Ars., Chin., Ferr., Oleand. 2. Acetic ac., Ant. cr., Bry., Meny., Phos., Phos. ac., Sulph ac.

——— *Insufficient.*—1. Arn., Cham., Magn. m., Natr. c., Nux v., Sulph. 2. Alum., Colch., Hyos., Sabad., Sep., Staph.

——— *Tenacious.*—1. Merc. sol., Plat. 2. Asar., Caust., Plumb., Sassap.

STOOLS, *with Ascarides.*—1. Calc. c., Chin., Cina, Ferr., Ignat., Sulph. 2. Asar., Merc. sol., Nux v., Phos., Plat., Squill., Sil., Spig., Spong.

——— *with Lumbrici.*—1. Cina, Sabad., Sil., Spig., Sulph. 2. Acon., Anac., Calc. c., Cham., Cic., Graph., Natr. m., Ruta, Sec. corn.

——— *with Tænia.*—1. Calc. c., Graph., Plat., Puls., Sabad., Sil., Sulph. 2. Carb. veg., Chin., Kali c., Nux v., Petr., Phos., Sep.

FISSURE OF THE ANUS.

This very painful and distressing disorder occurs more frequently in women than in men, and is often an accompaniment of pregnancy. In milder cases the fissure is limited to the mucous membrane, but in the severer forms it involves also the sub-mucous tissues. The fissure is usually about a quarter of an inch in breadth and from a quarter of an inch to an inch in length, situated immediately within the anus, with its inferior extremity corresponding to the margin of the sphincter ani. In recent cases the edges of the fissure are soft and pliant, but in cases of long standing they are indurated and prominent.

Fissure of the anus should be distinguished from hæmorrhoids, though they often coexist in the same individual. Hæmorrhoids are almost always attended with constipation, which acts as a provoking cause, but fissure of the anus is as often accompanied by looseness of the bowels as otherwise. The fissures are always very painful during and after an evacuation—sometimes even before. They are accompanied by a constriction of the sphincter ani in many cases, which renders the evacuation of the bowel still more difficult and painful, and in some instances almost impossible. The pain is increased by forced expirations, as in coughing, sneezing, and by urinating; every effort to discharge flatus or feces is attended with excruciating torment, which continues for one or more hours, attended with violent spasmodic action of the sphincter ani: so violent is the agony that most persons thus afflicted put off the calls of nature and retain the recumbent position.

This diseased condition results from some constitutional dyscrasia. Its cure should not be attempted by surgical means. Its homœopathic treatment results in a cure; while its surgical treatment is merely temporizing, and may be followed by disastrous consequences; just as the cure of anal fistula by operative procedure is sometimes followed by pulmonary disease. What have been termed *rhagades* or cracks of the anus appear to be a milder form of fissure of the anus.

Æsculus hip. This remedy has been successfully employed in some cases. The bowels are costive, although they are moved daily. Face pale and haggard, as though from great suffering. Lameness of the back and hip, so that walking is not only painful, but wellnigh impossible. Itching, stinging, burning and feeling of fullness at the anus. Hæmorrhoids.

Arsenicum. On going to stool painful constriction immediately above the anus, which extends towards the sacrum. After stool the anus burns like fire, causing intense agony, restlessness and exhaustion. Heat and pain in the rectum, with a kind of tenesmus, as in dysentery, with continual pressure.

Causticum. There is great difficulty in walking, for the pain in the anus and rectum becomes intolerable. Much pain in the perineum. Large, painful pustule near the anus, discharging pus, blood and serum. Bowels are usually very costive.

Gratiola. After stool, painful pressure in the abdomen when walking, relieved by sitting down. Sticking pain about the umbilicus. Tearing in the rectum or prickling in the anus. Painful cramps in the os coccygis.

Ignatia. Painless contraction of the anus for many days. Soon after stool, pain in the anus, shooting far up into the rectum, or constriction and smarting like touching a wound. Very easy prolapsus of the rectum. Pain in the anus returning at the same hour each day; worse walking and still worse standing, but relieved on sitting down.

Lachesis. On going to stool the anus feels as if closed. Internal, cramp-like pain in the anus before and after passage. Prolapsus of the rectum, which is thick and tumefied, and when it returns it contracts spasmodically. Obstinate constipation. Mind depressed.

Mezereum. Painful constriction, tearing and drawing at the anus, in the perineum, and from thence through the urethra. After stool the anus contracts upon the prolapsed rectum, which remains strangulated, causing, when touched, a pain like a wound.

Natrum mur. On going to stool the rectum seems contracted, then is voided, after great effort, only a small quantity of hard feces, with tearing, bleeding and smarting at the anus, and finally some soft matter. Ripping-up sensation in the anus after stool. Much sticking and sharp pains in the anus and rectum between the stools, and at night in bed.

Nitric acid. This remedy is used more frequently than any other. The symptoms which indicate it are: On going to stool, pain in the

rectum as if something were torn away, or twitchings in the rectum and spasmodic contraction of the anus many hours afterward. Smarting more in the rectum than in the anus immediately after stool, and continuing two or three hours. Sometimes prolapsus of the rectum or discharge of much blood accompanies some of the above symptoms. Fear of stool, as it is so painful.

Nux vom. Painful stools, either much too large and difficult or too small and insufficient, with a sensation as if something remained in the rectum still to be discharged, but with an entire inability to void it.

Phosphorus. The pains for phosphorus are mostly lancinating, in the anus and up the rectum—sometimes attended with smarting. After stool, strong desire to urinate. Acute smarting pains after a soft stool, extending into the abdomen, with empty feeling.

Plumbum. A sensation as if a rough body were traversing the rectum during stool. Sensation as if the anus were drawn strongly upward. Much trouble in not being able to void the urine; the will to do so cannot effect it, as if from paralysis. Drawing pain from abdomen to back.

Sepia. Constrictive pain in the rectum, extending to the perineum and into the vagina. Pain in the rectum on going to stool, and which persists for a long time after sitting down, and finally an imperfect stool is voided with sore, smarting pain. There is a sense of weight in the anus, like a constant drag.

Silicia. Painful effort to stool for some time, and finally the stool recedes into the rectum; such efforts are repeated several times before a passage is effected, with sore, sticking, shooting pains.

Sulphur. Tenesmus for an hour after having been to stool. On attempting to sit down for stool the pain in the anus prevents her from doing so. After stool a pulsating pain continues in the rectum the whole day. Lancinating pains from the anus upward after stool, so violent as to cause syncope. At night there is much difficulty in lying in bed from lancinations and uneasiness in the rectum, tenesmus, etc. Itching about the anus with heat.

Thuya oc. During an attempt at stool the pain in the anus and rectum is so great that she has to desist. Violent contraction in the anus and rectum, following by tearing as if in the bowels. Burning pricking in the anus between stools. Violent burning in the anus while walking. Anus very sensitive to touch.

The remedies laid down under the head of hæmorrhoids, varicose veins, constipation and diarrhœa, with their indications, should likewise be consulted. Head-symptoms often help to decide.

Disordered Secretions and Excretions.

Ptyalism.

The profuse flow of saliva which sometimes occurs in the earlier months of pregnancy usually lasts but two or three months, although cases are recorded in which it continued during the whole period of gestation.

Where this discharge is excessive it must necessarily prove very exhausting. Its source must be found in some peculiar constitutional dyscrasia, which ultimates itself in this direction under the stimulus of pregnancy. Hence the homœopathic remedies are found to relieve the difficulty, and at the same time benefit the whole system of the patient. This is just the reverse of the experience derived from the allopathic use of astringent gargles. Two cases are referred to by Cazeaux, in one of which the sudden suppression of the ptyalism was followed by apoplexy, in the other symptoms of suffocation appeared. This eminent authority is unwilling to admit that these results were the actual consequences of such suppression, but the intelligent homœopathist would expect nothing less.

The salivation, if unattended by other symptoms, may require *mercurius*, but in most cases there are other gastric disturbances, all of which must be duly considered. For remedies, therefore, consult those mentioned in the preceding sections.

Spitting of blood sometimes exists in connection with pregnancy, but in ordinary cases need give rise to no alarm. It is usually due to the general congestion consequent on the condition of pregnancy, and consists of a mere exudation from the mucous membrane of the air-passages or fauces. Such remedies as Acon., Bell., Creos., Hamam., Ipec., Lachesis. Elaps., Mur. ac., may be indicated.

Urinary Difficulties and Derangements.

As gestation advances, the increasing size of the uterus causes it to press more and more upon the bladder. Thus the capacity of the latter organ is diminished by the lateral pressure, which necessitates a much more frequent discharge of urine. The same frequent micturition results also from the direct irritation of the neck of the bladder. Thus there may be hourly calls to pass water, which are sometimes but partially relieved by the flow of a few drops only at a time, or the irritation may amount to dysury, an actual strangury, or even to a complete retention of urine.

These difficulties may arise in the earlier stages of pregnancy, especially where the unusual size of the pelvic cavity allows the fœtus to

remain too long within it, or they may appear in consequence of some displacements, such as prolapsus, anteversion or retroversion of the uterus. Where some displacement appears to be the cause—which may sometimes be known by the suddenness of the onset of the difficulty, especially if it follows some accident or over-exertion—the case should receive the treatment recommended in a succeeding chapter for uterine displacements. If it prove to be retroversion, the use of the elevator may be necessary to replace the organ. The other varieties of displacement scarcely ever require manual assistance, since perfect rest in the horizontal position and the exhibition of the homœopathically indicated remedy will, in most cases, readily relieve the uterine and the urinary difficulty at the same time. The catheter may sometimes be required, in order at once to relieve the patient of the great distress under which she may be laboring from enormous accumulation of urine.

Incontinence of urine sometimes appears, especially in the later stages of pregnancy. When it appears in the early months it may result in part from the pressure of the womb upon the neck of the bladder before it rises out of the pelvic cavity, causing a loss of tone of the part. This difficulty will often yield to the indicated remedy, but if not, where it comes on in the early stage of pregnancy, it may be expected to disappear upon the emergence of the uterus from the cavity of the pelvis.

For the medical treatment of these difficulties the following remedies should be carefully studied according to the indications here given, and compared in the Materia Medica with reference to any concomitant and constitutional symptoms which may also be present in the case. *It is to be noted, likewise, that these remedies should be consulted, and may be required for urinary difficulties occurring not only during pregnancy, but before, during, and after parturition as well.*

Aconite. Retention of urine, with stitches in the region of the kidneys. Difficult and scanty emission, with pinching around the umbilicus. Bright-red, hot urine. Enuresis, accompanied with profuse perspiration. Desire to urinate, accompanied with great distress, fear and anxiety. Worse from exposure to cold dry air.

Apis. Burning smarting pain before and after urination. Stitching pain in the urethra during micturition; must urinate often.

Arnica. After passing a little urine she wishes to pass more, but is unable to do so at that time. Brown urine with brick-red sediment.

Sense of fullness of the bladder, with inability to urinate. A bruised and sore feeling exists if hæmorrhoids complicate the case.

Arsenicum. Considerable burning is experienced at the commencement of the flow; restlessness, cold sweat. Sometimes the urine will not flow, and, although the bladder be full, there is no desire to urinate. Discharge of mucus and blood with the urine.

Belladonna. Great difficulty in passing a small quantity of urine; it flows in a very feeble stream or in drops. The urine is often of a golden-yellow color. Constant involuntary dribbling of urine. Enuresis with profuse perspiration. The region over the bladder is very sensitive to pressure, the slighest jar causing pain. Blood-red urine. Urine, at first clear, becomes turbid on standing. Retention of urine.

Berb. vul. Much pain in region of the kidneys, extending upward or downward; copious slimy sediment, urine looking badly. Great debility.

Camphor. Retention of urine, with constant pressure on the bladder and desire to urinate. Burning in the urethra during emission of urine. This remedy will prove very useful if the urinary difficulty is the result of the injudicious use of cantharides, balsam copaiba, turpentine, etc. Red urine, small thin stream.

Cannabis. Burning during and after emission, particularly after cantharis has failed to relieve. Urethra feels very sore.

Cantharis. Very frequent urination, even sixty times an hour, with violent cutting pain, so severe as to make her scream. The urine is often bloody. Strangury, with frequent urging. The urine does not flow in a stream, but dribbles away or passes drop by drop, with cutting and burning. Cutting and burning pains in and through the bladder. Tenesmus of the bladder, which is agonizing in severity.

Capsicum. Burning smarting after micturition, as from the application of cayenne pepper; often unsuccessful urging.

Causticum. Frequent desire to urinate, a small portion passing involuntarily. Involuntary passing of urine at night. Also where there are signs of paralysis of the bladder from prolonged retention of urine and over-distension.

Coccus cacti. The urine does not form the usual jet, but runs down over the surrounding parts. Does not cut or burn.

Colocynthis. Tough mucous sediment in the urine which can be drawn out into strings. Urine like brown beer.

Conium. The urine flows and stops, and flows and stops again, and so on. There are cutting pains during the flow, and burning or smarting afterward. Strangury, with vertigo, particularly on lying down. On turning over in bed great vertigo.

Dulcamara. The urine on standing and becoming cooled, has an oily consistence, with a jelly-like sediment, intermixed with specks of blood. The urinary difficulty is increased at every cool change of the weather.

Graphites. Urinary troubles, with burning in the urethra between the acts of micturition. Very frequent nightly micturition. Pain in the sacrum when urinating. Cutting and downward pressure in both kidneys before urinating. Much headache.

Helleborus nig. In bad cases where the irritation at the neck of the bladder threatens to run into inflammation. Almost constant desire to urinate, very little being passed, of a dark color and depositing a coffee-ground-like sediment; the bladder at length becomes paralyzed and greatly distended. On straining to pass a small quantity of urine some drops of blood come away. Nausea and distended abdomen sometimes attend. Often dropsical symptoms.

Hepar. Intense soreness in the urethra during the emission of urine. Very slow but painless emission of urine, apparently from feeble contraction of the bladder. Greasy and opalescent pellicle on the urine. Blood-red urine. Painful micturition.

Lachesis. Stitches in the kidneys, extending downward and apparently through the ureters. Frequent emission of a foamy urine, sometimes dark and scanty, sometimes profuse. Dull pain in the bladder, occasionally with a sensation as of a ball rolling about in there. Great mental depression, particularly in morning.

Laurocerasus. Acrid urine, corroding the labia. Urinary difficulties, with palpitation of the heart and gasping for breath, coming on by spells. Very slow flow of urine; sometimes the bladder seems to be completely paralyzed, so that not a drop can be voided. Thick, reddish or mahogany-colored sediment, with white jelly-like flocks floating through it. Pain in the region of the stomach when urinating.

Lycopodium. Much pain in the back previous to the emission of urine, so that she even screams out. Itching in the urethra during and after micturition. Violent jerking, sharp-shooting, tearing or cutting pains in the urethra not long after urinating. Red crystals are deposited in the urine, the urine itself being clear. Foaming urine. Stitches in the bladder, neck of the bladder and anus at the same time. The flow is delayed, with pain in the back, which, however, is relieved as soon as the flow begins. Urine turbid, milky, depositing a thick sediment of a nauseating odor.

Merc. sol. Constant desire to urinate, the desire not lessened by urinating. Pieces of filaments, flocks and hard pieces of mucus resembling pieces of flesh are passed in the urine. Burning and scald-

ing sensation of the urine as from raw surfaces. Sour-smelling urine.

Natr. mur. Stitches in the urethra during the intervals of urinating, with violent tenesmus vesica and passing large quantities of mucus. Urine intermits.

Nitric acid. Painless retention of urine. Desire to urinate, with cutting in the abdomen. Urine with an intolerable odor. Very thin stream, as if from contraction of the urethra. Stitching pain in the abdomen when urinating. Burning in the urethra, and desire to urinate with the hope of relieving the burning, which, however, is increased by the act. Brown urine, leaving brown spots.

Nux vomica. She wishes to urinate very frequently, only a little at a time being passed, with a sore burning pain, usually accompanied with constipation. Stangury. Bloody urine. Spasmodic retention of urine, only a few drops passing at a time, with scalding sensation; reddish brick-dust sediment. Frequent desire for stool.

Phosphoric acid. Frequent calls to urinate at night, a large quantity of colorless urine being passed each time. Creeping in the urethra between the acts of micturition. White, jelly-like flocculi in the urine. Whitish urine, like milk.

Pulsatilla. Retention of urine, with redness, heat and soreness of the vesical region externally. Desire to urinate, with drawing in the abdomen. Involuntary emission of urine when sitting or walking. After urinating, spasmodic pain in the neck of the bladder, extending to the pelvis and thighs. Frequent and almost ineffectual urging to urinate, with cutting pains. Great urgency of the call; it seems impossible to delay. The urinary difficulties are increased by taking cold, and at such times the urine may deposit a tough, slimy sediment.

Rhus tox. Involuntary urination, particularly when at rest. Dysuria, with discharge of drops of bloody urine. Snow-white sediment in the urine. Retention of urine, with great restlessness and uneasiness, no position being comfortable except for a few moments. Belching of wind while urinating. Urine scanty.

Ruta. At every step after micturition she feels as if the bladder were full and moved up and down. She feels as if she could not retain the urine, so urgent is the desire, although she can pass but a very small quantity. Involuntary emission of urine, whether at rest or in motion. Green-colored urine.

Sepia. The urine deposits a sandy, sometimes pinkish sediment, which becomes firmly attached to the vessel and is with difficulty removed. Frequent urging at night, the urine voided often having a

putrid odor in the morning. Sensation as though urine were passing through the urethra, which is not a fact. Burning and smarting in the urethra. Violent itching about the vulva. Blood-red urine.

Stramonium. The urine dribbles away very slowly and feebly. Retention of urine, or it flows feebly or in drops, though painlessly, as though there existed a spasmodic stricture of the urethra.

Sulphur. Very frequent desire to urinate, almost constant urging; the pain caused by the act of micturition scarcely ceases until the patient is again obliged to urinate and the pain returns. Fetid urine, with a greasy pellicle on its surface. The urine is emitted with great force. The urine occasions an acrid or corrosive sensation when voided. Cutting in abdomen before urinating.

Terebin. Urine bloody, scanty, dark bloody sediment, *sweet smelling*, heavily loaded with albumen. Patient weak; pale skin. Epistaxis. Vomiting of food.

Albuminuria.

Albuminuria, or the presence of albumen in the urine, constitutes one of the most interesting of the pathological changes induced by pregnancy. Healthy urine contains no albumen, and the urine of healthy women in the pregnant state is equally destitute of this element. This change in the urine is not always constant or equal in amount: in proportion as women are constitutionally healthy, they will be found free from albuminuria in pregnancy. And in proportion as their systems are affected by some dyscrasia, the derangement of the vital fluid will be greater; for it must be borne in mind that albumen must be diminished in the blood in the same ratio that it is increased in the urine. Cases of albuminuria might be cited illustrating all the different degrees, from the slightest and scarcely perceptible trace of albumen which appears in the urine for a brief period only of pregnancy, up to those forms of anasarca which involve the entire system, and in which the urinary secretion, almost totally suppressed, is so loaded with albumen as to become entirely solid on boiling.*

Albuminuria may be either temporary or permanent. In the former case it may arise from a great variety of morbid influences and in connection with various forms of disease. And it may be occasioned by pregnancy, which, although not itself a morbid condition, seems to develop in some form or other any latent dyscrasia which may have been lurking in the system, just as scarlatina de-

* *Am. Hom. Review*, vol. v., p. 492.

velops any scrofulous taint which may belong to the constitution of children whom it attacks. And, in fact, scarlatina does actually develop an albuminuria in post-scarlatinal dropsy, which must be deemed a purely psoric affection, since it appears only in a particular variety of constitution, although the presence of the albumen is partially accounted for by the temporary failure of the functional action of the skin during desquamation.

Permanent albuminuria is principally found in connection with chronic disease of the kidneys, whether in the pregnant or in the unimpregnated condition. In that form of hypertrophied degeneration in which the kidneys become white and enlarged, the urine is greatly diminished in quantity and contains a large amount of albumen. This nephritic affection never proves fatal without the previous occurrence of dropsy, which is one of its most usual and prominent symptoms. Such cases belong to strongly-marked psoric diatheses, of which instances have been observed in three successive generations in which the albuminuria, morbid affection of the kidney, almost total suppression of the secretion of the urine and general dropsy were the unavoidable attendants of every pregnancy. This intimate connection of albuminuria with psora is well illustrated in the report, by an allopathic physician, of the treatment with arsenic of this disease complicated with psoriasis and lichen.* The arsenic chanced to be the true homœopathic similimum to the entire case, and, although given in allopathic doses, both albuminuria and skin disease were thoroughly cured.

The prompt disappearance of the albuminuria at the termination of pregnancy in many cases, gives rise to the belief that some local influence, such as pressure of the gravid uterus upon the emulgent veins, may be an important cause of this condition. But, as already stated in the case of varices and hæmorrhoids, such results can occur from local pressure only in persons constitutionally predisposed to this affection. Thus, in the milder cases particularly, we see all the abnormal symptoms removed by the recuperative energy of nature alone on the discontinuance of the provoking cause. Thus, too, even during the continuance of pregnancy, the homœopathically indicated remedies are so far capable of antidoting the constitutional dyscrasia that the albuminuria in many instances may be made to disappear entirely in spite of the persistence of the provoking cause. And these remedies may even then have been selected under the prevailing influence of other (sensational) symptoms—remedies perhaps in which we have

* *Braithwaite's Retrospect*, July, 1862, p. 95.

hitherto discovered neither pathogenetic nor clinical evidences of their adaptation to albuminuria.

The important relation which albuminuria bears to puerperal insanity and convulsions ought not to be overlooked in this connection. "Albuminuria precedes and attends the first access of puerperal insanity in a large proportion of cases, but not perhaps so frequently nor so constantly as it precedes and attends upon attacks of puerperal convulsions. The coagulability of the urine generally disappears within a short time after an attack of puerperal insanity commences. When the insanity recurs in the form of successive attacks or explosions, each attack is connected with a new attack or advent of albuminuria."

The albuminuria mostly appears in the later months of pregnancy, and its presence, especially if accompanied by anasarcous conditions, will serve to place the physician on his guard against puerperal convulsions. And while on the one side the albuminuria seems to predispose to severe nervous affections, on the other excessive nervous excitement appears to cause albuminuria.

Where from collateral symptoms there is reason to suspect the presence of albumen in the urine of a pregnant woman, the urine should be subjected to the usual qualitative tests, that its presence or absence may be ascertained with certainty, and the presence of albumen having been discovered, its quantity should likewise be made out. At the same time in treating the case the attention of the practitioner should not be diverted from the general symptoms by the presence of the albumen, but, as in all other cases, the subjective symptoms should have equal weight with the objective symptoms, and the remedy chosen should be as nearly in accord with the totality of the case as possible. These cases are amenable to treatment, and it is feared that failures to cure sometimes result from the entire attention, in choosing the remedy, being directed to the albuminuria.

Uræmia, or retention of the urea in the blood, which usually forms a part of the albuminuria, is probably the direct cause of the convulsions and other nervous affections that sometimes result. And it is remarked that these difficulties are more apt to occur in primiparæ than in multiparæ.

This affection has been mentioned as a powerful and frequent cause of abortion, of premature labor and of the death of the fœtus. This, however, is more apparently than really correct; for the presence of albumen in the urine forms but a single one of the symptoms of a general dyscrasia which pervades the entire system, the radical cure

of which forms one of the most gratifying results of homœopathic practice.

The anæmia, œdema, ascites and anasarca which appear in connection with albuminuria will be subsequently considered. The following medicines, together with those mentioned under the head of urinary difficulties and of dropsy, should be considered, as well as the general table of remedies appended to this section, and, above all, the Materia Medica should be carefully studied.

Allium cepa., Amm. carb., Apis., Ars., Aurum mur., Bell., Bry., Cinnab., Cobalt, Colch., Cupr. m., Dig., Dulc., Eupat. purp., Glon., Lachesis, Natr. mur., Ononis sp., Phos., Phos. ac., Squill., Terebinth.

Remedies for Urinary Difficulties and Derangements.

Urine *acrid.*—1. Hepar., Merc. sol. 2. Cann., Caust., Clem., Par., Rhus tox., Thuya. 3. Calc. c., Canth., Graph., Kali c., Natr. m.

——— *smelling like ammonia.*—1. Asaf. 2. Mosch., Nit. ac., Phos.

——— *hot or scalding.*—1. Ars., Canth., Hepar. 2. Acon., Caps., Cham., Colch., Dig., Merc. sol., Phos. ac., Squill.

——— *bloody.*—1. Canth., Puls. 2. Ars., Calc. c., Caps., Con., Ipec., Lyc., Merc. sol., Mezer., Nux v., Phos., Sassap., Sec. corn., Sep., Sulph., Terebinth., Uva ursi, Zinc.

——— *with greasy or variegated pellicle on its surface.*—1. Paris. 2. Calc. c., Hepar., Jod., Lyc., Petrol., Phos., Puls.

——— *dark.*—1. Acon., Bell., Bry., Colch., Merc. sol., Sep., Tart. em., Veratr. a. 2. Ant. cr., Arn., Calc. c., Canth., Carb. veg., Dig., Hell., Hepar., Ipec., Puls., Selen., Staph., Sulph.

——— *flaky.*—1. Canth., Mezer. 2. Cann., Cham., Sassap., Zinc.

——— *frothy.*—1. Lach., Lyc., Seneg., Spong.

——— *greenish.*—1. Camph. 2. Jod., Kali c., Rheum, Ruta, Verat.

——— *milk-colored.*—1. Aur. mur., Cina, Phos. ac.

——— *mucous.*—1. Natr. mur., Puls. 2. Ant. crud., Canth., Coloc., Dulc., Merc. sol., Valer.

——— *pale.*—1. Con., Nitr. ac., Phos. ac. 2. Agar., Alum., Ang., Arn., Bell., Colch., Coloc., Ignat., Puls., Rhus tox., Sassap., Squill., Sec. corn., Stram., Stront.

——— *purulent.*—1. Canth., Clem. 2. Cann., Con., Lyc., Nitric ac., Puls., Sabin., Sep., Sil., Sulph.

——— *stinking.*—1. Dulc. 2. Ars., Carb. veg., Natr. mur., Nitr. ac., Phos. ac., Puls., Sep., Viol. tr.

——— *sweet-smelling.*—Lactuca, Nux mos., Terebin.

——— *with urinous odor in excess.*—1. Benz. ac.

URINE *turbid or cloudy when voided.*—1. Cina, Con., Merc. sol., Sabad. 2. Ambr., Cann., Chin., Dulc., Ignat., Phos., Puls., Rhus tox., Sep. 3. Bell., Canth., Dig., Phos. ac., Plumb.

——— *becomes turbid or cloudy on standing.*—1. Bry., Cham., Phos. ac. 2. Acetic ac., Caust., Merc. sol., Seneg., Valer.

——— *sticky or viscous.*—1. Coloc. 2. Arg., Canth., Creos., Cupr. met., Phos. ac.

SEDIMENT *reddish.*—1. Canth., Natr. mur., Puls., Sep., Valer. 2. Acon., Ambr., Ant. crud., Arn., Chin., Lyc., Nitr. ac.

——— *whitish.*—1. Phos., Rhus tox. 2. Coloc., Con., Hepar., Nitr. ac., Oleand., Petrol., Phos. ac., Sep., Spig., Sulph., Valer.

——— *yellow.*—1. Cham., Phos., Sil., Spong., Sulph. ac., Zinc.

——— *bloody.*—1. Canth., Phos. ac., Puls., Sep. 2. Acon., Dulc., Hell., Lyc., Phos., Sulph., Terebinth., Uva ursi, Zinc.

——— *clay-like.*—1. Anac., Sassap., Sep., Sulph., Zinc.

——— *cloudy.*—1. Bry., Nitr., Phos. ac., Seneg., Thuj.

——— *flaky.*—1. Berberis, Canth., Merc., Mezer., Zinc.

——— *like flour.*—1. Calc. c., Graph., Merc., Natr. mur.

——— *like pus.*—1. Canth., Cham., Lyc., Puls. 2. Calc. c., Con., Kali c., Nitr. ac., Sep., Sil.

——— *mucous.*—1. Dulc., Natr. m., Puls., Valer. 2. Ant. crud., Aur., Berberis, Bry., Caust., Coloc., Con., Merc. sol., Natr. c., Phos. ac., Sassap., Seneg., Sulph., Sulph. ac.

——— *sandy, gravelly.*—1. Ant. crud., Calc. c., Lyc., Phos., Ruta, Sassap., Sil., Zinc. 2. Ambr., Arn., Chin., Meny., Natr. m., Nitr. ac., Nux m., Nux v., Puls., Thuya.

DESIRE TO URINATE *ineffectual.*—1. Acon., Canth., Dig., Sassap. 2. Arn., Camph., Caust., Coloc., Hyos., Kali c., Nux v., Phos., Phos. ac., Plumb., Puls., Stram., Sulph.

DISCHARGE *too copious.*—1. Arg. nit., Mur. ac., Rhus tox., Squill., Verb. 2. Acetic ac., Agnus., Bar. c., Bism., Canth., Guaj., Ignat., Merc. sol., Nitr., Phos. ac., Seneg., Tarax., Viol. tr.

——— *scanty.*—1. Canth., Colch., Dig., Graph., Hell., Op., Ruta, Staph. 2. Acon., Apis., Arn., Arum tri., Bell., Bry., Caust., Chin., Dulc., Hep., Hyos., Kali c., Lach., Laur., Nitr. ac., Nux v., Phos., Plumb., Puls., Sulph., Terebinth., Veratr. a.

——— *too frequent.*—1. Agar., Bar., Canth., Caust., Merc. sol., Nitr. ac., Rhus tox., Squill., Staph. 2. Bry., Creos., Ferrum phos., Ignat., Kali c., Lach., Mur. ac., Natr. c., Phos. ac., Selen., Spig., Thuj.

——— *seldom.*—1. Canth. 2. Acon., Arn., Ars., Aur., Camph., Hepar., Hyos., Laur., Nux v., Op., Plumb., Puls., Ruta, Stram.

DISCHARGE *by drops, dribbling.*—1. Canth., Sulph. 2. Arn. Camph., Clem., Dulc., Petrol., Staph., Stram., Thuya.

——— *involuntary.*—1. Caust., Puls., Rhus tox. 2. Arn., Bell., Calc. c., Carb. v., Chin., Cin., Dulc., Graph., Kreos., Lyc., Merc. sol., Natr. m., Petrol., Ruta, Sep., Sil., Spig., Sulph.

——— *involuntary at night, "wetting the bed."*—1. Ars., Bell., Bry., Caust., Cham., Merc. sol., Op., Puls., Rhus tox., Sep., Sil., Stram., Staph. 2. Acon., Arn., Bar. c., Calc. c., Chin., Cina, Dulc., Hep., Hyos., Ignat., Kali c., Kreos., Lyc., Natr. m., Nux v., Petrol., Phos., Phos. ac., Rheum, Ruta, Spig., Zinc.

——— *interrupted.*—1. Clem., Con. 2. Agar., Caust., Dulc., Phos. ac., Sulph., Thuya, Zinc.

RETENTION.—1. Acon., Arn., Ars., Canth., Hepar., Hyos., Laur., Lyc., Plumb., Puls., Ruta., Stram. 2. Aur., Bell., Caps., Caust., Chin., Cic., Coloc., Con., Cupr. m., Dig., Graph., Nux v., Op., Sec. corn., Sulph., Veratr. a.

COMPLAINTS *before urinating.*—1. Bor., Coloc., Lyc., Nux v., Puls. 2. Arn., Bry., Dig., Phos. ac., Rhus tox., Sulph., Tart. em.

——— *when beginning to urinate.*—1. Canth., Clem., Merc. sol.

——— *while urinating.*—1. Cann., Canth., Hepar., Lyc., Merc. sol., Phos. ac., Puls., Thuj. 2. Acetic ac., Acon., Clem., Colch., Con., Ipec., Nitr. ac., Nux v., Phos., Sassap., Sep., Sulph., Veratr. a.

——— *on cessation of flow.*—Bry., Canth., Sassap., Sulph.

——— *after urinating.*—1. Canth., Coloc., Hepar., Merc. sol., Natr. m., Sassap., Thuj. 2. Anac., Arn., Bell., Calc. c., Cann., Caps., Chin., Con., Dig. Natr. c., Nux v., Par., Puls., Ruta., Staph., Sulph., Zinc.

REMEDIES ACTING ESPECIALLY ON THE BLADDER.—1. Canth., Hyos., Lyc., Nux v., Puls., Ruta. 2. Acon., Ant. crud., Arn., Bell., Berb., Calad., Caps., Dulc., Hell., Merc., Mur. ac., Petrol., Sassap., Squill., Sep., Staph.

REMEDIES ACTING ESPECIALLY ON THE URETHRA.—1. Cann., Canth., Caps., Clem., Merc. sol., Phos., Thuj. 2. Acon., Bry., Calc. c., Caust., Chin., Colch., Con., Mezer., Natr. m., Nitr. ac., Nux v., Phos. ac., Puls., Sabin., Sep., Sulph., Zinc.

DISORDERS OF RESPIRATION.

COUGH AND DYSPNŒA.

These are the principal forms of disorders of the respiratory organs which occur in connection with pregnancy. There may also be oppres-

sion of the chest, palpitation of the heart, and other similar symptoms; but these belong rather to disordered circulation than to disordered respiration. Yet so intimate is the connection between these two vital functions that it would be difficult in any given case to determine whether the disturbance of the respiration affected the circulation, or whether the disturbance of the circulation affected the respiration. For our purpose it is sufficient to remember that both these functions are under the immediate and absolute control of the nervous system of organic life, which, as has already been explained, is most intimately connected with the uterus and sustains all the development of utero-gestation.

From reflex, sympathetic irritation of the pneumogastric, either in connection with gastric disturbances or *in lieu* of them, the cough of pregnancy may arise in the earlier months, or it may be the *direct result* of irritation of the diaphragm from the upward displacement in the later months. In either case the cough is short, frequent, irritating, and it may be perfectly dry or attended with some expectoration. Influenza may also set in as a complication, in which case prompt attention should be rendered and a cure effected at once, since otherwise abortion itself may result.

A certain spasmodic form of cough sometimes makes its appearance, resembling hooping-cough, and arising from an apparently similar irritation of the pulmonary nerves. Such cough as may be connected with a tuberculous condition of the lungs, as in cases of incipient phthisis, is more apt to disappear under the influence of pregnancy. Should the pulmonary difficulties be so far developed that a purely phthisical cough maintains itself during the period of gestation, the state of the patient will require the most serious attention, since the phthisical symptoms usually appear with far greater intensity after delivery. Another most important indication of this condition in pregnancy is to be found in the chills, which have been known to occur every day, and which in the entire absence of cough or expectoration were believed to be due to some miasmatic influence. Such a patient was readily delivered of an apparently healthy and full-sized child, but was herself found upon examination to be in the last stage of consumption, never being able to leave her bed or scarcely to speak. She lived but a few weeks after her confinement.

Dyspnœa in its various forms, panting respiration, shortness of breath, oppression of the chest, is a not unfrequent accompaniment of pregnancy. The symptoms of this class, as well as those connected with cough, are more apt to appear in persons whose chests

are naturally weak, who are constitutionally predisposed to phthisis pulmonalis, or who have a similar predisposition to hydrothorax. A very sad case of a fatal complication of all these difficulties recently came under observation. A young woman, aged about thirty, of scrofulous constitution, rather short in stature, inclined to hydrothorax, who probably had some small accumulation of water about the heart for a considerable time, was married in the fall, and found herself *enceinte* in the winter; she consulted her physician, at a distance, for a severe cough with great shortness of breath. She reported herself very much relieved by the remedies advised, but soon after taking, as was stated, "a cold on her lungs," she died in a few days, suffocated by the copious pulmonary effusion.

Plethora has also been mentioned as one of the causes of dyspnœa in pregnancy, for which of course venesection is the allopathic remedy. But a more sound physiological view, which denies that there is ever too much pure blood, leads also in this instance to a more accurate pathology, which attributes the dyspnœa to irregularity or obstruction of the circulation—to congestion perhaps in the more aggravated cases—but never to plethora.

The local congestions which arise in such cases from the obstruction of the general circulation, or even from constitutional predisposition to pulmonary apoplexy, are connected with palpitation of the heart and rush of blood to the face and head. These local difficulties, whether dependent upon constitutional dyscrasia or not, are inseparably connected with the other forms of disorder which occur in the pregnant condition; since every part of the system sympathizes with the whole and the whole with every part, the remedy which will cure any one must also be the one which more or less accurately corresponds to them all. Hence, too, the radical cure of such cases is seen to be a work of time; the disturbance of the harmony of the system by pregnancy becomes gradually relieved, as the circulation and play of the vital forces are equalized by eliminating from the interior of the organization those subtle hereditary miasms which poison the springs of life in their original fountains.

For the treatment of the cough, dyspnœa, and other disturbances of the respiratory system in gestation, we recommend therefore no particular medicines, but advise the thorough study of those already detailed under the various forms of gastric disturbance, and more particularly a reference to the most copious and reliable works on Materia Medica that can be procured. The leading symptoms of the case may be found in connection with the pulmonary

difficulties, with the gastric derangements, or with some abnormal condition of the secretions or excretions; and the remedy at first indicated by the principal symptoms, if it do not in time remove the entire train of morbid conditions, will remove some of them; at which time a new prescription may require to be made for the case as it then presents itself. But it will sometimes be found that the remedy which is indicated at the first, being homœopathic to the particular form of constitutional dyscrasia in the patient, and given at intervals and in higher potencies, will eventually remove all the various forms of trouble and restore the patient to complete health.*

Derangements of Circulation and of the Circulatory Apparatus.

PLETHORA, HYDRÆMIA, ANÆMIA, ETC.

Plethora, in pregnancy, means principally that increased activity of the circulation which corresponds to the increased activity of the nervous system. The volume of the blood may be increased, and this increase may sometimes be obtained at the expense of the quality of the blood itself. Thus, as the bulk of the circulating fluid is augmented, it becomes more thin and watery. And this condition is expressed by the term *hydræmia* or watery blood.

Plethora alone is insufficient to account for the vertigo, giddiness, flushes of the face, dimness of vision, ringing in the ears, flashes of heat all over the body and attacks of fainting which often annoy pregnant women. Some of these conditions it should, however, be remembered, may arise from the opposite or anæmic condition of the blood. Even in plethora, while some few of the symptoms may be due to the pressure of the apparently augmented quantity of the blood, the greater part must doubtless arise from the influence of the vitiated character of the blood itself rendered more serous, since it is evident how similar symptoms, as of debility, may appear to spring from too much and also from too little blood. The same thing is seen in cases of severe hæmorrhage, where the other fluids in the body are rapidly called upon to replace the quantity which is requisite for the flow of the current. The intimate connection of this hydræmic condition of the blood, which often appears in the latter part of the period of gestation, with the various forms of dropsical accumulation, will be obvious. It is sufficient to remark here that the common source of all these morbid conditions of the blood, and of the subsequent effu-

* Consult also Dr. Carroll Dunham's *Bönninghausen on Hooping-Cough*, and Dr. B. Simmons' *Cough Repertory*.

sions and œdematous infiltrations is to be found in the psoric dyscrasia developed and aggravated by the constitutional excitement of pregnancy.

Anæmia constitutes a still greater degree of depravation of the blood under the prolonged influence of many of the other morbid conditions of pregnancy. The failure of nutrition from the severe nausea and vomiting which sometimes persist even through the whole course of pregnancy, and from other gastric disturbances and intestinal difficulties, in addition to some original morbid tendency in the system itself, sometimes reduces the pregnant woman to a very feeble, almost cachectic condition. This condition is still further aggravated by the constantly-increasing demand made upon it for the support of the growing fœtus. And the exhaustion in such cases may prove fatal, either before or after delivery, unless the very root of the difficulty is reached and removed by the appropriate remedy.

Among the more active consequences of such impoverished condition of the blood in pregnancy—as in chlorosis—should be noticed certain local congestions. These are developed in different parts of the body, according to the direction of the constitutional weakness; thus in some persons we see epistaxis, in others hæmoptysis, in others still hæmatemesis, and in others, finally, certain forms of uterine hæmorrhage, to be afterward described more particularly in connection with the other principal causes of abortion. For each of these forms of local congestion the appropriate remedy must be selected in accordance with all the conditions present.

Uræmia, or the retention of the urea in the blood, has been mentioned in connection with albuminuria, with which it is usually a complementary symptom. All these forms of dilution, depravation or poisoning of the blood may be cured by the exhibition of the remedies indicated by all the attendant circumstances, symptoms and conditions; not by any means failing to consider the mental and moral states and symptoms, which latter may constitute the most important indications to guide us in the selection of the curative remedy even for such pathological changes. The same deep-seated constitutional influence that disturbs the harmony of the circulation and the proportions of the constituents of the blood, most powerfully and much more palpably affects the intellectual faculties, the sensibilities, and even the affections.

ŒDEMA—ANASARCA—ASCITES.

These various forms of dropsical affections may occur during pregnancy, either resulting entirely from the condition of pregnancy itself, or complicated and in great part caused by serious diseases of the heart, kidneys or liver. Some women when pregnant are invariably more or less dropsical, while others, on the contrary, do not show even the slightest evidence of simple œdema. And again, a dropsical condition of considerable magnitude may give rise to no inconvenience during pregnancy save that of causing clumsiness, and disappear promptly after parturition, while in another case it may be very fruitful of suffering and of peril, not only to health, but even to life.

What at the first is merely an œdematous enlargement of the feet and ankles may be developed as gestation advances into a general dropsy, the primary infiltration into the cellular tissue being finally accompanied by extensive effusion into the great serous cavities.

ŒDEMA OF THE LOWER EXTREMITIES is a very common attendant of pregnancy, often occasions no great inconvenience, and is usually confined to the seventh, eighth and ninth months. It is supposed to arise in most instances from mechanical pressure alone, and to be entirely independent of constitutional disease. This may be true in those cases where it is not accompanied by other dropsical affections. Standing and walking serve to aggravate this condition; it becomes worse towards evening, gradually increases as pregnancy advances, and is often combined with a varicose state of the veins.

In some instances the œdema becomes very great, the integuments of the lower limbs become enormously distended, and a certain angry redness appears, as if erysipelas would set in. In such cases there is reason to suspect the presence of some more deeply-seated cause than mechanical pressure upon the veins, or even upon the lumbo-sacral nerves, nor will the dropsical infiltration be restricted to the inferior extremities.

Œdema of the vulva will nearly always be present when that of the lower limbs is so largely developed; and this will often cause much suffering in the latter months of gestation, and even render the patient unable to lie on either side. Cases are on record in which the œdema of the external genitals was so enormous that the patients were obliged to lie on their backs with their lower limbs widely separated. In the worst forms of this affection the tumefaction may occasion considerable difficulty in the dilatation of the perineum and passage of the child's head. Acupuncture has sometimes been re-

sorted to in advance of parturition, with considerable relief of the pain arising from the excessive distension of the delicate and sensitive tissues.

ANASARCA represents the extension of the œdema from its original local seat in the lower extremities over the entire surface of the body. Both œdema or partial dropsy of the cellular or areolar tissue, and anasarca or general dropsy of the same tissue, belong to the class of infiltration, as contradistinguished from ascites and hydrothorax, which are effusions respectively into the abdominal and thoracic cavities.

The more the œdema comes to resemble anasarca, the more we realize the existence of general constitutional causes of the affection, and are thus led to look for the means of curing it in corresponding constitutional remedies. The attendant symptoms in each case will aid us in the selection of the remedy, since we must prescribe for the patient, not for a particular pathological condition alone, however distressing it may be, or however thoroughly we may understand it. Much experience proves the truth of this.

ASCITES, or dropsical effusion into the cavity of the abdomen, may make its appearance in the first half of pregnancy, although it is more usually developed about the fifth or sixth month, and then continues during the remainder of the period of gestation.

This affection is attended with more or less œdema of the inferior extremities, of the labiæ, and infiltration of the abdominal walls. The accumulation of fluid in the abdomen may be slow and gradual, or it may be very rapidly effused, especially after a certain degree of general œdematous infiltration has been reached. In pregnant women this disorder cannot fail to cause much greater inconvenience, and even positive suffering, than in other persons, since it will cause greater obstruction of the movements of the thorax. So great is the dyspnœa in the advanced stages of pregnancy from this cause that the respiration becomes as difficult and distressing, and the erect position is almost as necessary, as in ordinary cases of hydrothorax. There are frequent attacks of faintness and a constant sense of suffocation from the insufficient aëration of the blood. And these sufferings are often aggravated by difficulty of sleeping, headache, thirst and disgust for food.

The presence of water in the abdomen may be determined by percussion, the fluctuation being usually more perceptible in the left

hypochondrium just below the false ribs. The existence of any large accumulation of water in the cavity of the abdomen will usually prevent conception, by impeding the action of the fimbriated extremities of the Fallopian tubes; and the same cause tends to prevent the full and healthy development of the fœtus, although women with dropsy are said to have had often very lively and healthy children. Ascites should be treated by homœopathic physicians with medicines alone if possible, since tapping, either in the earlier or in the later months of pregnancy, is very apt to be followed by the expulsion of the fœtus. The severity of the dropsy itself, and the consequent danger of its interfering with gestation, may be measured by the earlier or later period in which it makes its appearance. When the effusion is evident in the first half of the pregnancy, if its increase cannot be arrested or the disease removed by the use of the appropriate remedies, it may even be necessary to resort to paracentesis.

The causes of ascites, and in fact of all forms of dropsical disorder, except perhaps the most trifling, which may be considered to result from pressure and general weakness, must be found in the constitutional dyscrasiæ that have already been referred to in connection with disorders of the blood and its excretions. The morbidly serous condition of the blood forms but a single link in the chain that terminates in cellular infiltration and dropsical effusion. Still farther back we may trace the fault of nutrition, by which the blood is impoverished, rendered watery and the receptacle of uræmic poisons.

It is important to be familiar with these pathological changes so far as they can be detected, and some of their objective manifestations may afford valuable aid in selecting the appropriate remedy. Especially, if not only, is this true where the pathogenesis of the remedy has furnished us with similar pathological symptoms. But that physician will be most successful in his prescriptions who carefully avoids encumbering his mind with theoretical generalizations, most patiently studies his Materia Medica, and never allows himself to rest satisfied till he has found the remedy which constitutes the most complete simile to the mental, moral, sensational and physical symptoms of the case.

For the remedies which may be indicated in the various forms of dropsical affections liable to appear in pregnancy, consult those detailed in the article on Dropsy of the Uterus.

Dropsy of the Amnion and Hydrorrhœa are treated of under the head of Disorders of the Uterus and its Appendages.

Hæmorrhoids, or Piles.

Hæmorrhoids may make their appearance in the earlier or in the later months of pregnancy. In the first instance they may result in part from pressure exerted directly upon the internal iliacs by the expanding uterus before it has emerged from the pelvis. In the latter case the gravid uterus exerts pressure upon the common iliacs. Still this affection of the hæmorrhoidal veins is by no means entirely caused by such mechanical pressure, otherwise it would be much more common than it now is, if not indeed universal.

In women predisposed to constipation, or in whom some dyscrasia develops itself in such obstruction of the bowels, hæmorrhoids are an almost necessary consequence of this condition in pregnancy; and the inactive habits that aggravate the constipation at the same time augment the hæmorrhoidal enlargements. But whether due to the inactive state of the circulation, which is a necessary attendant of inactive habits, to mechanical pressure, to constipation, to dyscrasia, or, as is generally the case in greater or less degree, to all these influences combined, the piles constitute a very painful condition in pregnancy. They may be blind, that is, never bleed, and inward, never protruding, and still occasion much suffering. They may protrude with each evacuation, sometimes become strangulated and difficult of replacement, and by their exhausting hæmorrhages may greatly weaken the strength. The constipation greatly aggravates the hæmorrhoidal condition, and at the same time the pain accompanying an evacuation is so great that the woman dreads going to stool, and hence by delaying causes increased atony of the bowels and aggravates the constipation. This circumstance should be borne in mind by the practitioner, and should lead him to urge upon his patient the necessity of not neglecting the alvine evacuations, and at the same time lead him to suggest a suitable diet, such as would have a tendency to produce rather a relaxed condition of the bowels. Most of these cases are entirely amenable to treatment, and even the worst may be so modified that the suffering may be almost entirely removed.

Under allopathic treatment the constipation is attacked by purgatives, which are incapable of removing either the cause or the consequences; while the indicated homœopathic remedy exerts a beneficial influence equally upon the obstruction of the bowels and upon the enlargement of the hæmorrhoidal veins. The following medicines should be studied, and that one selected which best corresponds to all the conditions and symptoms of the patient, who should carefully abstain from coffee, wines and liquors, and from food too much concentrated, and

take as much daily exercise as her circumstances and situation will allow with comfort to herself. The medicines mentioned under Constipation may likewise be consulted with advantage.

Aconite. Shooting and constant pressure at the anus, pain in the back and sacrum as if bruised, feeling of fullness of the abdomen, colicky pains, great uneasiness; the piles occasion great annoyance.

Æsculus hipp. Sensation in the lower portion of the back, across the sacro-iliac symphyses, as of great weakness; she "gives out" there when walking. Bleeding piles, or purple-colored piles which do not bleed; constipation, great pressure in the rectum. Sensation of sticks.

Aloes. The varices protrude and resemble clusters of grapes; frequently feel hot and sore. When urinating, sensation as though something had passed or would pass from the bowels. Feeling of heaviness or weight within the pelvis. Large masses of mucus are sometimes discharged per anum. Involuntary solid stool.

Alumina. Evacuations look like laurel-berries, and are passed with much difficulty and with cutting pains. Occasional discharge of blood from the rectum, followed by sore pains. The urine cannot sometimes be passed except when straining at stool.

Ammon. carb. The varices protrude during stool, and even between the evacuations, and feel raw as if excoriated. Burning and itching in the anus, and so painful after stool she cannot walk.

Ammon. mur. Continual sore smarting in the hæmorrhoids. Sore pustules on the verge of the anus. Pain in the perineum, especially when walking. Particularly useful if hæmorrhoids occur after the suppression of a leucorrhœal discharge.

Antimonium c. Diarrhœa and constipation alternate, the evacuations while diarrhœa exists consisting of a watery fluid with hard lumps. General gastric disturbance with the hæmorrhoids. Excretion of large quantities of mucus, with burning, tingling and itching so great that she can scarcely keep still.

Apis. Constipation. Scanty urine. Much stinging pain in the anus and rectum; the stinging is followed by severe burning sensation. Restlessness at night, no position comfortable.

Arsenicum. Burning, like fire, and shooting pains in the varices; heat, agitation, and sometimes a feeling of great weakness and restlessness. Fissures in the anus, which burn and render urination difficult. Pain or a painful stiffness in the back, making stooping difficult. Corrosive itching of the parts.

Belladonna. Bleeding piles, accompanied with a sensation as if the

back were breaking or would break. The varices sometimes become strangulated from spasmodic constriction of the sphincter ani, at which time they are excessively sore and sensitive. Dysuria and congestion of blood in the head are frequent accompaniments of the hæmorrhoidal condition when this remedy is indicated.

Calcarea c. The piles often bleed profusely, to the extent of blanching the patient. The pain occasioned by the piles is aggravated by walking. Very great pain in the anus after stool. Sleeplessness in the early part of the night. Acrid and offensive sweat from the feet, which makes them raw and sore. Feet are cold, as if from damp stockings. When not pregnant the patient menstruates too frequently and too profusely. She is very sensitive to cold air.

Capsicum. Burning and smarting in the varices, as though pepper were sprinkled on them. Bleeding piles, the flow of blood causing a burning pain in the anus.

Carbo veg. The hæmorrhoidal tumors are large and blue, with shooting pains in the loins, stiffness in the back, burning and rheumatic pains in the limbs. Burning feces. Frequent congestion to the head; epistaxis; flatulence. There may also be much burning mucus from the rectum. Discharge of an acrid, offensive humor from the anus, particularly at night. Much itching about the anus and perineum.

Cascarilla. The bowels are evacuated with difficulty, and the feces are covered with much mucus, or the feces are mixed with quantities of mucus. Frequent and profuse bleeding from the anus during or after stool.

Causticum. Large and painful hæmorrhoids, which burn when touched and seem to hinder the passage of the feces; the suffering is much increased by walking. Sometimes in connection with the hæmorrhoids we find a large and painful ulcer near the anus, constantly discharging blood and pus.

Chamomilla. In painful, bleeding, burning hæmorrhoids; but the mental symptoms will particularly indicate this remedy. She is restless, can hardly control herself; gives short answers; she can hardly endure her slight sufferings. Irritable and spiteful.

China. Hæmorrhoids, with burning, itching, tingling or creeping, extending into the urethra. They sometimes bleed profusely. The patient is very sensitive and debilitated, and the piles and her general symptoms are worse every other day.

Collinsonia. A jagging sensation is felt in the lower part of the rectum and anus, as though sticks or gravel had lodged there. The symptoms get worse in the evening, and continue so till late at night.

Blind or bleeding piles. Constipation or diarrhœa. Weight or pressure in the rectum, with intense irritation or itching there.

Colocynth. Pricking at the anus, with constant discharge of mucus. Darting in the rectum, alternating with stitches through the bladder. Blood flows continuously from the hæmorrhoids for a long time. Emission of large quantities of flatus per anum. Persons who are subject to violent attacks of cramp colic.

Graphites. Easy prolapse of the rectum, as though the parts had lost their tonicity; it becomes prolapsed without even a desire for stool. Swelling of the anus. The varices feel very sore after an evacuation. Painful burning fissures between the varices. The patient menstruates scantily, and has itching blotches on the face and other parts of the body.

Hamamelis. The varices bleed very profusely, with sensation of soreness, weight and burning in the rectum. The varices protrude, and the anus feels sore as if raw. The stools are covered with mucus; the back feels as if it would break; restlessness at night; dryness of the mouth.

Ignatia. When the piles are attended with pains shooting deep into the rectum, seemingly up into the abdomen. Itching and tingling in the anus, and prolapsus recti during an evacuation. Sensation of excoriation and contraction in the rectum. The pain in the anus and rectum continues for hours after an evacuation.

Kali carb. Stitching and cutting pain in the varices, which become greatly swollen and enlarged. The feces are large and hard, and the stools are followed by bleeding from the varices.

Lachesis. The anus feels as if it were entirely closed by the varices, and as if nothing could pass; the bowels are very costive, apparently on this account. (Hæmorrhoids, which make their appearance at the climacteric, when the menstrual flow becomes scanty.)

Lycopodium. Much rumbling in the abdomen; red sand or red sediment in the urine; itching eruption around the anus; great tendency to excoriations, which bleed easily. The varices protrude, and are particularly painful when sitting. Cutting in the rectum and bladder. Tearing in the rectum, so sharp that it arrests the breathing. Accompanied with varices in extremities.

Mercurius sol. Piles which bleed during stool and while urinating. The bloody stool causes an acrid, painful sensation in the anus. Prolapsus of the rectum, the fallen gut having a dark and bloody appearance. Inflammation and suppuration of the hæmorrhoidal tumors. The anus feels raw.

Muriatic acid. Exceeding tenderness of the parts; she cannot bear the least touch upon them, not even of the sheet. The piles bleed profusely; there is much itching of the parts, which is not relieved by scratching. Great debility. Prolapse of the rectum when urinating. Involuntary discharge of a small quantity of feces while urinating, which seems unavoidable.

Natrum mur. A moisture constantly oozes from the varices, which are very painful, stinging, smarting and throbbing. Herpetic eruptions about the anus, with itching and burning. Stitches in the rectum from below upward occasionally during the day. Hard, difficult and painful stool followed by a liquid stool, the pain lasting a long while afterward. Ripping sensation during stool.

Nitric acid. Old hæmorrhoidal tumors, secreting much slime and bleeding profusely at every fecal evacuation. Smarting in the rectum a long time after a stool; also sharp cutting pains, which last a long time. The patient dreads an evacuation.

Nux vom. This remedy should be thought of for all persons of sedentary habits, and for those who use spirituous liquors or coffee in excess. It is especially indicated when there are shooting and shocks in the loins; contused pains which hinder from rising up; constipation, with frequent and ineffectual effort to evacuate, and sensation as if the anus were closed or contracted; no appetite; sleepless in the latter part of the night; headache; loss of energy. Sensation in the rectum after an evacuation, as though something remained which should be passed; or a frequent or even continual inclination to stool, with a sensation as though the rectum contained a small quantity of feces which must be passed, although nothing passes.

Petroleum. Hæmorrhoids, with itching about the anus, which compels her to rub and scratch till the part becomes raw and sore. A moisture constantly oozes from the vulva, with violent itching.

Phosphorus. The hæmorrhoids are accompanied with a sensation of weakness or sinking in the abdomen; they protrude very easily, coming down even during the emission of flatus. Relaxation of the sphincter ani; constant discharge of mucus from the varices.

Podophyllum. Piles, with prolapsus ani; prolapsus uteri; constipation or morning diarrhœa; too frequent but natural passages. Pain in the lumbar and sacral regions, worse during a stool and still worse afterward. Constipation with headache. She is subject to "bilious attacks."

Pulsatilla. Discharge of blood and mucus during stool; pallid countenance and disposition to faint; dysuria; tearful disposition, mild and

gentle; bad taste in the mouth in the morning. She cannot bear to be in a close or warm room; generally feels worse in the evening, and is better from going into the fresh open air. Feels worse after partaking of rich or greasy food. Absence of thirst.

Rhus tox. Protrusion of blind hæmorrhoids after every stool, which feel sore. Drawing in the back from above downward, which sensation seems to be due to the piles, and with a feeling as though everything would come through the rectum. Constant restlessness and fidgetiness. Relieved by change of position.

Sabina. The piles discharge bright red blood, and cause pain in the back from the sacrum to the pubes. Biting, sore pain in the varices, especially during the morning stool.

Sepia. The patient is subject to a painful sensation of emptiness in the epigastric region; has delicate and sensitive skin. Protrusion of the varices and of the rectum, attended with difficult micturition. Heat, burning and swelling of the anus when the piles do not protrude, and defecation is then excessively painful, the stool being rather small, narrowed down by the diminished calibre of the anus. Sometimes the fecal mass is triangular in form and very painful. Constant oozing of moisture from the anus. Stitches and jerkings from the anus upward into the rectum and abdomen. The symptoms are usually aggravated by partaking of milk.

Silicia. If the varices protrude ever so little they are apt to become strangulated and painful, and are returned with much difficulty. Difficult stool, the fecal mass receding into the rectum several times when on the point of being discharged. The hæmorrhoidal tumors inflame and suppurate easily.

Sulphur. Much itching and soreness of the anus on account of the varices, which bleed during stool. Prolapse of the rectum during a hard stool. The indications for this remedy are to be found rather in general characteristics than in local symptoms. Heat on the top of the head, general flushes of heat, weak, fainting feeling; very hungry and faint about eleven o'clock A. M.; awakens frequently at night, and feels very weak and faint in the morning; very cold feet, sometimes burning in the soles of the feet at night in bed. Inclination to stoop forward when walking, or even when sitting. Desire to sleep late in the morning. Despondency and sluggishness of the mind; she finds it difficult to do anything.

Thuja occ. The hæmorrhoidal tumors are excessively sensitive to even the slightest touch. Fig-warts around the anus or elsewhere are an accompaniment.

Varicose Veins.

Varicose veins often appear during the latter months of utero-gestation, and are commonly supposed to be caused by the pressure of the gravid uterus upon the iliac vessels and inferior cava. But this local pressure can be but a single one of the exciting causes, since varices are seen in some who are not pregnant, and they do not make their appearance in the larger proportion of those who are. If the pressure were the main cause, all or nearly all pregnant women should have more or less of this varicose condition before they are confined, which is far from being the case.

The constitutional condition of the system in general, and perhaps of the organs of venous circulation in particular, which gives rise to varices under the influence of exciting causes, is no doubt similar to that which produces hæmorrhoids. In each affection, constipation seems to exert no small provoking influence, although it may be that the same deep-seated disorder of the constitution may at the same time cause the varicose and the constipated condition. The varicose and the hæmorrhoidal enlargements are alike liable to rupture and to occasion serious hæmorrhage. And both these disorders are equally amenable to homœopathic medication. The appropriate remedies, taken in season, will entirely cure the varicose condition, or, if resorted to only after the enlargement has already become very extensive in the latter months of utero-gestation, will at least prevent its further increase. And as on the one hand homœopathic treatment perseveringly employed will entirely remove the constitutional predisposition to varix, so, on the other hand, the highest allopathic authority states that "this condition of the veins gradually increases in amount and severity with every succeeding gestation." *

The various and severe pains, and all the attendant symptoms and conditions of varices below the knee, in the thighs, in the labia, vagina, and even in the os uteri itself, the appearance of the enlarged veins themselves, their color, inflammation or rupture, and the concomitant and constitutional symptoms and seasons and occasions of aggravation, will enable the attentive physician to prescribe in such cases, with the certainty of greatly ameliorating the general health, and so of improving the prospect in parturition, as well as of removing the varicose diathesis itself.

The vascular nature of much of the substance of the external genitals predisposes them to varices. They may occur in the veins of the vulva or in those of the vagina.

* Churchill, *Diseases of Women*, chap. vi.

These enlargements of the veins are scarcely less common during pregnancy than are hæmorrhoids, but, except they appear in the vulva or vagina, are usually less painful. They should be treated upon general homœopathic principles, all the attendant and constitutional symptoms being taken into account in prescribing. The following medicines are more particularly useful, and the indications given for their use under the head of Hæmorrhoids or Piles, together with those of the other medicines there given, may be consulted with advantage:

Apis mel. Burning and stinging pains in the varicosed veins, either with or without constipation.

Arnica. The varices are very sore, with a bruised feeling. Especially useful for varicose veins of the vulva or vagina.

Arsenicum. If they burn like fire.

Carbo veg. Painful discharge or complete suppression of urine attends the varicosed condition of the vagina. The varices have a blue appearance and are very hard.

Causticum. They become much more painful while walking. Involuntary urination on coughing or making a false step.

Ferrum met. In weakly persons, with fiery-red face.

Fluoric acid. In obstinate cases and in those of long standing, especially in women who have borne many children.

Graphites. The varicosities itch very much, and have little pimples on the surface of the integument over them. Itching blotches on various parts of the body.

Hamamelis. The varicose veins are hard, knotty, swollen and painful.

Lycopodium. Varicose veins of the lower limbs, extending nearly to the feet; they seem very large and hard under pressure of the finger. Red sandy sediment in the urine. Borborygmus and constipation.

Nux vom. In women who habitually use wine and rich and highly-seasoned food, who keep late hours and suffer from habitual constipation.

Pulsatilla. Especially suited to women of mild disposition, who are easily moved to tears. The pain from the varicosed veins and the general symptoms are aggravated toward evening. The varices present a blue appearance.

Sulphur. This remedy will often be found useful when indicated by its well-marked and well-known characteristics. It will be especially useful to women who suffer from hæmorrhoids as well as varicose veins of the extremities or vulva.

Zinc. Varicose veins which give rise to fidgetiness of the feet and limbs.

External treatment for this affection, such as bandaging, is of far less value than internal medication. In extreme cases, however, where there appears to be danger of rupture of the vessels, a roller or a laced stocking may be applied to support the veins until the remedies have time to act. In such cases, also, placing the limbs when they are the seat of the affection upon a stool or chair relieves the over-distended vessels from the downward pressure of gravity. Perfect rest and quiet are indispensable in the treatment of these worst forms of varicose veins until decidedly better.

CHAPTER XVII.

DISORDERS INCIDENTAL TO PREGNANCY—CONTINUED.

Affections of the Uterus and its Appendages.

THE morbid affections to which the uterus is liable in the pregnant state may be arranged in three classes: I. those which are principally sensational, such as cramps, pains and excessive sensibility; II. displacements; III. abnormal secretions, such as leucorrhœa, dropsy of the amnion and hydrorrhœa.

I. Pains; Cramps; Sensibility of the Uterus.—The uterus in pregnancy, even if it does not experience an enlargement of its nerves corresponding to that of the arteries and veins, still partakes in a remarkable manner of the increased sensibility of the nervous system in general. Hence all influences, from within or from without, are very acutely felt—many of them very painfully—which in the unimpregnated condition would scarcely be noticed. In addition to this excessive sensibility, there are actual uterine pains, seated apparently in the walls of the uterus, which are doubtless the result of the contraction of the uterine muscles. These may appear at any time after the first three months of utero-gestation; they may return at intervals in paroxysms, and increase in severity as the pregnancy advances. These pains may even become so severe as to resemble uterine cramps. The excessive sensitiveness of the uterus renders the ordinary motions of the fœtus very painful to the mother, while at the

same time the morbid irritability of the mother's state in general renders the movements of the fœtus much more active and violent. All these morbid conditions may be greatly ameliorated by the exhibition of appropriate homœopathic remedies, thus rendering the patient more comfortable, and at the same time removing influences which might otherwise terminate in abortion.

II. Displacements of the Uterus.—Conception may occur in women who are subject to prolapsus uteri in cases where the womb is temporarily replaced, or the already gravid uterus may become subject to either of the different forms of displacement under the influence of accidental causes connected with its own weight or with the disproportionate size of the pelvis. In the former case the prolapsus, while it affords no bar to conception, greatly endangers the safety of the fœtus until after it is established above the superior strait. In the latter case the already gravid uterus may be projected so far over the pubes as to constitute anteversion, or turned back in such a manner as to undergo retroversion by its fundus being lodged beneath the promontory of the sacrum.

Prolapsus uteri in pregnancy, as in the unimpregnated condition, may come on gradually or suddenly; it may also be a partial descent or a complete procidentia. This is especially apt to be the case when the pelvis is unusually large. In all cases of prolapsus uteri in pregnancy, whether the result of a previous habit or of more recent influences, it is simply necessary for the patient to remain quiet and take the remedy indicated, according to the conditions and symptoms of her case. The appropriate remedy, together with the increasing size of the ovum, will in a short time remove the prolapsus and render its return impossible.

Anteversion chiefly occurs in the more advanced stages of pregnancy when the uterus has become very heavy, although some few instances are recorded in which this accident happened in the second and third months of pregnancy. In the slighter forms of this displacement the term *obliquity* is more applicable, while in complete anteversion the fundus uteri may even be engaged below the symphysis pubis. Perfect quiet, a recumbent position, and the judicious exhibition of the remedy indicated by the symptoms of each case, will almost always suffice to effect a complete cure. In cases where the fundus is actually engaged beneath the symphysis, manual assistance will be needed in order to secure reposition, the patient lying on her back.

Retroversion, in the pregnant as in the unimpregnated condition of the uterus, forms a very serious complication, whether it occur

suddenly or slowly. In many cases the symptoms will scarcely lead us to suspect the presence of this form of displacement until the fundus is actually engaged beneath the promontory of the sacrum. In this condition the use of the uterine elevator, described in another chapter, may be found necessary. Retroversion is most apt to occur in the third and fourth months, but it may occur in the fifth, or even as late as the seventh month, of gestation. It may take place very slowly, so as to become complete by the third month of pregnancy, aided very much by the gravity of the ovum when once it has become deflected from its proper position. This first beginning of the mischief may result from a too great and too long-continued distension of the urinary bladder. The complete or partial retention of the urine forms one of the most characteristic indications of the retroversion itself.

In order to facilitate the restoration of the retroverted uterus it may be necessary to place the patient prone upon her face; thus, as soon as the fundus uteri is disengaged from beneath the promontory of the sacrum, its own gravity will enable it to resume its proper place in the pelvis. It will be necessary to distinguish this form of displacement from extra-uterine pregnancy, since very disastrous consequences must otherwise speedily result. And this will be best accomplished by a careful study of the conditions and symptoms of the case, and of the causes which have apparently produced the mischief, in addition to the most careful exploration per vaginam, and, if necessary, per anum. Retention of urine in the bladder, from want of opportunity to discharge it, as sometimes in traveling, violent straining to lift a heavy weight, a fall backward, blows or other accidental pressure upon the navel, may occasion the retroversion.

A previous retroversion is no doubt the most frequent cause of the retroversion of the uterus in pregnancy. In such cases the trouble is at first entirely unsuspected, as in the first weeks of gestation the increased size of the uterus scarcely occasions any more inconvenience than before conception. But after a while the cervix uteri begins to press upon the bladder and hinder its evacuation. Then the sudden and severe symptoms, which are really the consequences of the gradual enlargement of a previously retroverted uterus, are supposed to result from a sudden displacement. Careful attention to the calls of nature, as well in respect to the bowels as to the bladder, will be important, in order to obviate any disposition to this displacement, particularly in persons who have suffered from it in former pregnancies. And where retroversion has either suddenly set in, as in consequence of

an accident, or gradually developed from partial displacement of this kind existing previously to conception, it may be necessary to evacuate the bladder and rectum before any progress can be made in restoration. Then, after the womb has been replaced, perfect rest in a recumbent posture, for a longer or shorter time, according to circumstances, will greatly aid the proper remedy to effect a complete cure. The various pessaries proposed and used in such cases we consider entirely unnecessary, and in many cases positively injurious. With the aid of the appropriate remedies, and of such favorable circumstances and hygienic conditions as are indispensable under any plan of treatment, Nature may be enabled to hold the uterus up; which she can never learn to do as long as it is propped up and the muscular structures are thereby weakened.

The medicines appropriate for these various forms of uterine displacements existing during pregnancy, as well as explicit directions for their treatment, will be found elsewhere, in the chapter on Displacements of the Uterus.

III. Abnormal Secretions.—*Leucorrhœa* may exist during pregnancy, especially in persons constitutionally predisposed to this affection. The discharge is usually of a mild character, thick and white in its appearance, and sometimes profuse in quantity. The increased activity of the circulation of the uterus and its appendages, incident to pregnancy, extends to the muciparous glands of the vagina and cervix uteri, and an excess of the secretion which closes the cervix may occasion a constant discharge. In connection with the discharge may occur irritation, itching, heat and burning in the vulva and parts adjacent. Where the leucorrhœa is very profuse, symptoms of debility may follow.

The treatment required for all these cases will be found under appropriate headings in another part of this work.

Hydrorrhœa is the name given to such discharges of water from the womb as occur in the course of gestation without rupture of the membranes. It is probable that this accumulation of fluid—*false waters*—takes place between the inner surface of the uterus and the membranes, the latter being stripped off as the fluid accumulates and forms for itself a pouch. This pouch gradually increases in size in the direction of the os, and when that outlet is reached the flow of false waters takes place. This phenomena may deceive the accoucheur, and lead him to believe that the membranes are ruptured and that labor is about to set in, whereas careful examination will discover the membranes intact, and there may be no signs of labor present.

In the later months of pregnancy this affection is not uncommon, the uterus from time to time relieving itself of the undue accumulation without special muscular effort, very much as the urinary bladder does. An examination of the os uteri in such cases will satisfy the practitioner that the discharge does not come from within the true water-sac, and that therefore there is no cause for alarm as from a threatened miscarriage. The flow appears at irregular intervals, and without any especial provoking cause; neither does it occasion any remarkable symptoms.

The concurrence of other dropsical conditions, such as œdema of the limbs, the fact that the discharge arises spontaneously, and the almost entire absence of pains or uterine contractions, will enable the physician to diagnose the hydrorrhœa with sufficient certainty. The false waters may make their exit without any noticeable provoking cause, and without any more than the very slightest constitutional disturbance; while the membranes which enclose the true amniotic waters can only be broken by some great bodily exertion, some special accident or positive effort, and their discharge of these waters cannot but be followed by strongly marked symptoms indicating the approach or actual existence of labor. Perfect quiet, freedom from excitement or anxiety, and the exhibition of the remedies indicated by all the attendant symptoms and conditions, will be all that is requisite to prevent serious mischief from this condition, and to remove as far as possible its constitutional causes.

Dropsy of the Amnion.—The determination of the existence of this disorder of pregnancy is not so easy as that of hydrorrhœa, since there may be an excessive amount of amniotic liquid without any very remarkable distension of the abdominal parietes, and since also the normal amount of the liquid itself is capable of very considerable variation. But generally speaking, dropsy of the amnion is an acute disease, and the rapidity of its development, together with the distressing constitutional symptoms, affords our best means of diagnosis. This is the more especially the case since also ascites almost always complicates this affection.

There does not seem to be any change in the specific gravity or constitution of the liquor amnii, only an excess of production. The normal quantity may be estimated at three or four pounds, according to the state of pregnancy, but from forty to fifty pints have been found present in dropsy of the amnion. Thus at the fifth or sixth month the uterus may be more distended than usually at full term. The uterus is rounded; fluctuation is more obscure; there is not much

thirst; the urine is natural except in cases complicated with general dropsy, and there is sometimes little or no œdematous enlargement of the inferior extremities. Among the most important diagnostic signs are to be found, therefore, the disproportionate size of the tumor to the period of pregnancy, the feebleness of the movements of the child, and the great size of the abdomen, evidently dropsical, which is less apt to be accompanied by œdema of the thighs and legs than in ascites.

Dropsy of the amnion may occasion severe suffering to the mother, sensations of suffocation and hindrance of the circulation; these are probably due in part to the rapidity of the enlargement itself, and in part to the general constitution of the patient. But this difficulty very rarely becomes dangerous, since its very excess tends to self-relief by producing abortion.

The most important results of this dropsical affection are found in the injury to the fœtus, whose nutrition is enfeebled by such excessive secretion; in the total destruction of the fœtus, which is sometimes almost entirely dissolved in the amniotic fluid; and in the premature expulsion of the fœtus at a period when its insufficient age, its enfeebled condition, or both together, render it incapable of viability.

As has been already remarked, ascites usually accompanies and complicates dropsy of the amnion. But ascites may exist during pregnancy without amniotic dropsy, and the reverse may likewise occur. It is therefore a matter of importance to be able to make a correct diagnosis. Cazeaux gives the following points for their differential diagnosis: "In ascites complicating pregnancy the urine is small in quantity, whitish and turbid, the thirst great and constant, and the lower extremities and genital parts mostly much infiltrated. It is difficult, and sometimes even impossible, to distinguish the shape and fundus of the uterus, on account of the irregular form of the belly and the enormous distension of the hypochondriac regions. Percussion produces an undulation or sort of fluctuation, which is much more perceptible at the upper than at the lower part of the abdomen.

"In dropsy of the amnion the size of the belly approaches much more nearly that of a uterus at term, although the pregnancy may not have existed more than five or six months. The uterus is so rounded as to be almost spherical. Fluctuation is more obscure, thirst slight or absent, urine natural, and in some cases little or no infiltration of the lower extremities. The umbilical tumor is rarely present, and when it exists has not the transparency observed in ascites."

The treatment of dropsy of the amnion must be principally prophylactic, and based upon attendant symptoms and such constitu-

tional indications of predisposition to general or particular forms of dropsy as may be discovered, aided and confirmed by the sensational symptoms which may especially characterize the individual case. For when dropsy of the amniotic cavity has become so extensively developed as to be clearly diagnosed, there will be small hope of eventually saving the product of conception. But even if perfect success may not be thus obtained in the first instance, there will still be reason to hope that in a subsequent pregnancy a constitutional treatment begun at an earlier period, and more intelligently directed by ampler knowledge of the case, its tendencies and its dangers, may enable the practitioner to obtain a decided improvement in the health of the mother, and at the same time secure the safety and the healthfulness of her child. Dropsy of the amnion is always the result of some constitutional dyscrasia, which, under the stimulus of pregnancy, develops itself usually in other directions and in other forms also. For the remedies for this affection consult therefore those mentioned under other varieties of dropsy, and such as may be particularly indicated by the sensational symptoms, such, for example, as the sense of suffocation. With regard to the propriety of inducing premature delivery in extreme cases of this kind, see the subsequent chapter on Abortion.

Affections of the Appendages of the Uterus.

Pruritus of the vulva forms one of the most distressing disorders to which women are liable in pregnancy. This affection consists in an incessant and intolerable itching of the external genitals. The immediate cause may be found sometimes in an irritated, inflamed condition of the parts involved, or, as described by another, "it commonly depends on follicular irritation of the vulva, which, if unchecked, passes to aphthous ulceration." Sometimes there may be found no abnormal appearance of the vulva, except such as must arise from the violent rubbing and scratching to which they have been subjected; but on examination, congestion and even superficial granular ulceration of the cervix uteri may be detected.

This affection is most apt to occur in young women. Churchill relates a case the symptoms of which are very strongly marked: when about four months pregnant she was attacked by the most intense and incessant itching of the vulva; she had no rest, day or night; could scarcely ever sleep, but was obliged to walk up and down all night; she was kept in such an irritated condition by this distress and loss of sleep that she became very cross and irritable.

In this case no relief was obtained until after delivery, when the pruritus disappeared of itself. In all such cases as described above our constitutional treatment is of the greatest importance. Some relief is afforded at once, and the improvement continues as pregnancy advances till she becomes perfectly free from the trouble ere the trying hour of parturition is reached. This affection is sometimes accompanied by sexual excitement, or it may have a periodic character, coming on or being aggravated at certain times of the day; all of which is perfectly amenable to our treatment.

The homœopathic treatment of this disorder should always be constitutional rather than local; for, whether the pathological seat of irritation be found in the parts immediately affected or in the cervix uteri, the true cause of it must consist in the disturbance of the system which is occasioned by pregnancy. For the remedies consult those mentioned in a future chapter under Pruritus.

Pains.

Pains, fixed or wandering, irregular or constant, are often experienced by women during pregnancy, and are frequently so severely felt as to cause them to become the subject of complaint to their physicians. These pains are principally felt in the abdominal, lumbar and inguinal regions; they may be considered as myalgic, whether characterized by cramps or not, when they result from fatigue of the muscles; and they may be deemed purely neuralgic when they are caused by (reflex) irritation of the nervous centres.

The pains which are experienced in the lumbar and inguinal regions, especially in the early stages of pregnancy, when they cannot be attributed to the size or weight of the gravid uterus, are usually the manifestations of some disordered condition of the uterus itself. Pains felt in the loins in the advanced stages of gestation may be purely myalgic, or the result of strain of the muscles so constantly exerted to maintain the equilibrium by bearing the body backward. Pains felt in the breasts, and the excessive tenderness and sensibility of these organs, are due to sympathetic nervous irritation, and are therefore properly called neuralgic. Those which are felt in the abdominal parietes usually appear in the more advanced stage of pregnancy, and may be attributed to over-distension of the muscles and tension upon the nerves. Certain pains in the interior of the thighs, numbness and cramps of one or both legs, have been supposed to result from pressure upon the sacral nerves. But even these may be caused by the severe dragging upon the various ligaments, and

consequent irritation of the nervous centres in different parts of the abdomen and back.

Where these pains are aggravated by exercise or movement, perfect quiet should be enjoined. But it is believed that with the help of the appropriate homœopathic remedies these pains can be so far relieved as to admit of as much exercise as may be necessary for the general health of the mother, and consequently for the greater vigor of the child. There is no doubt that the greater susceptibility to these various pains witnessed in some individuals, like the predisposition to many other morbid affections in pregnancy, is in a great measure due to constitutional peculiarity, just as we see in certain constitutions a remarkable facility of straining and laming the muscles and tendons and of suffering dislocation of the joints from comparatively slight causes. At any rate, the following remedies, or others that may be especially indicated, are capable of affording very marked relief in these cases, whether the symptoms appear in the earlier part of gestation, and so threaten to result in abortion, or whether they occur principally in the latter part of pregnancy, and tend to increase the immovability and helplessness of the patient. The same may be said of those pains regarded as the results of a certain constitutional weakness of the muscular organs or of a corresponding irritability of the nervous system.

Aconite. If the sufferings seem to be developed immediately after an exposure to cold air or to a draught. Sensation of soreness, with restlessness and uneasiness, although each movement causes pain. Fear of approaching evil. Distressed and unhappy. Thirst, with more or less feverishness.

Argentum nit. Almost constant belching of wind after eating, which continues until the time for the next meal has nearly arrived. Pains in the back and lower extremities. Time seems to pass very slowly.

Arnica. Very great soreness, as if from a bruise. The motions of the fœtus cause a bruised and sore feeling in the abdomen, and the woman feels as if her child were lying crosswise, which position hurts her constantly.

Belladonna. If the pains appear suddenly, and after a time as suddenly cease. The bed feels very hard to her. She cannot bear the slightest jar of bed or chair. The back feels as if it would break.

Bryonia. The sufferings are rendered more severe by motion; even the slightest motion aggravates, taking a full inspiration, for instance; she desires therefore to keep quiet and to rest in a recumbent position. Stitching pains.

Calcarea c. Cramps in the toes or soles of the feet. The feet feel cold and damp. Feels badly on ascending an eminence or going up stairs. Sensation of crackling or crepitation in the joints, as though they were dry. She is a long time in getting to sleep at night.

Camphor. Cramps, with inability to remain covered. The surface becomes cold at night—as cold as marble—and yet covering is intolerable.

Chamomilla. Abdominal pains, with frequent emission of pale, colorless urine in large quantities. Feels disagreeable and unhappy. Spiteful irritability. Whatever pains she may have she feels very keenly, and regards them as unbearable. Sleeplessness.

Chelidonium. A great deal of pain under the inner inferior angle of the right scapula, sometimes extending into the chest; this pain is frequently accompanied with gastric or hepatic disturbances.

Cimicifuga. Cramps in the extremities, and even intermitting spasms. Especially suitable for women who have a tendency to hysterical attacks.

Cocculus. A paralyzed feeling in the limbs, which are very weak. Nausea, with vertigo and tendency to faint. Spasms, which occur frequently at midnight.

Coffea. Often indicated when there is much excitement and sleeplessness. The pains she experiences are continuous and very distressing, so that she feels as if she would "go distracted."

Colocynth. Frequent attacks of colic, which draw the patient nearly double. The pains she has cause great restlessness, so that she writhes and twists herself in every direction, yet without obtaining relief.

Cuprum. When there are cramps in the fingers and toes or in the pit of the stomach; violent cramps. Coppery taste. Restlessness.

Gelseminum. Pains in the abdomen, which run directly upward or backward and upward, which are very severe and resemble the pains of commencing labor. Feeling as if the muscular power was weakened, which arises from a weakness of the will-power, which is unable to command muscular movements as in health.

Ipecacuanha. Sharp, colicky, coiling pains around the umbilicus, with nausea; clutching and squeezing in the abdomen.

Lycopodium. Cutting pains running from right to left across the abdomen. A great deal of commotion and borborygmus in the abdomen. The fœtus is unusually active. Red sand in the urine.

Nux v. Sufferings from high living or from a sedentary life; constipation of large, difficult stools as an accompaniment. Aggravation in the morning at four o'clock; she is obliged to get out of bed at

that time, on account of a pain in the back, and she finds relief from rising and walking about. She cannot turn over in bed on account of the pain in the back.

Plumbum. A sensation in the abdomen at night in bed, which causes the patient to stretch violently for hours together; sometimes she must stretch in every possible direction, or she feels that she must do so, and this inclination is almost uncontrollable. Feeling as if there was not room enough in the abdomen, or as if the abdomen and back were too close together. Sensation as if the abdominal walls were pulled inward.

Pulsatilla. She cannot sit long at a time; she must walk about to relieve her pain. A close or warm room is very oppressive, and she feels as if she must be in the open air, which is extremely grateful to her.

Rhus tox. Cramps in the legs, causing her to rise and walk. Cramps in the legs every night, causing her to jump out of bed. She is very restless at night, and can find ease but for a short time in any position.

Secale c. Frequent and prolonged forcing pain in the abdomen, particularly in thin and ill-conditioned women.

Sepia. Frequent bearing-down pain in the back and abdomen. Sense of weight in the anus as an accompaniment. Painful sensation of emptiness in the pit of the stomach, which makes her feel miserable.

Sulphur. Cramps in the lower extremities, with hot flushes and weak, faint spells. Burning in the soles of the feet; she must put them outside the bed-covers or into a cool place. Feels hungry and faint at about eleven A. M.; she cannot wait for her dinner. Cannot walk or sit erect. Always feels worse before a storm. Pains are mostly on the left side.

Veratrum a. Cramps in the extremities, with cold perspiration. Very great feeling of distress in the pit of the stomach after eating, lasting for an hour or two. She feels very weak, so much so that she is obliged to lie down. Violent retching, with cold sweat breaking out.

Disorders of the Apparatus of Locomotion.

Inflammation of the Pelvic Articulations.

This not very common form of inflammation is sometimes seen during pregnancy, but less rarely after parturition. The affection appears spontaneously, with severe, acute and sometimes lancinating

pains in one or several of the pelvic articulations. These pains are necessarily aggravated by pressure, by standing and by attempts at walking, which the inflammation may render impossible. In some cases, probably those which were strongly predisposed to suppuration, the inflammation has taken this course, the articular surfaces becoming denuded of cartilage. In two instances referred to by M. Cazeaux this affection terminated fatally.

Perfect quiet must of course be observed in such inflammation of parts which are not only immediately engaged in locomotion, but which have to sustain also all the superincumbent weight of the body. The character of the pains themselves, together with their conditions of aggravation as to time and circumstances, will readily suggest to the homœopathic practitioner the remedy applicable to each particular case, by the timely exhibition of which much suffering will be saved to the unfortunate patient.

Relaxation of the Articulations of the Pelvis.

In certain constitutions there appears during pregnancy a considerable amount of relaxation of the ligaments which unite the bones of the pelvis, and a consequent mobility of the pelvic articulations. This change occurs in different degrees in different persons, being scarcely perceptible in some and rendering walking impossible in others.

The precise cause of this affection it may not be easy to designate, although those who suffer in this manner usually appear to possess what is termed a scrofulous constitution. And indeed this temporary relaxation and displacement is in no small degree analogous to the chronic scrofulous disease which goes by the name of rachitis. The immediate cause of the relaxation is found to consist in a softening of the ligaments by which the pelvic articulations are usually so firmly bound together. And in this respect this affection differs from the rachitic softening of the bones which so often produces distortion during the period of childhood, and also from the corresponding softening of the bones in adult years, malacosteon, which occasions so many varieties of pelvic deformity. A certain enlargement of the synovial bursæ, and corresponding hypersecretion of the synovial fluid, have been noticed in the more aggravated cases of pelvic relaxation.

This spontaneous relaxation and dislocation from the very first occasions such an amount of instability in standing and insecurity in attempting to walk as to indicate at once the nature of the difficulty. The pains which accompany the affection, being felt principally from

motion or pressure, such as standing or walking, might be incapable of being distinguished from those of inflammation of the articulations, but for this remarkable sense of instability which appears in the incipient stages, and which is subsequently aggravated to exceeding difficulty of standing and impossibility of walking. In such cases the sensation experienced on attempting to stand is that which so strongly characterizes belladonna, as if her whole body would sink down between her thighs.

This relaxation of the pelvic articulations may, when not too much developed, render delivery less easy and speedy by destroying the firmness and stability of the *point d'appui* which the abdominal muscles derive from the bones of the pelvis. But when farther advanced this relaxation, by enlarging the pelvic cavities, may facilitate the expulsion of the child's head, thereby rendering spontaneous a delivery which would otherwise have been very difficult on account of the disproportion between the size of the head and the dimensions of the pelvis. After delivery the relaxation has been known to continue for several months, or even for years or the whole lifetime.

In all cases of relaxation of the pelvic articulations in pregnancy the most perfect quiet, and even absolute rest, should be enjoined, in order to prevent the increase of the difficulty which must result from moving about, and in order to obviate the danger of inflammation arising from undue irritation of tissues already morbidly affected. A careful study should be made of all the indications and symptoms, in order to reach the constitutional dyscrasia which lies at the bottom of the difficulty, and thus at the same time arrest the progress of the present mischief, prevent future trouble, and radically and permanently improve the patient's health.

A disposition to fall sometimes greatly troubles the pregnant woman. That which arises from sudden attacks of syncope is not referred to here, but rather that want of firm balance in walking, that danger of stumbling and that general sense of instability which often prove a constant source of annoyance. The equilibrium of the body in motion in the natural state is only preserved by the incessant although entirely unconscious effort of the muscular apparatus, which as instinctively regulates the movement and position of the body in accordance with the law of gravity as the muscles of the eye adapt the size of the pupil to the various degrees of light. In persons afflicted with hereditary muscular weakness, which is but the particular manifestation of some general and constitutional dyscrasia, the constant task of maintaining the proper centre of gravity, aggravated by the awkward dispro-

portion in size and large addition of weight in front which characterize the advanced stages of pregnancy, is entirely beyond their strength. Hence the severe myalgic and neuralgic pains already described as affecting the abdomen, breasts, back and lower limbs; hence, too, the difficulty of walking, the unsteadiness of gait and the danger of falling with which such persons are afflicted.

A careful collection of all the symptoms of such cases, and an equally careful comparison of them with those belonging to the following remedies, and to others which may be indicated in the rarer forms of lesion of the locomotory apparatus in pregnancy, will enable the homœopathic physician to prescribe for these various difficulties with confident hope of affording to these sufferers both present and permanent relief.

Æsculus h. Where the sacro-iliac symphysis is the point of the trouble. She cannot walk because that part of her back gives out, and it fatigues her so that she must sit down, and she feels better still when lying.

Aloes. Where a sense of weight and pressure into the pelvis seems to cause the lameness. Solid stools pass involuntarily.

Arnica. Where a sensation of soreness as of a bruise prevails. She can hardly move about at all from the soreness in the symphysis pubis or in the sacro-iliac symphyses.

Calc. carb. Will be indicated in leucophlegmatic constitutions; great fatigue on walking even but a short distance, from a general feeling of lameness in the pelvis. Cold, damp feet. Vertigo on ascending. Does not sleep after three A. M. She is clumsy. She stumbles and falls very easily.

Calc. phosph. She is very much worse after taking a little cold. She is liable to rheumatic pains in all her joints after taking cold.

Gelseminum. This remedy will be found useful in cases where the difficulty of walking or the inability to stand appears to be due to an inability to control muscular movements.

Kali carb. The back aches so badly while she is walking that she wishes to lie down at once, and says "she feels as if she could lie down in the street" at such times, to obtain immediate rest and relief. Cannot walk farther; must sit down.

Manganum. The limbs are affected, and are very tender and sensitive to the touch. The point or part affected, and to which the lameness is ascribed, is sensitive on pressure.

Pulsatilla. She cannot walk so well toward evening. She feels

worse when warm in bed. She can hardly find an easy position through the night, owing to the pain in the pelvic articulations.

Rhus tox. A sense of stiffness in the pelvic articulations on first attempting to walk; better after getting warm in walking. At night she must change her position frequently, feeling quite easy for a while after every change, but she must shortly change again.

Silicia. In cases where ulcerations take place with fistulous openings, which are very tender to the touch. If pimples make their appearance around the ulcerations, hepar may be indicated.

Sulphur. With her pelvic sufferings she has flushes of heat and weak, fainty spells. She is weak and faint from about eleven o'clock till noon. Could walk with a firm roller around the hips.

Thuya. The sufferings are greater in the left sacro-iliac articulation, the pains running into the left groin. The pain from walking is so insupportable that she must lie down.

Derangements and Affections of the Nervous System.

The sympathetic nervous disorders which affect young girls in difficult menstruation are but the prototypes of those affections which occur during pregnancy in women of corresponding unhealthy constitutions. Hence, in addition to the more strongly-marked disorders of pregnancy just described, we find disturbances of the nerves of special and of general sense, abnormal conditions of the intellectual faculties, and various depravations of the moral and emotional sphere. The more important of these various disturbances will now be briefly considered.

Loss of Hearing.

Davis mentions having seen two cases of entire deafness which came on during gestation. In the one case the abolition of the sense of hearing came on suddenly during one of the earlier months, and very gradually returned after delivery; whilst in the other it came on by imperceptible degrees in the seventh and eighth months of gestation, and returned suddenly and with painful acuteness on the sixth day after delivery, when the lochia entirely ceased to flow. From Paullini the same author quotes the case of the wife of a citizen who was subject to be seized with an entire loss of hearing about four or five days before being taken with labor-pains, the deafness going off after delivery. Indeed, such cases are by no means uncommon, particularly where the deafness is not complete, but is merely an impairment of the sense of hearing in a greater or less degree. And there may be accompanying the deafness, or occurring with but little or no deaf-

ness whatever, various and most distressing noises in the ears, *tinnitus aurium*, etc. Where these sounds are heard, however, the practitioner before prescribing any medicament should ascertain whether they are not due to impacted cerumen making pressure upon the membrana tympani.

The following remedies should be consulted, as well as others not here enumerated:

Capsicum. The petrous portion of the ear is much swollen, red and painful. A pressing pain deep in the ears.

Carbo. an. She is able to hear, although faintly, but cannot tell accurately from whence the sounds proceed.

Causticum. Reverberation of all sounds, even of the patient's own voice, in the ears. A constant roaring before the ears.

Graphites. Great dryness in the ears. The deafness is better when riding in a carriage.

Lachesis. The cerumen is too hard, too pale and insufficient.

Mercurius. Sensation of coldness in the ears continually.

Nitric acid. Much swelling of the internal ear; it is nearly closed, and sometimes there is much pain within it. Secretion superabundant.

Phosphorus. Difficulty in distinguishing the human voice.

Pulsatilla. Sensation as if the ears were stopped up.

Silicia. Partial relief is obtained by blowing the nose.

Sulphur. Aggravation for a while after eating or blowing the nose.

Compare, also, **Calcarea c., Petroleum, Hepar, Staphysagria,** etc.

Affections of the Eyes.

The eyes sometimes become the seat of a still more painful affection in pregnancy. Dr. Bezard* relates the case of a lady who, in the fifth month of her ninth pregnancy, was suddenly and without any known cause seized with a deep-seated pain in her right eye. There was no external sign of disease, except that there was no secretion of tears; there was, however, a sensation of strong pulsation at the bottom of the orbit, accompanied by acute and frequently repeated lancinating pains, by appearances of rapidly-darting specks before the eyes and by errors of the vision. Pain of the forehead and at the root of the nose, together with a sense of weight and oppression about those parts, aggravated the patient's distress. In a short time the rays of light ceased to irritate the retina, the eye became insensible to the contact of the finger, and the patient could intently stare at the sun with-

* *Journ. de Med.*, par Leroux, xxxiii., p. 72.

out producing any painful excitement. Inability to sleep accompanied this local affection for several weeks. The delivery was happily accomplished, and in the course of some days subsequently the lady found that she could perceive light with the eye which she considered as lost to her, and after some days she could clearly distinguish objects with it. She gradually improved in this respect for eighteen months, when she became *enceinte* for the tenth time. At about the fifth month, at the same time as in the former pregnancy, she was seized with similar but much more intensely severe pains in the same eye. In this pregnancy the difficulty extended to the left eye also, which after delivery in great measure recovered its functions, but the right eye remained permanently insensible to light.

According to Beer,* amblyopia or amaurosis, accompanied with nausea or with vomiting which cannot be quieted, sometimes occurs early in pregnancy and ceases after parturition. He saw a young Jewess, who in her first three pregnancies, which followed in quick succession, began to grow blind in the early period, and became quite amaurotic in the third or fourth month. On the first two occasions she continued blind until after parturition, and the third time her sight never returned. Desmarres also mentions pregnancy among the indirect causes of amaurosis.† Exactly opposite to this is the case quoted by Cazeaux, of a young woman whose imperfect vision had compelled her to use spectacles from childhood, but whose sight had so much improved immediately after the beginning of her pregnancy that she had no longer need of magnifying-glasses.

In affections of the eyes study the following remedies:‡

Aurum. Objects appear as if divided horizontally.

Belladonna. Objects appear dim. As if inverted or double.

Calc. c. All objects appear as if seen through a mist.

Causticum. Sudden and frequent loss of sight, with sensation of a film before the eyes. The dimness of vision is greater after every headache. Paralysis of the upper eyelids, so that they hang down.

China. She can only distinguish the outlines of distant objects. When reading, the letters appear pale and surrounded with a white border. She sees better after sleeping.

Cicuta v. The letters seem to move about when she is reading.

Cina. She can see more clearly for a while after rubbing the eyes.

* *Lawrence on the Eye*, p. 612.

† *Maladies des Yeux*, Paris, 1847, p. 715.

‡ *Berridge's Repertory on the Eyes.*

Hyoscyamus. Frequent spasms of the eyelids. Strabismus. All objects appear of a red color, or larger than they are.

Natrum mur. Frequent spasmodic closing of the eyelids.

Nux v. Heaviness and contraction of the lids.

Phosphorus. All objects appear to be covered with a gray veil.

Pulsatilla. Sensation as if the eyes were covered with a mist, or as if the dimness could be removed by rubbing something off from the eyes.

Sulphur. Dimness of vision and the gas- or lamp-lights appear to be surrounded by a halo.

Compare, also, **Cyclamen e., Drosera, Glonoine, Lithium c., Mercurius, Ruta, Senega, Sepia, Tijanium, Veratrum,** etc.

Headache.

This forms one of the most common and most painful affections of pregnancy. It may arise in part from sedentary habits, especially in the more advanced stages of pregnancy, and for similar reasons it may be both complicated with and aggravated by constipation. In persons who are usually subject to headache the condition of pregnancy may serve to increase the difficulty. The cephalalgia of pregnancy may attack those of an anæmic habit and nervous temperament, or it may appear in connection with a plethoric condition, indicated by flushing of the face and giddiness aggravated by stooping. Or, again, the headache may accompany nausea and other gastric disturbances, with paleness of the face and general debility.

The treatment will usually be very simple, since the indications can hardly fail to be plain. When the disorder appears in connection with constipation, increasing in severity upon each occasion till the bowels are moved, and seems also to result in some measure from the sedentary mode of life to which so many women addict themselves even when not *enceinte*, exercise in the open air should be strongly advised, to be taken in the manner best suited to the circumstances of the patient.

Neuralgia.

Facial neuralgia in pregnancy differs but little from headache in its causes and requisite mode of treatment, except that while like headache it may arise in connection with constipation, it is otherwise more apt to occur in persons of a pale, anæmic or nervous temperament than in those of a ruddy, plethoric habit of body. According to Tyler Smith, "facial neuralgia from uterine irritation is a very common affection of pregnancy. It generally affects the dental nerves,

particularly those of the upper jaw. In many subjects acute caries of the teeth occurs; in some child-bearing women a tooth or two is lost in each pregnancy." In neuralgia of the face in pregnant women, without disease of the teeth, the same author says *a generous diet is called for*, and he advises also wine and porter.* The latter articles we think can hardly ever be needed in this country, unless perhaps temporarily in cases of *great privation from suitable nourishing food;* in such instances a little wine may aid in restoring the system from its enfeebled condition, and thus enable it the more readily to avail itself of a wholesome and nutritious diet. Great care must be taken in cases of severe neuralgia in pregnancy—cases which may constitute a true spinal neuralgia—lest from loss of sleep, inability to assimilate suitable food and the depressing influence of long-continued suffering, the system may become so much reduced as to induce abortion, and even fatal marasmus.

In selecting a remedy for the cure of the headaches and neuralgias of pregnancy the practitioner should bear in mind the importance of the concomitant symptoms, as well as of those especially of the disorder itself. The following medicines may be studied among others for these painful and distressing affections:

Aconite. In headache or neuralgia, accompanied by vertigo on rising up in bed. Crampy sensation in the root of the nose. Sensation as if the whole brain would press out at the forehead. She fears to be in a place of excitement or confusion.

Belladonna. Flushed face and injected eyeballs. Cannot bear noise or bright light. She seems to be in a stunned or stupid condition.

Bryonia. A splitting headache; she wishes to keep very still. Dryness of the lips and mouth. Nausea on rising in bed.

Calc. c. Headache, with an unusual accumulation of dandruff on the scalp. Headache is aggravated by ascending, as in going up stairs; the blood seems to be forced into the head on ascending, causing a burning sensation. Vertigo on ascending.

Cocculus. Her head feels worse after eating or drinking. Headache, as if the eyes would be torn out, particularly on motion, with vertigo.

Cimicifuga. Lancinating pain over either eye or in the eyeball, which is worse every other day. Heat, sense of fullness and throbbing in the head. The pain is relieved in the open air, and aggravated by the heat of the stove. Throbbing in the head when ascending.

* *Braithwaite's Retrospect*, xxxiii., p. 252.

Coffea. *Intense* pain, the head feeling *contracted* or as if *too small.* Nervous excitement, with sleeplessness; or drowsiness, yet with inability to go to sleep.

Gelseminum. Sharp shooting pains through the face, eyes and head, which feel like rheumatic pains; the face is congested and of a dark or dusky hue. The headache commences in the neck quite suddenly, and spreads from thence over the head, or vice versâ; dimness of vision; heaviness of the head; vertigo; stupor; dull expression of the countenance. Powerlessness of the muscles.

Glonoine. Whirling in the head, with giddiness; sensation as of expansion of the brain, the head feeling as though it would burst. Confused feeling in the head; perceptible throbbing of the carotid and temporal arteries. The headache or the neuralgia has been brought on by exposure to the rays of the sun, or is aggravated by such exposure. Can't bear the head covered.

Ignatia. Headache confined to one side of the head; clavus; unbearable pain, as of something sharp being forced into the brain; weak feeling in the stomach; suitable for women of melancholy disposition who are given to sighing, or to hysterical women.

Magnesia c. The pains are aggravated by talking or by mental exertion. She feels sad and disconsolate. Constipation.

Nux v. This medicine is especially suitable for headaches or neuralgias of pregnant women who are addicted to high living, the use of wine and spirits or coffee, and to keeping late hours, or who lead a too sedentary life. Constipation of the bowels or hæmorrhoids habitual. The head feels as if it would split, and the scalp is sore to the touch; pressure with the hands on the head relieves the pain. Nausea; accumulation of gas in the stomach after a meal, and other symptoms of dyspepsia. Very inanimate.

Pulsatilla. Hemicrania, occurring in women of mild and gentle disposition, given to weeping. The suffering, whether from headache or neuralgia, is much worse in a warm or close room, and is relieved by going into the fresh, open air.

Sepia. Headache, with aversion to all kinds of food, a feeling of emptiness or goneness in the pit of the stomach, which is very distressing. Headache occurring every morning, with nausea, vertigo, epistaxis. In women who have "moth-patches" on their foreheads, who are of sallow complexion, or who have a yellow streak across the bridge of the nose and under the eyes. Smell of food repulsive.

Spigelia. Facial neuralgia, generally of the left side of the face, and of very severe type. The parts supplied by the fifth pair of nerves

are especially affected. The pain involves the eyeball and orbit, and sometimes the eye of the affected side is very much congested. The pains are lancinating or lacerating, and are somewhat relieved by firm pressure. **Verbascum thapsus**, on the contrary, is indicated when even the slightest pressure greatly aggravates the suffering.

Sulphur. Heat on the vertex, habitually; frequent flushes of heat all over; cold feet; spells of faintness. Feels worse from 11 to 12.

Veratrum a. Headache causing delirium, dementia, and cold sweat on the forehead.

Toothache.

Toothache is a common and very distressing accompaniment of pregnancy, being in fact only a particular form of neuralgia. Leadam strongly advises against extracting the teeth in such cases, since abortion has been known to follow the operation. Tyler Smith states that they ought only to be extracted with caution under such circumstances. But those having in their hands the homœopathic remedies, and blest with even a moderate amount of skill in administering them, will never be tempted to resort to a practice at once barbarous and dangerous. Still, it must be borne in mind that neither local applications nor remedies selected with reference to the teeth alone will suffice, in many cases, to remove an affection which is at once painful, sympathetic and constitutional—that is, connected with some individual idiosyncrasy. Here, as in all other cases of disease, the remedy should be selected in accordance with the totality of symptoms.

One or the other of the following remedies will usually be found useful:

Alumina. Drawing toothache, extending to other parts, as down the larynx, neck or shoulders, etc.

Arsenicum. Periodical toothache, occurring most frequently at night, however; it is then unbearable and drives the patient almost to frenzy. She is unable to remain in bed, and must get up.

Belladonna. Pains as if caused by ulceration, worse after lying down at night or when in the cold air. Pains mostly on the right side of the face, extending to the eye and its orbit. The pain causes moaning and weeping. Throbbing pains.

Calcarea c. The pain is aggravated by the slightest change, as from a current of air, whether warm or cold, drinking anything warm or cold, noise, mental excitement, etc.

Chamomilla. The pains are perfectly unbearable, and give rise to

much irritability of temper and impatience; redness of one cheek, while the other is normal or pale; jerkings in the teeth.

Gelseminum. General nervous excitement or weak and trembling. The pains come in paroxysms, are decidedly neuralgic, and dart through the jaws and face. Congestion of the head and face.

Hyoscyamus. Violent tearing and pulsating pain, causing spasmodic jerks of the fingers, hands, arms, facial muscles. Spasms in the throat, etc. Often delirious with the pain.

Magnesia c. Insupportable pain during repose; she must get up and walk about.

Mercurius sol. The teeth feel sore to the touch—so much so that pressing them together, as in eating, increases the suffering. The teeth feel elongated and as if loose.

Mezereum. Pains extending to the bones of the face and temples, particularly when they run along the left malar bone to the temple.

Nux m. Pains in the front teeth on inhaling cool air or taking warm drinks; feeling as if the teeth were grasped to be pulled out.

Nux v. Toothache occurring in women of irritable disposition, or who are high livers and are troubled with constipation or hæmorrhoids. The pain makes her feel cross and morose.

Phosphorus. The pain is of a jerking or twitching character. The periosteum of the tooth is inflamed and tender of pressure.

Pulsatilla. The pain is better when taking cold food or drink or upon exposure to cold air, and is worse from warm food or drink and in a warm room. Inclines to tears; can't lie down.

Rhus tox. Rheumatic toothache, or toothache occurring from getting wet. The pain is relieved by applying warmth to the face.

Staphysagria. The teeth grow black, become carious and brittle. She is very sensitive to either mental or physical impressions.

Chorea.

Where this affection occurs in connection with pregnancy the spinal system of nerves is affected secondarily through the ganglionic. The symptoms of this disorder are too strongly marked and too well understood to need to be repeated here. The following conclusions, arrived at by Dr. Lever twenty years ago, fully represent the present state of our knowledge in respect to most of the points mentioned.

"In conclusion," says this writer, "I venture to submit the following propositions: 1. That pregnancy is occasionally associated with chorea or convulsive movements; with paralysis of various parts of the body, of the extremities and of the nerves of special sense; and with

mania. 2. That the varying symptoms of such complications may be produced at any period of pregnancy, but when produced, although modified by treatment, are rarely removed during the existence of gravidity. 3. That the patients in whom these complications exist are women of a highly nervous temperament, of great irritability, or whose constitutional powers have been reduced by some long-continued but serious cause of exhaustion. Lastly: That although in most instances the symptoms will continue so long as pregnancy exists, yet in a majority of cases *we are not justified* in inducing a premature evacuation of the uterine contents."

To these views of an old-school author let us add what our own school teaches in one most important respect. In those cases in which chorea or epilepsy appears for the first time during pregnancy, we must regard this latter state as having sufficed to develop a certain morbid element of the constitution which had hitherto remained latent; and we should seize upon the opportunity thus afforded to endeavor, by the exhibition of the appropriate remedies, to *radically cure* this morbid taint, and thus, at the same time, prevent the continuance of the convulsive disorder after delivery, and provide against its return in a succeeding pregnancy. In those cases in which women become pregnant who have been subject to either of these nervous affections, the pregnancy may either render the convulsive attacks less frequent, cause them during the continuance of this state to cease entirely, or even render them of much more frequent occurrence than before. But while it is believed that no instances are recorded of epileptic patients having been permanently benefited by pregnancy, M. Malgaigne * cites a singular case in which the first attack of epilepsy was developed during pregnancy in an unfortunate young woman, who retained this fearful malady through all her subsequent life. Similar is the case quoted from a German author by Dr. Davis,† of a lady twenty-six years of age, of a bilious constitution, and the mother of three children, who was attacked with a periodical epilepsy whenever she conceived, and who sustained a paroxysm of this malady once a fortnight during the whole of her gestation. But as soon as she was delivered the disease left her. Its occurrence, therefore, was always a sign to her that she had become pregnant.

Chorea, whether occurring during pregnancy or at any other period, is amenable to homœopathic treatment. The subjoined remedies are presented as those most likely to be required, while the

* *Traite Théoretique et Pratique, etc.*, p. 368. † *Obstetrics*, ii., p. 900.

remedies and their indications given under the article on Chorea in the portion of this work devoted to the consideration of diseases of children may be studied with advantage:

Belladonna. When the tongue is partially paralyzed. Difficulty of articulation. Right side more particularly affected. Red eyes. Much debility. Rather stupid.

Calc. c. Chorea from a fright. In leucophlegmatic temperaments.

Causticum. If the upper eyelids are particularly affected, so that they hang down—can't keep them up. She is worse in the open air and in the evening. Involuntary urination on coughing.

Cocculus. She is always worse for a while after drinking, eating, sleeping or talking.

Crocus. She is worse every evening, with alternations of excessive happy, affectionate tenderness and *rage*.

Cuprum. When the spasms come on in paroxysms, grouped with other symptoms which always appear grouped with these paroxysms. Or when the paroxysm commences in one part—the finger or limb, for instance—and gradually extends till the whole frame is involved.

Hyoscyamus. Twitching and jerking of all the muscles, including those of the eyes, eyelids and face.

Ignatia. When there is much deep sighing and sobbing, or when the disorder is the result of a long-suppressed grief..

Nux v. Very fond of high living; troubled with constipation. Chorea is worse in the morning or in the early part of the day.

Stramonium. Full of strange, inconsistent fancies. The attacks are brought on by fright or care, and are very violent, especially at night; excessive jactitation of the muscles.

Study also **Apis mel., Asafœtida, Arsenic, China, Cicuta, Cimicif., Coffea, Dulc., Opium, Puls.. Sabina, Sepia, Silicia, Veratrum v., Zinc.**

Psorine or **Sulph.** In exanthematous complications.

Hysteria.

This affection is a frequent accompaniment of pregnancy. But in this place we need do little more than refer the reader to the very full discussion of the subject of hysteria in the succeeding portion of the work, similar indications being present and similar remedies called for in the pregnant as in the non-pregnant condition. Still, in cases of pregnant women the remedies should be selected, if possible, with still greater care, since, for obvious reasons, much greater importance must be attached to the hysterical condition in the pregnant state.

Dr. Burrows states that he has seen two cases in which hysterical symptoms attended during pregnancy, and the patients in each case became insane almost immediately after delivery. Romberg instances among the debilitating influences which are the most fertile sources of hysteria, "repeated miscarriages and a rapid succession of pregnancies and lactations." In most cases of women subject to hysteria, or any other form of general disorder of the nervous centres, the occurrence of pregnancy serves rather to aggravate than to ameliorate the pre-existing morbid condition.

Disturbances of the Intellectual Faculties.

Pregnancy is sometimes accompanied with a partial mental derangement, which may become complete insanity. Esquirol mentions the case of a young woman of a sensitive habit who had an attack of madness in two successive pregnancies, commencing immediately after conception and lasting fifteen days. Montgomery states that he knew a lady who was attacked with insanity in eight successive pregnancies; and another who was similarly affected three times soon after conception, and remained so until within a short time after labor, when she became sane and continued so until the next pregnancy.

It should be observed that insanity in pregnancy, whether arising in connection with the hysterical condition or not, has two distinct sources; in the one, the disturbance of the intellectual faculties appears to result rather from the physical condition, and to be dependent upon pregnancy physically considered; in the other, the mental powers manifestly give way and the reason loses its balance under the depressing influence of the melancholy and settled gloom which belong entirely to the moral sphere. And at the same time it should be remembered that a certain constitutional dyscrasia may be the real cause of the physical condition which leads up to insanity on the one hand, and even of the profound moral and spiritual dejection which leads down to it on the other. There are, however, numerous unfortunate cases, especially of young women who become pregnant while yet unmarried, in whom the agony of disappointed hopes, of affections misplaced and cruelly abused and betrayed, the present scorn of society, and the apprehension of a still increasing shame, suffice to hurl reason from its throne, to destroy the better judgment, and induce such madness as finds its necessary crisis in suicide. These are cases in which the grief of irreparable affliction, the mental anguish and moral suffering, can scarcely fail to

derange the soundest mind in the soundest body, and destroy both together.

But while time alone can effectually mitigate the more poignant forms of affliction, the homœopathic remedies are yet remarkably efficacious in "ministering to a mind diseased," whether the mental derangement result from physical dyscrasia, from moral suffering, or from both combined. The physician should most carefully explore all the symptoms, circumstances and conditions in respect to the physical system, to the sensorial, the intellectual, and the affectional faculties, in order to discover in the Materia Medica the exact simile of his patient's case. The serious responsibility which rests upon the physician to do all that human science can accomplish in such cases is not limited to the present condition or future well-being of the mother; regard must also be had to the unborn child, to prevent the predisposition to insanity from being perpetuated in the infant, and in a still greater degree developed in succeeding generations.

To give indications for remedies for the various and varying disturbances of the intellectual faculties would be a task of great magnitude, and, we might add, a work of supererogation, inasmuch as all the remedies comprising the Materia Medica would have to be recorded. Reference may be made with advantage, however, to those especially recommended for

Disorders of the Affections, Emotions and Feelings.

In addition to the disturbances of the intellectual faculties already mentioned as incidental to the condition of pregnancy, there are frequently seen certain anomalous variations of the spirits, temper and affections, for which the physician will be called upon to prescribe, either in connection with physical symptoms or in their absence. The special adaptability of the homœopathic Materia Medica to abnormal conditions of the sensational, intellectual, emotional and affectional faculties gives the homœopathic physician an immense advantage in this class of cases.

The *settled gloom*, the *profound melancholy* to which allusion has already been made as occasionally productive of insanity is sometimes seen to appear without any other assignable cause than the general one of pregnancy. When this depression of spirits assumes some particular phase—as, for example, that of a disposition to commit suicide—the appropriate remedy is at once suggested. The limits of the present work restrain us from doing more in this connection than merely to mention some of the most prominent forms of mental and

moral derangement, and to indicate the principles upon which they should all be treated. For a fuller exposition of the various mental and moral diseases, and a more detailed statement of the numerous homœopathic remedies applicable to them, the reader is referred to Dr. G. H. G. Jahr's very excellent work on *Mental Diseases.**

Remarkable *changes of temper* also appear, and in a still more numerous class of pregnant women. "Few women are quite as self-possessed or in as even spirits during pregnancy as at other times; little things annoy them, trifles depress them. Sometimes the most sweet-tempered women become irritable, cross and quarrelsome. The husband of a patient of mine, whose wife was remarkably good-tempered and attached to him, told me that the earliest symptom of pregnancy in her case was a disposition to quarrel with him especially. Dr. Montgomery mentions the case of a lady who, for the first two or three months of her pregnancy, was so irritable that, to use her own words, 'she was a perfect nuisance in the house.'"—*Churchill.*

Sometimes women whose ordinary dispositions have been soured by the trials of life, or who are characterized by a habit of fault-finding and complaining, experience a very happy change of temper on becoming pregnant. But more often those usually of a cheerful, lively disposition become sad, depressed and even morose, refuse all comfort or encouragement, and persist in the fixed belief of a fatal termination of their labor. Except in a very few and remarkable cases, such gloomy anticipations of impending evil are happily disappointed by a successful delivery, which is therefore succeeded by the restoration of the accustomed cheerfulness. And in those few instances in which the foreboding of a fatal termination of the labor proved prophetic, it is believed that some deep-seated dyscrasia of the physical system gave rise to this instinctive fore-consciousness, such as is sometimes seen in a similar fulfillment of such predictions in cases of ordinary illness.

The *feelings* and *affections* in many instances undergo a distressing transformation in pregnancy. It is related of one young woman that she was seized at about the fifth month with an unconquerable aversion to her apartment; so that, after much effort of reasoning and persuasion had been tried in vain, it became necessary to leave her in the country during the remainder of her pregnancy. Another

* *Special Therapeutics, according to Homœopathic Principles*, by Dr. Franz Hartmann. Third volume, *Mental Diseases*, written by Dr. G. H. G. Jahr. Translated by J. M. Galloway, M. D., Manchester; Henry Turner, 1857.

case is recorded of a young lady, for the first time pregnant, whose former love for her husband was replaced by an almost invincible antipathy to him. Similar to this is the moral state of those who, from imagining, in their hypersensitive, nervous condition, that they do not receive proper and necessary attention from their husbands and their friends, turn against them and conceive for them a strong dislike. In most cases all such morbid changes of the affectional sphere disappear with the termination of the pregnancy under the influence of which they were developed. But it becomes no less important for the physician to do all in his power to relieve such moral disorders, not only on account of the present suffering and distress to all concerned, but also because in some instances, at least, these disorders may become permanent, and even ultimate themselves in disturbances of the intellectual faculties, in subsequent puerperal mania, and finally in some dangerous forms of physical disease. These disorders of the feelings, emotions and affections may be connected with an hereditary predisposition to insanity, or with some deeply-seated and even malignant dyscrasia, which, if not remedied at its incipient appearance, may develop the most serious mischief in the present and in future generations. Happily, these disorders are usually amenable to careful medical and hygienic management. In selecting a remedy for any of the above-described conditions, even the most trifling symptoms, as well as those of apparently more grave import, should be taken into the account which makes up the *totality* of the individual case. And while individualizing is the touchstone of successful treatment in all cases, it is through it only that success can be attained in treating any of the varied affections of the mind. A few of the medicines most frequently called for in these cases are herewith subjoined:

Aconite. Fear and presentiment of approaching death; she fixes the time of her death. Fears to go out of doors, etc.

Aurum. She has no confidence in herself, and thinks others have none in her; this makes her unhappy. She looks on the dark side of everything; weeps and prays; thinks she is not fit to live, and has a strong inclination to suicide—to jump out of the window or from a height. Sleepless at night. Often very costive.

Anacardium. Estrangement from individuals and society, with fear of the future. Strange temper; she laughs at serious matters; is grave over laughable occurrences. Swears; thinks herself a demon. Loss of memory, dullness of the mind and inability to think. Dyspepsia.

Arsenic. Periodical attacks of anguish, inquietude, tossing and inability to lie in bed; fear of death; excessive dread of death; she is sure she will die. Easily exhausted; looks pale and haggard. Puffed and waxy appearance of the face.

Arnica. Thoughtless gayety; great frivolity and mischievousness.

Belladonna. Great distress with inquietude. Frightful visions; she wishes to hide herself. She has a wild look, a stunned appearance. She wishes to strike, bite and quarrel. Difficult deglutition.

Calc. c. Excessive mischievousness, with obstinacy. She thinks and talks about murder, incendiarism, rats and mice. She imagines people think she is insane. Feels as if she were going crazy.

China. She thinks she is very unfortunate and constantly harassed by enemies. The symptoms appear to be paroxysmal, and are worse every other day. Sensation in abdomen of distension.

Hyoscyamus. She fears she will be poisoned or betrayed or injured; she wishes to run away. Wishes to go naked.

Ignatia. She wishes for solitude; sighs and sobs; she will not be comforted. She is full of grief. Broods over troubles.

Lachesis. Excessive loquacity, with rapid change of subject, talks of one thing, then of another, etc. Jealous, proud, suspicious.

Lycopodium. Very reproachful and overbearing. Restless at night, and complains of not sleeping well. Worse after 4 P. M.

Moschus. She complains much, but of nothing in particular.

Natrum c. Estrangement from individuals and society, even from her husband and family. See also **Anacardium**, **Conium** and **Natrum m.**

Nux v. Loss of mental power; can't read or calculate, because she loses the connection of ideas; she thinks she will lose her reason. Worse in the morning or early part of the day.

Opium. Thinks she is not at her home; this is continually in her mind. Constipation, inactivity of rectum; stools round balls.

Phosphorus. Great sadness with tears, alternating with gayety and laughter. Suitable especially for tall and slender women; thin, hard and dry stools, evacuated with difficulty. Abdomen feels weak.

Platina. Past events trouble her. Contempt for other persons. She thinks all persons are demons. Thoughts horrify her.

Pulsatilla. Much weeping, even at answering a question. Most suitable for mild and gentle women, who are easily controlled.

Sepia. She is very uneasy about the state of her health; constantly worrying, fretting and crying about her real or imagined illness.

Silicia. She is occupied with pins—counts them, hunts for them, etc. She is always worse during the increase of the moon.

Staphysagria is very similar in some respects to Sepia. The patient is very sensitive to either mental or physical impressions.

Stramonium. She is worse in the dark or in solitude. Full of strange, ridiculous ideas. Talks or prays earnestly and constantly.

Sulphur. She is very happy, and imagines she is in possession of beautiful things. Awakens at night singing, she is so happy; she dreams very happy dreams, etc.

Veratrum. A desire to wander about the house. Erroneous and haughty notions. Disposed to be very taciturn.

Asafœtida, Gelseminum, Cimicifuga, Cocculus, Cypripedium, Moschus, Nux moschata, Phosphoric acid and **Zincum** may likewise be consulted.

The patient should receive the best advice from her physician in regard to the necessity of self-exertion in assisting to overcome the tendency to a disordered mental state. She should be urged to bear up bravely, and to resist, to the full strength of her ability, those feelings which are unnatural and are harmful. And those who surround her should likewise be instructed, if necessary, to treat her with the utmost kindness and consideration. If these conditions are not fulfilled, it is possible for the homœopathically selected medicine to effect a cure; but there can be no doubt that its effects will be powerfully aided by a proper attention to mental discipline and hygiene on the part of the patient, and a proper degree of kindness, yet withal firmness, on the part of her friends.

In concluding the general subject of disorders incident to pregnancy, it may be proper to remark—

I. While pregnancy serves in many cases to develop in some form —physical, mental or emotional—whatever latent tendency to disease had existed in the system, it does not render the body more liable to be attacked by external diseases; and in some instances, as is often seen in the phthisis of those *enceinte*, it actually retards the development and prevents the fatal termination of pre-existing disorders until after delivery.

II. The disorders of the mental and moral or emotional and affectional spheres which so often accompany pregnancy will always speedily disappear with the successful delivery of the child, unless based upon and representative of some profound constitutional dyscrasia. In this latter case such affections not only tend to perpetuate themselves after parturition, but to become developed in puerperal mania, and even ultimated in some malignant form of bodily disease.

CHAPTER XVIII.

THERAPEUTICS OF LABOR.

The Pains of Labor.

PAINS *ceasing.*—1. Bell., Kali c., Op., Puls., Sec. corn. 2. Cham., Natr. m., Nux v., Ruta, Sep. 3. Acon., Arn., Bor., Camph., Carb. veg., Caulophyllum, Chin., Cocc., Graph., Ignat., Lyc., Magn. m., Nux v., Plat., Sulph., Thuj.

——— *distressing.*—1. Cham., Gelsem., Kali c., Sep. 2. Acon., Arn., Aur., Bell., Cimic., Coff., Con., Lyc., Nux v., Sec. corn.

——— *spasmodic.*—1. Cham., Gelsem., Hyos., Puls. 2. Bell., Cimic., Cocc., Cupr. m., Ipec., Lycopod., Nux v., Sep.

——— *too weak.*—1. Bell., Cann., Cauloph., Cimicif., Gelsem., Kali c., Op., Puls., Sec. corn. 2. Cham., Natr. m., Nux v., Ruta, Sep. 3. Arn., Bor., Camph., Carbo veg., Chin., Cocc., Graph., Ignat., Lyc., Magn. m., Nux m., Plat., Sulph., Thuy.

——— *too strong.*—Bell., Cham., Coff., Con., Nux v., Puls., Sec. corn.

Aconitum. Great distress, moaning and restlessness during every pain. She fears that she will not be delivered, that she will die, or that something will certainly go wrong. The vulva, vagina and os are dry, tender and undilatable. It hurts her so there.

Arnica. With each pain there is great flushing of the face and heat of the head, while the rest of the body may be cool. The pains are so violent as to drive her almost distracted, yet little good is accomplished. Frequent desire to change position. She feels unaccountably sore and bruised in any position. The pains are very feeble, with a desire to change the position frequently.

Aurum. The pains make her desperate, so that she would like to jump out of the window or dash herself down; with congestion to the head and chest and palpitation of the heart.

Belladonna. The pains come on suddenly, and disappear after a time as suddenly as they came. Spasmodic contractions of the os, which is hot, dry and tender. Very red face and injected eyeballs, with pain; labor slow and tedious. Throbbing headache, with great sensibility to light and noise. The os uteri does not dilate readily in proportion to the pains. Jarring the bed annoys her.

Borax. The pains are accompanied by violent and frequent eructa-

tions. She fears a downward motion. She is very sensitive to the slightest noise, as the rumpling of paper, fall of the door-latch, etc.

Chamomilla. Her pains are spasmodic and distressing. She can hardly bear them; she wishes to get away from them. She is very fretful, peevish and cross; can't return a civil answer. Tearing pains down the legs. She is spiteful, or shrieks out sharply.

Camphor. Her pains have ceased, and her skin is cold, dry and shrunken; she does not like to be covered, and is restless. Camphor[200], or higher, will warm the patient, restore the pains, and, other things being equal, produce spontaneous delivery.

Caulophyllum. Extraordinary rigidity of the os uteri. Spasmodic and severe pains, without progress being made. The pains become very weak and flagging from exhaustion, on account of the long continuance of the labor. Thirst and feverishness. False pains.

Causticum. She complains mostly in her back of a sore, distressing pain. Her suffering is principally in the back. When the unnatural condition of the pains is attributable to debility from night-watching, grief, or other depressing influence.

Carbo veg. The pains are too weak, or cease from great debility. Particularly indicated where there is a varicose condition of the vulva, or when there has been a great loss of animal fluids, or the woman is laboring under the debilitating effects of previous or existing disease.

China. Where much blood has been lost or there have been fainting fits, convulsions, etc. Cessation of pains from the loss of blood, a protracted diarrhœa, etc.; her skin may even be cold and blue. She can't bear to be touched during the pains, not even on her hands.

Cimicifuga. The woman complains that the pains do not seem to be located properly to effect expulsion, but they are of a tearing and distressing character. Suitable to women of a rheumatic tendency. The pains are very violent and spasmodic, and there is great nervous excitement.

Cocculus. Her pains are of a spasmodic, irregular and paralytic character. She will have one hard one, and then, after a longer interval, several light ones, etc. Much headache. Numb or paralyzed feeling of the lower limbs.

Coffea. Labor-pains insupportable to her feelings; she feels them intensely, weeps and laments fearfully. Although the pains are severe, they are not efficacious.

Conium. If there are scirrhosities in either the breasts or uterus and labor does not progress normally—pains spasmodic; vertigo, particularly on turning in bed; rigidity of os uteri.

Cuprum. Violent spasmodic pains appearing at irregular intervals, often with violent cramps in the lower extremities, or the cramps may be confined to the fingers and toes. Great restlessness between the pains.

Gelseminum. Cutting pains in the abdomen from before backward and upward, rendering the labor-pains useless; these come on with every pain. These pains are very distressing, and may be felt throughout the abdomen.

Gossypium. In cases of lingering almost painless labors, where the uterine contractions are feeble or entirely inefficient. The case presents negative rather than positive symptoms.

Graphites. In large and corpulent women of venous constitution, who are subject to tettery eruptions, which itch and emit a glutinous fluid. The pains are weak or have ceased entirely.

Hyoscyamus. There is delirium, startings and jerks in various parts of the body, in the face, eyelids, and sometimes all over.

Ignatia. Deep sighs and sadness; she must take a deep breath in order to breathe at all. The labor does not progress.

Ipecacuanha. One *constant* sense of nausea, not a moment's relief. The pains are distressing by reason of a sharp cutting about the umbilicus, which darts off toward the uterus; this distress hinders the proper action of the uterus.

Kali c. The pains begin in the back, and instead of coming round in front like a regular pain, pass off down the buttocks or the glutæi muscles; or they are sharp and cutting across the lumbar region, arresting contractions. She is sometimes greatly disturbed by sharp stitching pains. Often much belching with relief.

Lycopodium. During the paroxysms of her pain she is obliged to keep in constant motion, with weeping and lamenting; there may be even spasmodic contraction of the os, with the above symptoms. She finds relief by placing one foot against a support and pressing and relaxing alternately, so as to agitate her whole body.

Magnesia m. The labor-pains are interrupted by hysterical spasms. (See Hysteria, same remedy.)

Natrum c. Anguish, tremor and perspiration with every pain, during which she desires to be gently rubbed; this rubbing affords relief. She often says, "Rub me, rub me."

Natrum m. Very, *very* sad and foreboding—so much so that labor goes on very slowly, from feeble pains.

Nux m. She is very drowsy, sleepy and disposed to fainting spells, the pains being correspondingly slow and feeble, or quite suppressed.

Nux v. Every pain causes an inclination to go to stool or to urinate. Every pain causes fainting, and thereby interrupts the progress of the labor. Retarded and painful labor in women accustomed to a sedentary life, and to those accustomed to high living and an inactive, indolent life.

Opium. The pains have been suppressed by fear or fright. She is in a soporous condition, with red face, injected eyes and stertorous breathing, and there is twitching and jerking of the muscles.

Phosphorus. Tall and slender women of phthisical diathesis, the pains being distressing and of but little use. Very weak and empty feeling in the abdomen, sometimes with cutting pains.

Platina. The contractions are interrupted owing to the very painful sensitiveness of the vagina and external genitals. Very painful though ineffectual, spasmodic labor-pains. Her thoughts horrify her.

Pulsatilla. Suitable to mild, tearful women, who are in an apparently healthy condition, yet the uterus seems almost inactive. The pains excite palpitation, suffocating and fainting spells, unless the doors and windows are wide open; she feels that she must have them open, as she wishes for cool, fresh air. Absence of thirst. Labor progresses very slowly.

Rhus tox. Very restless, must change positions often, with relief for a short time.

Ruta. Lameness and soreness all over; weak, feeble contractions.

Secale c. Particularly in weak, cachectic women, or in women debilitated from venous hæmorrhages. In such cases it is particularly efficacious for weak, suppressed or distressing pains. Fainting fits in such cases; small or suppressed pulse.

Sepia. Shuddering attends the pains, and she rather wants to be covered up more, because she can bear the pains easier. Indurations are felt upon the neck of the uterus. Shooting pains in the neck, extending upward. Spasmodic contractions of the os in these cases, when fine needle-like pains fly up the os.

Stannum. The pains seem to exhaust her very much, and make her speech difficult from weakness in the chest. She cannot answer questions; she is all out of breath; the labor does not progress.

Sulphur. She has flushes of heat, frequent weak and fainty spells, wants more air. Cold feet, heat on top of head.

Thuya. In some cases of complication with syphilis, which hinders the proper contractility, this remedy will do much good immediately.

Veratrum. The pains are accompanied with cold sweat, particularly

on the forehead, fainting on the least motion, the pains exhaust her much, and she feels completely done over after every pain.

Rigidity of the Os Uteri.

Where rigidity of the os uteri in labor depends on organic lesions of the cervical tissues the treatment to be resorted to is laid down on page 236. But where, as is commonly the case, the rigidity or spasmodic contraction is due to mere functional disturbance, one of the following remedies will be found to be sufficient to produce a gradual relaxation and dilatation. *Rigidity of the vaginal walls*, dependent on a similar cause, may likewise be removed by the same remedies.

Aconite. When there is great dryness of the vagina; much moaning, restlessness, feeling of discouragement; fears she will not do well; the parts feel contracted, rigid and undilatable. Aconite, in water, every half hour till better.

Belladonna. There is heat of the parts, with great tenderness; moaning; flushed face; injected sclerotica; throbbing of the carotids; all her motions are quick; pains come suddenly and disappear suddenly.

Caulophyllum. The pain is spasmodic; it appears in various parts of the abdomen; patient seems much exhausted and the pains very inefficient.

Chamomilla. Where there is great irritability of a spiteful nature; she seems scarcely able to bear the pains; she moans, laments, calls for assistance, sometimes screams out, and the pains appear as if too severe to be endured.

Cimicifuga. The pains seem intensely severe, but spasmodic and ineffective. The patient is of a rheumatic diathesis and subject to rheumatic pains.

Gelseminum. The pain extends, in the abdomen, from before backward and upward; this pain is a false pain, and is so severe as to interrupt the true labor-pain. The *labor*-pain seems utterly inefficient. The pain is sometimes cramping in various parts of the abdomen. The os is rounded and hard, and feels as though it would not dilate.

Lobelia inflata. When the respiratory organs sympathize in the trouble, as in violent dyspnœa, with every uterine contraction, which seems to neutralize the pain.

Any remedy in the Materia Medica may be useful in these cases, as the rigidity or contraction is but the result of some morbific influence working upon the system; therefore see remedies for difficult labor.

Hour-Glass Contractions. (See page 202.)

The medicines most suitable for this condition are: Belladonna, Chamomilla, Kali carb., Platina, Secale cornutum and Sepia. Next best: Cocculus indicus, Conium, Cuprum ars., Hyoscyamus, Nux vomica, Pulsatilla, Rhus tox, Sulphur.

Belladonna. Almost constant moaning, which seems to afford relief; injected eyeballs; flushed face; can't bear light or noise; pulse full and bounding; very hot skin.

Chamomilla. Distress which it seems she can hardly endure; a spiteful irritability; thirst; desires fresh air; restless; more or less discharge of dark blood from the vagina.

Cocculus indicus. Terrible pain in the small of the back; lower limbs feel paralyzed; frequent vomiting.

Conium. Great vertigo when turning the head; very sensitive across the abdomen.

Cuprum. Violent and distressing cramps in the uterine region; cramps in the extremities, hands and feet.

Hyoscyamus. Delirium; jerking and twitching of muscles; bluish color of the face.

Kali carb. Distressing pain in the back, running down into the glutæi muscles; stitching pain in the abdomen; abdomen bloated with wind; restlessness and thirst.

Nux vomica. Sore aching pain in the region of the uterus; a very frequent inclination to stool; great mental depression and nervous irritability.

Platina. Very great sensitiveness of the organs; severe cramping pains in the region of the uterus; constant oozing of dark, grumous blood from the vagina. Horrified by her thoughts.

Pulsatilla. In very mild, tearful women; desires fresh air; very restless; absence of thirst.

Rhus tox. Occasional paroxysms of pains extending down the posterior surface of the limbs; restless, with relief after every change of position; must change frequently.

Secale cornutum. A sensation of a constant tonic pressure in the uterine region; this causes great distress; wishes fresh air; don't like to be covered much.

Sepia. Numerous little darting pains, shooting upward from the neck of the uterus; flushes of heat; cold feet.

Sulphur. Frequent weak and fainty spells; wishes to be fanned; flushes of heat and cold feet.

In the preceding cases the remedy should be repeated every fifteen minutes or half an hour till improvement sets in.

Fainting, Swooning, Syncope.

These are synonymous terms, but perhaps syncope represents the complete stage of swooning. In treating this abnormal manifestation much will depend upon the correct observation of the practitioner, and much care is needed that a proper prescription be made.

If the patient is not already lying down, she should be placed in that position, and an abundant quantity of fresh air should be allowed to enter the room. All applications are usually injurious, excepting perhaps a little cold water applied to the face by sprinkling or gentle bathing. The homœopathic remedy is the safest dependence. The remedies herewith mentioned are suitable for attacks of syncope occurring before, during or after parturition:

Aconite. When there is violent palpitation of the heart; congestion of blood to the head; buzzing in the ears; pale face on assuming an erect position from the recumbent; after a fright.

Arnica. From injuries of any kind; from fatigue; from stitches about the heart; when the head is very hot and the body cool.

Arsenicum. Result of debility or prostration, when the least effort causes fainting; thirst for frequent sips of cold water; wishes to be wrapped up warmly; pale bloating of the face.

Carbo vegetabilis. Fainting from weakness caused by loss of animal fluids; after sleeping; after rising in the morning; much belching of wind or eructations.

Chamomilla. Where there is great irritability of a spiteful kind; she is very sensitive to the pains, which cause fainting, with vertigo, dimness of vision, dullness of hearing and nausea; must have fresh air and fresh water.

China. After loss of blood particularly or other animal fluids, with ringing in the ears, coldness of the skin, loss of pulse, and cold perspiration.

Coffea. In highly sensitive persons after a fright, if aconite fails.

Digitalis. Where the pulse is very slow and irregular; cold sweat, deathlike appearance of the countenance.

Nux vomica. As the result of over-indulgence, as from over-eating, etc.; after vomiting; after every labor-pain; after stool; with congestion of the blood to head or chest, with trembling.

Ignatia. When the fainting seems to result from grief; much trembling; sighing and sobbing.

Sepia. Feet and hands cold as ice; flushes of heat; a distressed, empty feeling in pit of stomach.

Stramonium. Fainting spells occurring every day or several times a day; the person suddenly falls, with pale face and almost insensible breathing; sometimes face is bloated red; the fainting may continue a long time. Talks in an imploring and beseeching manner.

Veratrum album. Fainting from the slightest exertion, turning in bed, straining at stool, retching as if to vomit, etc.; cold sweat upon the forehead.

Bryonia. When the fainting fits occur from the least motion, even when no effort is required; sighing respiration; thirst for cold water and drinks large quantities.

Camphor. Where there is a marble coldness of the surface of the whole body; very weak pulse.

Cocculus indicus. Paralyzed feeling in all the limbs, with trembling; paralytic weakness, particularly in the lower extremities; spasmodic pains in the uterus, with nausea and vomiting.

Lachesis. Fainting fits, with great and almost unconquerable sadness and gloom; dreads society and company; great and persistent constipation, with a sensation as though the anus were closed.

In all these cases during the attack it is better to administer the remedies every five or ten minutes till consciousness is restored, and then wait for the next attack.

Weakness, Debility, Exhaustion.

Arsenicum. From any cause when there is sense of great exhaustion after every effort, however small; chilly, wants to be wrapped warmly; cold water disagrees; waxy paleness of skin; may be bloated; going up stairs is very exhausting; great restlessness, particularly after twelve o'clock at night.

Calcarea carbonica. In leuco-phlegmatic temperaments; much perspiration about head and upper part of body; every exertion is fatiguing; ascending causes vertigo; cold, damp, clammy feet; the least cold air is almost unendurable.

China. Particularly when hæmorrhages or loss of animal fluids are the cause; ringing in the ears like bells; vertigo; cold perspiration; feeble pulse; almost insensibility.

Ferrum. Frequent attacks of tremor, alternating with a sensation of weakness, as if very weary; trembling of the whole body; feeling

very weak; feels very weak even from talking; wishes to lie down, face and lips very pale, or the cheeks may be fiery red.

Iodine. Pulsation in all the arteries at every muscular effort; great prostration of strength, so that even talking causes perspiration. Food does not seem to nourish her.

Kali carb. When one feels the pulsation of all the arteries even down to the tips of the toes; feeling of emptiness in the whole body, as if the body were hollow; the whole body feels heavy and broken down, so that it is only with the greatest effort that one can make any exertion.

Lycopodium. When lying in bed she feels as if she would die from weakness; the lower jaw drops, not being able to keep the mouth shut; the breathing is slow and through the mouth; the eyes half open; when walking she is obliged to let her hands hang down, and the bones of her lower extremities are painful; sudden weakness coming on even when sitting; red sand in the urine; flatulency.

Muriatic acid. Great debility, with hæmorrhoids so sensitive they can hardly be touched, and they often bleed; so weak cannot lie up on the pillow, but constantly slides down into the bed.

Nux vomica. Debility from abuse of coffee, wine, spirituous liquors or narcotic substances, from the abuse of highly seasoned food; night-watching; cannot walk on account of giving out of lower extremities; knees knock together; wishes to lie down all the time; cannot sleep well after three o'clock in the morning; great sensitiveness to external impressions, noise, talking, strong scents and odors, or bright light; trifling ailments affect her almost beyond measure; blue margin around the eyes; nose looks sharper and more pointed than usual; the face shrunken.

Rhus tox. Restlessness characterizes the use of this medicine; she is very restless, and is always relieved for a short time by a change of position, when she must move again; loss of appetite; cold water disagrees.

Sepia. Sepia debility is usually characterized by a painful sensation of emptiness at the pit of the stomach; icy coldness of feet and hands; urine deposits a very hard, crusty sediment; flushes of heat; loss of appetite.

Stannum. Characterized by great sense of weakness in the larynx and chest, thence all over the body, from talking or reading aloud.

Sulphur. Weak, fainting spells coming frequently during the day; feels very faint and weak from eleven to twelve every morning; flushes of heat; cold feet; heat on top of the head.

Veratrum. Excessive weakness; is obliged to move very slowly; so weak she can hardly raise her hand, and every motion seems to increase the debility; even a movement of the bowels causes great debility; very weak, almost imperceptible pulse; cold sweat, particularly on the forehead; thirst for icy cold water.

The above treatment, it need hardly be remarked, is suited not only to the weakness which sometimes manifests itself during the progress of labor, especially of tedious labor, but as well when occurring either during pregnancy or after parturition, or, in fact, at any other period of the woman's life. Stimulants do positive harm.

CHAPTER XIX.

HÆMORRHAGE.

THE hæmorrhage that may occur in non-pregnant women will hereafter be considered under the head of Metrorrhagia, while that which arises during the earlier months of pregnancy will be discussed in connection with Abortion, in which it tends to result. Puerperal hæmorrhage, our present theme, includes the flooding which occurs during the latter months of pregnancy, just previous to parturition, during its progress or subsequent to the delivery of the child. No complication of labor is more justly dreaded by the practitioner, since there is none capable of proving more rapidly fatal unless promptly arrested. Nor indeed can this indispensable result be produced unless the physician so completely retains his presence of mind in the most trying moments as to be able to ascertain the cause of the mischief, institute the requisite procedure where direct interference is needed, and select the proper medicaments when operative interference is not called for. Fortunately, uterine hæmorrhage is not a frequent complication of pregnancy and parturition. According to Churchill, out of 170,221 cases, hæmorrhage occurred 1370 times, or nearly 1 in 124. The mortality of mothers and children is in frightful proportion, however, to the number of cases, for, according to the same author, out of 782 cases, 126 mothers died, or about 1 in 6; while of 944 cases, 288 children perished, or about 1 in 3. These results occurred in cases treated by practitioners who knew nothing of the efficacy of medicines applied homœopathically for controlling

hæmorrhage. The extent of the modifying effect homœopathic treatment has upon the mortality of mothers and children in these cases is truly wonderful and diminishes fatal cases almost to none at all.

It may be laid down as a general proposition that nearly all forms of hæmorrhage connected with child-bearing are due to a *partial* separation of the placenta, by which the utero-placental vessels are torn and their uterine orifices left patulous through the non-contraction of the uterine muscular fibres. (Post-partum hæmorrhage, either before or after the expulsion of the placenta, may depend upon a variety of causes other than that just stated.)

When hæmorrhage occurs before or during delivery it is due either to an *accidental* separation of the placenta, which may be properly implanted at the fundus of the uterus, or to an *unavoidable* separation, in consequence of its being unnaturally located at the cervical extremity of the uterus and implanted more or less centrally over the os, so that the placenta beyond a certain point cannot grow nor the uterus expand, nor can delivery be effected without a more or less extensive separation of the placenta. From these circumstances hæmorrhages occurring before or during labor have been termed *Accidental* and *Unavoidable.*

Accidental Hæmorrhage.

This form of hæmorrhage occurs when from any cause the placenta becomes partially detached from the uterine wall; and generally the danger is proportionate to the extent of the detachment, though this is not always the case, for a fatal result may follow a slight separation. The flow of blood may show itself externally if there be room for it to descend between the uterus and the epichorion, and generally this is the case; or, on the other hand, it may be concealed, going on insidiously even to a fatal extent, and can only be known by its effects upon the system. The usual *causes* of this separation of the placenta are—shocks or blows or violence of any kind, fatigue, over-exertion, straining from lifting or reaching, jolting in a carriage or on a railroad, etc. It may likewise be produced by mental emotions, which, by exciting uterine action, may produce a separation of the placenta. In some constitutions, plethoric or susceptible, the slightest influences suffice to bring on the detachment and hæmorrhage, and in certain cases it seems to arise, as it were, spontaneously and without traceable cause during the course of labor. And again, there appears in some

cases to be an acquired tendency to accidental hæmorrhage, which the history of the case reveals to the practitioner.

When the flow of blood is external the case is plain enough, and even when the hæmorrhage is concealed its effects are so pronounced that a diagnosis is easily made. The most marked and characteristic symptoms are—*acute pain,* which occurs at the seat of injury, generally the fundus; *collapse; great distension of the fundus of the uterus.* In addition to these there may be rigors, tension and sensation of weight and fullness in the abdomen, and fainting. The pulse will be quick and feeble, and if the loss of blood be considerable there will be pallor of countenance, great agitation, partial or total blindness, noises in the ears or complete deafness.

In an article on "*Concealed Accidental Hæmorrhage*" in the *American Journal of Obstetrics*, August, 1869, Dr. William Goodell of Philadelphia gives the histories of one hundred and six cases. From this article we quote a portion of his summing up of the most marked indications of the occurrence of this unfortunate complication:

"An analysis of the foregoing one hundred and six tabulated cases shows that by far the most frequent symptom is an *alarming state* of collapse, carrying dismay into the heart of the bystander. Every detailed example, without exception, presents most of its characteristics, such as coldness of the surface, excessive pallor, feebleness of the pulse, yawns, sighs, dyspnœa, restlessness and retching.

"*Pain* holds the second rank in frequency. Out of these cases, sixty-four exhibit every grade of suffering, from the 'queerish feeling' to the 'greatest torture' and 'agonizing shrieks.' . . . In the great majority the pain was referred to the site of the placenta, and was of a bursting character. . . .

"The third most constant symptom is the *absence or extreme feebleness of the pains of labor.* Of the former, twenty-eight examples are tabulated, of the latter, fifty-six; but of these the majority presented no labor-pains until the membranes were ruptured, either naturally or artificially. In only twelve were the pains normal from the outset.

"Next follows a *marked distension of the uterus,* which produces those painful sensations of 'bursting,' that burden of every cry of the sufferer. Out of the one hundred and six examples, forty-two presented this symptom, although not always recognized during the life of the patient. . . .

"Very often, before the lapse of many hours, *a show of blood,* ranging from an ooze to a gush, will clear up all obscurity; but this trustworthy symptom does not usually occur at the outset of the attack,

but at a time when it may be too late to interfere. A diagnosis should not, therefore, depend upon its presence, but simply be affirmed by it."

The occurrence of such grave symptoms as these during the course of a labor should always excite strong suspicion of internal hæmorrhage; and if there be a history of a fall, a blow, or any other mechanical injury having been inflicted, the diagnosis is strongly confirmed. Should accidental hæmorrhage occur during the progress of labor, and the pains are not arrested thereby, it will be noticed that during a pain the flow nearly or entirely ceases, in consequence of the closure of the mouths of the bleeding vessels by that natural hæmostatic uterine contraction. The opposite of this is the case in unavoidable hæmorrhage (placenta prævia), where the flow occurs during a pain and nearly or entirely ceases during the intervals.

The diagnosis of accidental from unavoidable hæmorrhage is essential to its proper treatment, and it may be determined by means of the following distinctions:

I. Accidental hæmorrhage before labor or during its progress usually results from some definite and ascertainable cause, such as mechanical injury, while in placenta prævia there is no such history, and the flow of blood commences, as it were, spontaneously, perhaps while the woman is at perfect rest or asleep in bed.

II. In accidental hæmorrhage the discharge takes place freely in the intervals between the pains, and is arrested during the continuance of the pains; while in unavoidable hæmorrhage from placenta prævia the conditions are exactly opposite, the flow occurring during the pain, which expands the os uteri.

III. In accidental hæmorrhage the os uteri is free, and closed by the membranes only, which may be tense or flaccid, and the presenting part of the fœtus may be made out by the finger; while in placenta prævia the placenta, as a soft, spongy mass, may be detected within the os, and in all probability the presenting part of the fœtus cannot be touched or made out.

IV. In cases in which accidental hæmorrhage occurs the lips of the os will not have more than their usual thickness; while in placenta prævia they will be thick, and active pulsation will be strongly marked.

V. "In accidental hæmorrhage the blood, before being discharged, having to find its way some distance to the os, deposits its fibrin, so that coagulation does not occur in the vagina, which is free from clots; whereas the blood in placenta prævia comes directly from the uterine

or placental vessels, or both, into the vagina, and is there discharged as blood, leaving coagulations behind in the vagina." *

The *treatment* of cases of accidental hæmorrhage must be directed entirely by the circumstances of each case. If the woman has not advanced to full term and the hæmorrhage is slight, which may be known by its effects upon the system, there is reason for believing that placental detachment has not taken place to any great extent. In such a case, by perfect rest in the recumbent posture, the allaying of all excitement or anxiety, cool drinks, and the administration of the appropriate and homœopathic medicaments, the hæmorrhage may be arrested, and the woman delivered at term without any further untoward circumstances arising. At the close of this chapter the medicines appropriate in all cases of uterine hæmorrhage are given, with their indications in detail; and to these remedies the reader is referred. The nicest discrimination is needed in effecting a proper selection of the remedy, and when the truly homœopathic remedy has been selected in accordance with the totality of symptoms, subjective and objective, the practitioner will often be surprised by the happiest results in very gloomy cases. The use of plugs of any kind, or the resort to other mechanical measures in such cases, will almost certainly bring on labor.

Even in the worst cases of accidental hæmorrhage a fair trial should be given to the homœopathically indicated medicament before proceeding to operative interference; this being warranted by the well-ascertained hæmostatic power of such specific medication, and by the success which has attended such efforts.

In cases, however, where the flooding is very great, the danger is imminent, the woman is at her full term and the hæmorrhage is accompanied with pains; or, again, in the above-described milder cases, where the measures recommended have failed, and labor has come on spontaneously or in consequence of the irritation produced by plugging the vagina, the object of treatment must be to bring on labor, to induce uterine contractions, and to secure the expulsion of the child. These indications will be best fulfilled by *rupturing the membranes*, by which means the bulk of the uterus is diminished by the evacuation of the liquor amnii, its walls more effectually contract upon the placenta, at least temporarily arresting the flow from the uterine sinuses, and at the same time facilitating the expulsion of the fœtus. This being done, a period of rest should be allowed to the patient, giving her time to rally, and at the same time giving opportunity to the natural

* Dr. Calthrop, in *Braithwaite's Retrospect.*

forces to complete the labor; and if dilatation of the os uteri progresses and expulsive pains come on and increase, the case should be left without further interference. Should the os be dilating naturally though slowly, and the flow be great, the vagina may be plugged if medicine fails to arrest the hæmorrhage while the dilatation is completed. Should the pains be feeble and the os not dilating, remedies suited to the existing condition in these respects must be selected—remedies which will render available such desultory and inefficient pains as may be present.

If, however, the case is such as to demand prompt delivery to secure safety for the mother, and the os fails to dilate, Barnes' dilators must be used for the purpose of effecting dilatation; and when that has been sufficiently accomplished labor may be completed by the long forceps, by podalic version or the bimanual mode of turning, according to circumstances.

After the delivery of the fœtus, which is generally born dead in consequence of the collapse of the mother, the placenta usually comes away as in ordinary cases; if it does not, the course of treatment to be pursued will be similar to that laid down for retained placenta under other circumstances.

The after-treatment of the woman must be conducted with the utmost care, in order to secure a reaction of the vital forces. The remedy homœopathic to her deplorable condition should be chosen, and such a remedy may be found in *China* or some other medicament mentioned hereafter.

Unavoidable Hæmorrhage—Placenta Prævia.

Placenta prævia occurs when the ovule has descended after conception, and has become fixed to some spot in the lower part or cervical region of the uterus, so that the placenta becomes developed very near the internal os, overlaps a portion of it, or covers it completely, centre for centre. Such malposition of the placenta is by no means of frequent occurrence, happening about once out of every five hundred cases.

In cases where the placenta is thus misplaced, it is obvious that, as the uterus develops from above downward to the internal os, the disproportion between the rapidly developing placenta and the slowly developing cervical region must become greater and greater, and about the sixth month it is very considerable: hence a rupture or detachment usually takes place at this period of pregnancy, and hæmorrhage—*unavoidable* hæmorrhage—occurs, more or less abundantly, and is repeated from time to time.

In explanation of the phenomena which occur in cases of prævial implantation of the placenta, Dr. Robert Barnes writes thus lucidly: "The inner surface of the uterus may be divided into three zones or regions by two latitudinal circles. The upper circle may be called the upper polar circle. Above this is the fundus of the uterus. This is the seat of fundal placenta, the most natural position. It is the zone or region of safe attachment. The lower circle is the lower polar circle. It divides the cervical zone or region from the meridional zone. The meridional space comprised between the two circles is the region of lateral placenta. This placenta is not liable to previous detachments. Attachment here may, however, cause obliquity of the uterus, oblique position of the child, lingering labor, and dispose to retention of the placenta and *post-partum* hæmorrhage.

"Below the lower circle is the cervical zone, the region of dangerous placental attachment. All placenta fixed here, whether it consist in a flap encroaching downward from the meridional zone, or whether it be the entire placenta, is liable to previous detachment. The mouth of the womb *must* open to give passage to the child. This opening, which implies retraction or shortening of the cervical zone, is incompatible with the preservation of the adhesion of the placenta within its scope. In every other part of the womb there is an easy relation between the contractile limits of the muscular structure and that of the cohering placenta. Within the cervical region this relation is lost. The diminution in surface of the uterine tissue is in excess.

"The lower polar circle is, then, the physiological line of demarcation between prævial and lateral placenta. It is the boundary-line *below* which you have spontaneous placental detachment and hæmorrhage; *above* which, spontaneous placental detachment and hæmorrhage cease."

Hæmorrhage seldom occurs until after the sixth month, and then comes on suddenly, without admonition or apparent provoking cause. The flow may commence while the woman is sleeping, sitting at her sewing, at the piano, or elsewhere, and will as suddenly cease. The first hæmorrhage is not apt to be so profuse as subsequent attacks, and as a general rule the nearer the woman is to full term the greater will be the discharge. "The suddenness of the attack, the profuseness of the discharge, and its coming on without any evident cause, are peculiarly suspicious." In a longer or shorter period after the first attack the hæmorrhage is repeated, and is liable to become more and more profuse at every attack; for the disproportion between the

placenta and the development of the lower segment of the uterus becomes greater and greater as the time for delivery approaches.

When these hæmorrhages occur prior to the eighth month, and subside spontaneously without bringing on labor or doing serious damage to the system of the mother, the best treatment is to keep the patient as quiet as possible and to prescribe such medicines as seem to be indicated by her symptoms. This course may be pursued from time to time till the arrest of the hæmorrhage or the prevention of labor seems no longer possible. Indeed, if from the first the hæmorrhage is great, and the mother is reduced to so miserable a condition that it would seem unadvisable and almost impossible for her to go to full term, labor may be induced as the best procedure.

"It may be laid down as a rule of general application, and one which ought to be rigidly observed, that, no matter what the period of gestation, any large loss of blood demands the termination of pregnancy; for to leave a patient to be subjected to another attack, coming on, as it would do, without any warning, is in truth to place her life in imminent danger. The only justifiable ground for a temporizing policy is the concurrence of the following conditions—that the discharge is slight, the period of pregnancy short of six months, the absence of pain, and an undilated os. If, on the contrary, the discharge is excessive, that alone justifies interference; and if at the same time there is pain, the result of uterine contraction, and the os is beginning to dilate, so much the better, as the chance of a speedy delivery is greater; but if the two latter conditions are not present, the chief object of our treatment will be to secure them."—*Meadows.*

On making an examination per vaginam, the finger passed into the open os will detect the presence of a thick, soft, spongy mass, having the feel of a clot of blood, but with more firmness and consistence, quite unlike the smooth surface of the membranes, and blocking up the entrance to the uterus. It may be judged that the placenta in such a case is centrally implanted over the os uteri. If the placenta but partially cover the os uteri, then only one lip or side will be thickened; and the condition will be shown by the inability to carry the finger up within the uterus on that side, and by the ability to carry it up on the other side, and to feel there the smooth membranes or the presenting part of the child. If labor has set in, and there are pains, the hæmorrhage will always be worse during the pains, and will lessen or cease when they subside. The cause of this circumstance is as follows: The object of the pain, or contraction of the uterus, is to dilate the os, so as to complete the first stage of labor; and of course the

more the os dilates the more its adhesions with the placenta will be broken up; and as it cannot expel a bag of membrane full of water, so the greater the pains the greater the hæmorrhage during their continuance.

By far the best method of treating such cases—of lessening the hæmorrhage and causing it to cease, of securing uterine contractions, and of bringing about dilatation of the os uteri—consists, in my opinion, in *puncturing the membranes through the placenta and evacuating the liquor amnii.* By this means the bulk of the uterus is lessened; it contracts upon itself, and the hæmorrhage is controlled. As the contractions take place, the os is dilated without tearing up the adhesions of the placenta. And as dilatation is effected the placenta separates between its cotyledons, and the presenting portion of the child is permitted to pass through it. The placenta itself is finally delivered after the birth of the child, as in ordinary cases.

The method of operating is as follows: The finger must explore a sulcus between the cotyledons of the placenta, and with the same hand a female catheter, previously concealed in the palm, must be forced through the placenta and the membranes during a pain. The liquor amnii now passes off freely through the catheter; the bulk of the uterus begins at once to shrink and the hæmorrhage ceases. The finger may be used instead of a catheter, but much care is needed in this event, in order that the waters do not discharge themselves too rapidly, and thus produce atony from too sudden relief, for then the hæmorrhage would not cease. The liquor amnii MUST DRAIN OFF SLOWLY; and as surely as it thus flows, so surely will the hæmorrhage cease. After the waters have pretty much escaped, the finger may take the place of the catheter and aid in tearing the orifice larger, so that the presenting part can descend. Should the presenting part be the head, which is not always the case, its engagement in the os acts as a plug against any possible flow of blood, and gives further security if any is needed. If the shoulder is found presenting, or there be any other malpresentation, the case must then be treated in accordance with the directions laid down for such cases occurring under other circumstances.

I have not heard of a single case of loss of the mother where this method of procedure has been followed, and the child is almost invariably saved. It must be remembered to evacuate the liquor amnii very slowly. Every accoucheur knows what bad effects follow the emptying of the uterus rapidly under such circumstances; the atony thereby produced is more to be dreaded than the former state. When

the placenta is only partially over the os, even if it be but the edge of it, the same principle and practice hold good.

Almost invariably after placenta prævia has been thus treated the os uteri dilates in a natural manner, until it is sufficiently enlarged to admit of the passage of the child. Should, however, a case occur in which dilatation does not take place, Barnes' dilators may be used to effect dilatation, provided the homœopathic remedy carefully chosen fails of its purpose.

Some obstetricians have recommended, in cases of placenta prævia, that the hand be insinuated between the placenta and the uterus, the membranes reached and penetrated, and the child delivered by turning. This is especially taught in cases where the placenta is placed centrally over the os. The suffering entailed upon the woman by this method, and the very great mortality of both mothers and children following its practice, sufficiently condemn it.

Another plan of treatment has been recommended, especially by Sir James Simpson—namely, that of separating the placenta from the uterus entirely, and then trusting the case to nature. This procedure doubtless was suggested by the fact that in cases of placenta prævia, where the placenta was spontaneously cast off and expelled previous to the expulsion of the child, the rate of mortality of mothers and children was less than under the ordinary methods resorted to by accoucheurs. In regard to this method Dr. Robert Barnes very justly remarks as follows: "But it is contended that clinical observations prove that hæmorrhage has stopped on the total detachment of the placenta. These observations are partly true, partly fallacious. The true observations are those in which the placenta has been *spontaneously* cast off and expelled before the birth of the child. These cases are not numerous. They do not justify the conclusion drawn, that the *artificial* total detachment of the placenta will be equally followed by arrest of hæmorrhage. There is a fundamental physiological distinction between the two cases. When the placenta is cast off spontaneously, it is because the uterus contracts powerfully. This contraction stops the bleeding. When the placenta is detached artificially, there may be, and probably is, defective uterine contraction. The bleeding will be likely to continue. There is no independent virtue in the mere detachment of the placenta, as post-partum hæmorrhage abundantly proves."

Dr. Barnes offers a modification of Simpson's plan, which consists in separating from the uterus as much of the placenta as adheres within the orificial or cervical zone, and no more. He directs that one

or two fingers be passed within the os uteri and swept round in a circle, so as to separate the placenta from the uterus as far as the finger can reach. "Commonly," he says, "some amount of retraction of the cervix takes place after this operation, and *often the hæmorrhage ceases.* You have gained time. You have given the patient the precious opportunity of rallying from the shock of previous loss, and of gathering up strength for further proceedings." Notwithstanding, however, the dictum of so eminent an authority, I am still fully persuaded that the puncture of the membranes and the gradual evacuation of the liquor amnii, as directed, is altogether the best method of treatment for cases of placenta prævia.

Post-Partum Hæmorrhage.

Hæmorrhage following the delivery of the child may occur either before or after the delivery of the placenta. In the natural course of labor the child is delivered, while the placenta still retains more or less perfectly its connection with the uterus. In such cases little or no hæmorrhage takes place up to this time. But with the first pains which occur after the expulsion of the child from the uterus the placenta begins to separate from its adhesion to the uterine parietes; and from this moment until the uterus has considerably contracted upon itself after the discharge of the placental mass there is sometimes considerable loss of blood, sometimes almost none at all. Where all goes well, and the placenta is delivered, as it usually is, within fifteen or twenty minutes after the birth of the child, the hæmorrhage that does take place proves beneficial rather than injurious to the mother, by relieving the engorgement of the uterus and enabling the system in general more readily to adapt itself to the new condition. But just in proportion as this hæmorrhage becomes prolonged, it becomes more and more dangerous, whether it arise from causes which hinder the progress of the labor in the first instance, or prevent the subsequent contraction of the uterine parietes. Hence, in order to be able intelligently to employ the requisite means, it is absolutely essential to learn what are the efficient causes of the flooding in each individual case. This knowledge is to be obtained from the history of the case, from the conditions and symptoms obviously present, and from digital examination.

If the hæmorrhage be due to retention of the placenta, and the retention of the placenta be due to a want of tonicity of the uterus, in consequence of which it fails to contract, to close the mouths of the uterine sinuses and to expel its contents, the remedy appropriate to the con-

dition should be chosen and administered; and if the placenta is detached and lying within the uterus, it should be removed, as directed on page 201 of this work. From the list of remedies mentioned at the conclusion of this chapter the appropriate medicament may be selected. If, however, the placenta is adherent, and does not come away after a reasonable lapse of time and the administration of such remedies as Pulsatilla, Caulophyllum or Secale, which have a tendency to excite uterine contractions, or if hæmorrhage should occur in consequence of the adherence of more or less of the placental mass, the hand must be introduced within the uterus, and the placenta must be carefully and guardedly peeled from its attachments, in the manner directed on page 202, care being taken that neither too much nor too little is done, that the uterus is not injured by the fingers of the accoucheur, and on the other hand that no portions of the placenta are left behind, to occasion subsequent hæmorrhage or oozing of blood, septicæmia or other troubles. When the attempt is made to detach an adherent placenta in this manner, while the right hand of the accoucheur is engaged within the uterus the left hand should be placed over the fundus uteri, to steady that organ in its place; and as the right hand and the placenta are withdrawn, firm compression should be made with the left, following down the retreating uterus, to secure its complete and tonic contraction. If this is skillfully done the hæmorrhage will cease.

"You may suspect morbid adhesion if there have been unusual difficulty in removing the placenta in previous labors; if, during the third stage, the uterus contract at intervals firmly, each contraction being accompanied by blood, and yet, on following up the cord, you feel the placenta still *in utero;* if, on pulling on the cord, two fingers being pressed into the placenta at the root, you feel the placenta and uterus descend in one mass, a sense of dragging pain being elicited; if, during a pain, the uterine tumor do not present a globular form, but be more prominent than usual at the place of placental attachment."

The other form of post-partum hæmorrhage, occurring after the delivery of the placenta, is frequently very alarming, and may even be followed by a fatal termination. It is due to atony and relaxation of the uterus, whereby the mouths of the utero-placental sinuses remain open and pour forth a flood of blood, which continues until firm uterine contraction is secured. Sometimes this comes on immediately after the delivery of the placenta, and continues without cessation until arrested by appropriate treatment. At other times it comes on

more insidiously; the uterus contracts apparently well after the delivery of the placenta, and is found as a hard ball above the pubes, when suddenly the attention of the accoucheur is attracted by the woman declaring that she is flooding, or he sees by her countenance that her life-blood is wasting. The hand placed on the abdomen discovers the uterus distended and relaxed, high up in the abdomen and tender of pressure; and an examination per vaginam discovers a more or less copious flow of liquid blood, and perhaps the vagina, and even the uterus, filled with clots.

It is evident that prompt and efficient measures are necessary in a case like this, not only with the view of saving life, but with the view also of saving blood, for "a pint of blood saved, and a pint of blood lost to the patient, may make all the difference between a rapid and a tedious convalescence—may make all the difference between a successful and a fatal issue." The most prompt and most efficient measure in such cases, according to my experience and that of a very large number of able homœopathic practitioners, is, to apply that remedy which is homœopathic to the totality of the case. This can be done as quickly as can any other procedure, and will be found efficient even in those cases where the blood flows *pleno rivo* and threatens almost immediate dissolution. The remedies appropriate for such occasions will be found laid down, with their indications, at the end of this chapter; and let me here remark that every practitioner should be as familiar with these indications as with the alphabet, and being so he will stand prepared in such emergencies with an armamentarium equal to the vanquishing of the most dangerous and desperate cases.

It has been recommended to give brandy in unsparing doses, but this I regard as unnecessary. The pillow should be removed from beneath the woman's head, and the foot of the bedstead may be elevated a few inches higher than the upper part. Vomiting is not an unfavorable indication, as it may excite uterine contraction; but if it occurs, the woman's head should not be raised, but merely turned to one side.

Firm pressure or grasping with the hand upon the womb is commended as a method of inducing contraction, and no doubt it is a measure of very great efficacy; but since the hæmorrhage can be arrested by the administration of homœopathic medicines alone, it may be regarded as unnecessary to thus compress the tender womb, and perhaps thereby give rise to serious and even dangerous after-effects.

The use of cold or hot water injections, pieces of ice within the

vagina and uterus, pouring cold or hot water from a height upon the abdomen, colpeurysis, and other similar measures for arresting the hæmorrhage, all of which are recommended by old-school authorities, are doubtless of more or less efficiency; and the homœopathic practitioner would be justified in their use if the similar remedies failed to produce a prompt and satisfactory arrest of the flooding; but these do not fail when intelligently selected and applied, and a resort to them is avoided and a reliance on them condemned, *a priori*, by those only who have more faith in the above-mentioned appliances, or rather whose faith in the law of cure becomes faint when they are in the presence of a bad case of *post-partum* hæmorrhage.

Remedies for Uterine Hæmorrhage.

The medicines here mentioned are those most commonly indicated in cases of uterine hæmorrhage, whether occurring before, during or after parturition, or during the non-pregnant period. Special indications, however, are given for the remedies useful in cases of threatened *Abortion* under the article on that subject, as well as for cases of excessive menstruation under the article on *Menorrhagia*. The practitioner will do well to refer to these indications in connection with those given below. It is recommended that the indications for the remedies appropriate to all these forms of flooding be very carefully studied, that they may be indelibly impressed upon the memory and ready for instant use at the bedside.

1. Bell., Calc. c., Cauloph., Chin., Ferr., Ipec., Nux v., Sabin.
2. Bry., Cham., Croc., Erig., Hamam., Hyos., Lyc., Merc. sol., Nitr. ac., Phos., Puls., Sec. corn., Sep., Stram., Sulph., Trill.
3. Acon., Ant. cr., Amm. c., Apis, Apocyn. c., Arg. n., Ars., Canth., Carb. veg., Coff., Iod., Nux m., Plat., Sang., Sil., Sulph. ac.

Aconite. In active hæmorrhage, with fear of death and much excitability. She cannot sit up even in her bed. She seems so giddy she falls over. Particularly suitable to women of full, plethoric habit.

Antimonium crud. Uterine hæmorrhage, with a distinct pressure in the womb as if something would come out. Somewhat rheumatic. White tongue. Nausea and vomiting.

Apis. Profuse uterine hæmorrhage, with heaviness in the abdomen; faintness. Great uneasiness and yawning. Red spots like bee-stings

upon the skin, and sensation as if stung by bees in the abdomen and in different parts of the body.

Apocynum cann. There is great irritability of the stomach and vomiting; the blood is expelled in large clots, sometimes, however, in a fluid state; the vital powers are much depressed, and there is a disposition to faint.

Argentum nit. Much trouble in the head; confusion, dullness and much pain, greatly aggravated by the least movement. A short time seems very long to her, and everything done for her seems done so very slowly. She has, for instance, been flowing an hour, and to her it seems *hours;* we work rapidly for her safety, and she thinks we are very slow. Belching wind affords marked relief.

Arnica m. In cases from a fall, a shock to the system or a concussion. Blood bright red or mixed with clots. Nausea in the pit of the stomach. Warmth about the head and the extremities cool.

Arsenicum. Hæmorrhage, with lancinating burning pains; in low states of the system, when aphthæ appear.

Belladonna. Profuse discharge of bright red, hot blood, with pressing or forcing (outward) as if all would escape the vulva, or pain in the back as if it would break. The blood sometimes has a bad smell. Sometimes a vascular excitement prevails; throbbing of the carotids; flushed face, red eyes and full, bounding pulse. This remedy is very frequently indicated in uterine hæmorrhage, particularly in that occurring after labor.

Bryonia. Hæmorrhage of dark red blood, with pain in the small of the back, and headache as if it would split. Dry mouth and lips. Nausea and faintness on sitting up in bed, or even on raising the head from the pillow.

Calcarea carb. The history of the case shows that she has always menstruated too often, too much and too long. Leucophlegmatic constitution. Cold, damp feet. Swelling at the pit of the stomach, like a saucer bottom up. Vertigo on stooping; worse on rising again or going up stairs.

Cantharis. Uterine hæmorrhage, with great irritation in the neck of the bladder. Urinating often, smarting, cutting and burning in passing only a few drops.

Carbo veg. Passive metrorrhagia, with much itching of the vulva and anus. She wishes to be fanned very hard.

Caulophyllum. Hæmorrhage occurring after labor, especially hasty labor; the flow is very profuse, and is due to a want of tonicity of the womb, which is relaxed and contracts very feebly.

Chamomilla. Metrorrhagia of dark, coagulated blood, with tearing pains in the legs and violent labor-pains in the uterus. Hæmorrhage of dark blood, with pressure toward the uterus and frequent discharge of colorless urine. Great irascibility and of spiteful speech.

China. Hæmorrhage from the abuse of Chamomilla. Hæmorrhage from atony of the uterus. Discharge of clots of dark blood. Uterine spasms. Desire to urinate. Colic. Also after miscarriage or labor, or at any other time when there has been much loss of blood. Coldness and blueness of the skin. Twitching and jerking of single muscles. Heaviness of the head, ringing in the ears, loss of sight, and fainting. In the most desperate cases of this type China will be found of very great service. A dose in water every three or five minutes.

Coffea. Hæmorrhage, with excessive sensitiveness of the organs and voluptuous itching; she would like to scratch, but there is too great sensibility.

Creosotum. Discharge of a large quantity of dark blood; then for a few days bloody ichor with pungent odor, corrosive itching and smarting of the parts; then the discharge recommences and the same phenomena occur again.

Crocus. Frequently called for after miscarriage or labor, or after dancing or a long walk during the catamenia, with or without pain, when there is a discharge of a *dark, stringy* blood; it comes away in *dark* or *black* strings. Often there is a sense of rolling and bounding in the abdomen or in the stomach. Violent cephalic throbbings.

Ferrum. After parturition or miscarriage a frequent discharge of partly fluid and partly black clotted blood, with violent labor-like pains, full, hard pulse and frequent short shudderings; headache and vertigo; constipation and hot urine. Fiery-red face.

Hamamelis. In uterine hæmorrhage occurring at any time, where the flow is steady and slow; the blood is dark-colored, and there are no uterine pains.

Helonias. Flooding on lifting a weight and on the least exertion. Face sallow, having an expression of suffering. Menses too frequent, too abundant; pain from the back to the uterus.

Hyoscyamus. Hæmorrhage after accouchement, miscarriage, or at any time when there are general spasms of the whole body, interrupted by jerks or by twitching of single limbs; the bright-red blood continuing to flow all the time.

Ignatia. Hæmorrhage after the abuse of Chamomilla. Heavy sighing and sobbing, with empty feeling at the pit of the stomach. Great despondency.

Iodium. Uterine hæmorrhage occurring at every stool, with cutting in the abdomen, pains in the loins and small of the back.

Ipecacuanha. Constant flow of bright-red blood, with cutting about the umbilicus, constant nausea and vomiting. The woman feels cold and is very pale; complains of dizziness and headache. *Very* frequently used after parturition or miscarriage.

Lachesis. Pain in the right ovarian region, increasing more and more until relieved by a discharge of blood.

Lycopodium. Hæmorrhage, with cutting pain across the abdomen from right to left. Great fermentation in the abdomen, with much flatulence. Sensation as if "full up to the throat." A rumbling begins in upper part of the abdomen, and descends to lower part, when a flow of blood follows, and so on successively.

Mercurius s. Metrorrhagia in aged females, scorbutic gums, salivation. Mucous or muco-sanguinolent stools, with tenesmus.

Nitric acid. After miscarriage or confinement, with violent pressure as if everything were coming out at the vulva; with pain in the small of the back, through the hips and down the thighs.

Nux mosch. Thick and dark blood; intolerable dryness of mouth and tongue; tongue so dry it sticks to the palate; fainting; sleepiness.

Nux vomica. Metrorrhagia as a precursor of the critical age; also after parturition, if there be constipation of large, difficult stools, or frequent call to stool, with small and painful stools, or without result. She leads a sedentary life, drinks much coffee, wine or other liquors, and lives on highly-seasoned food. She is dyspeptic, and cannot sleep after three or four A. M. Frightful dreams; does not sleep well.

Phosphorus. After difficult labor, between the monthly periods, or during pregnancy. Particularly in tall and slim women. Weak and empty feeling across the abdomen. Constipation of narrow, dry, difficult stools. Much belching of wind after eating. Feeling of intense heat running up the back.

Platina. Metrorrhagia of dark, thick blood, with pain in the small of the back, which penetrates into both groins, with excessive sensitiveness of the genital organs. Metrorrhagia, with the sensation as if the body were growing larger in every direction. Hæmorrhage during pregnancy. Horrifying thoughts.

Pulsatilla. Metrorrhagia, profuse at times, at other times intermitting and mixed with clots—most profuse in persons given to reveries. Also at the critical age. In women of mild, tearful temperament.

Rhus tox. Metrorrhagia in pregnant women of a rheumatic diathesis, worse on change of weather.

Sabina. Hæmorrhage at the menstrual periods, after miscarriage, after parturition. The blood is dark, having blackish clots mixed with thin, watery blood. The pain extends from the back through to the pubes. Atony of the uterus. Painless loss of dark-red blood immediately after delivery. Sabina is used next in frequency to Ipecac. Discharge of fluids and clots with each pain.

Secale corn. Passive hæmorrhage of very fetid or dark blood. Sallow face. General debility, insensibility and feverish pulse. Passive hæmorrhage in feeble, cachectic women, particularly when the weakness is not caused by previous loss of fluids. Hæmorrhage, with strong and spasmodic contraction of the uterus, every flow being preceded by such contraction or by strong bearing-down pains. Hæmorrhage from atony of the uterus, especially after protracted labor. The patient is prostrated, cold and with pinched face; although cold, she does not wish to be covered.

Sepia. Chronic metrorrhagia, when it is excited from the least cause. She has yellow spots on the face, and a yellow saddle across the bridge of the nose. She has icy cold paroxysms, icy cold feet, and has flushes of heat. Painful sense of emptiness at the pit of the stomach. Urine fetid; it has a sediment as if clay were burned on the bottom of the vessel. Constipation. Stools mixed with mucus. Sense of weight in the anus.

Silicia. Metrorrhagia, with terribly offensive sweating of the feet. Constipation, of difficult lumps, which the rectum has not action enough to expel, and which sometimes recede after being partially expelled.

Stramonium. Metrorrhagia, with excessive loquacity, singing, prayers and praise. Full of strange and absurd ideas.

Sulphur. Chronic hæmorrhage. She seems to get almost well, when it occurs again and again, day after day, for weeks. She is weak; has weak and fainting spells, flushes of heat, heat on the top of the head, and cold feet. Sleep very light; often gets awake, wide awake. Feels very weak in the morning; gets hungry spells, when she cannot wait for her food, especially for her dinner.

Sulph. acid. Metrorrhagia, with tremulous sensation in the whole body, without trembling.

Trillium pend. Profuse flow of dark, thick and clotted blood, continuing at intervals for several days. Suitable for women who invariably flood after parturition.

CHAPTER XX.

PUERPERAL CONVULSIONS.

THE convulsions which occur during the first eight months of pregnancy are usually hysterical, although in some persons originally predisposed or actually subject to epileptic attacks, convulsions would be liable to appear during pregnancy, even in its earlier stages, and they would of course partake of the same epileptic nature. But in general only those convulsions which arise during the last month, and especially during the last weeks of gestation, are allied to epilepsy; and they are properly termed puerperal, because of their precise similarity in character to those which occur during labor and after parturition. Still, in common language all convulsions of pregnant women may be termed puerperal, whether they appear in the earlier or in the later stage of gestation, during labor or subsequently. And in fact such convulsions may arise in all these various conditions of the same individual. The hysterical form of convulsions appearing in persons of a nervous or hysterical constitution may be considered rather as an aggravated kind of hysteria, and studied in the article on that disorder. In the present section we shall have reference rather to the so-called *epileptic* form of convulsions, or the true *puerperal eclampsia*—to those which precede, accompany or succeed labor, and shall consider their *causes*, *symptoms* and *treatment*.

Causes.—The causes of puerperal convulsions may be most conveniently studied by first dividing them into two general classes—the *Centric*, or those which arise from direct irritation of the great nervous centres; and *Eccentric*, or those which arise from more external influences affecting the extremities of the incident nerves and reflected back upon the centres.

The *Centric* causes are either physical, acting as material irritants of the nervous centres, or psychical, consisting in mental emotions. The physical causes may be either intra-cranial, such as act primarily upon the brain and medulla oblongata, or they may be intra-vertebral, acting upon the membranes of the spinal cord and upon the substance of the spinal centre itself.

The most prominent of the physical intra-cranial causes consists in that derangement of the sanguineous system incidental to many cases of pregnancy, and known by the old term of plethora. "Pregnancy is usually and very justly considered a state of plethora; and it may

be readily presumed that the balance of such plethora may determine toward the head, inasmuch as the great vessels of the abdomen must be supposed, during the latter weeks of gestation, to be liable to much impediment to their action from the pressure of the gravid uterus."—*Davis.* Any agent which, like a clot of blood,* serous effusion or fullness of the cerebral circulation, causes undue or unusual pressure on any part of the brain, by causing also a counter-pressure on the medulla oblongata, may occasion convulsions. And the derivation of the accustomed pressure on the brain and on the spinal cord must necessarily be attended with similar results. Thus, cases of convulsions arise either in plethoric conditions with red, bloated face and projecting eyes, or in anæmic conditions characterized by excessive pallor and debility. In cases of excessive and fatal uterine hæmorrhage, convulsions always appear before death from this very cause. The *psychical* class of causes of convulsions consists in sudden and violent emotions of fear, of joy or of grief, or in deeper and more protracted influences, such as the sense of shame inseparably connected in many instances with pregnancy in unmarried females.

The intra-vertebral causes of puerperal convulsions have reference either to the quantity or to the quality of the blood. Too large a quantity relatively, exerting an undue pressure upon the spinal cord —either directly or by means of serous effusion—may give rise to puerperal convulsions; and a similar result, as already stated, will follow the opposite or anæmic condition. The abnormal character of the blood itself may cause convulsions. This may arise from deficient oxidation of this fluid, on account of the hindrance to respiration due to the encroachment of the abdomen upon the thorax; from that state of the blood which corresponds to albuminuria; from a true toxæmia or poisonous state of the blood, due to its double function of eliminating the débris of the fœtal as well as of the maternal system; and from the fever connected with the first secretion of milk. Generally speaking, "the immediate causes of puerperal convulsions are often very obscure. They appear sometimes to depend upon a loaded state of the brain; at other times the brain appears to be influenced by some distant irritation, either in the uterus or digestive organs; and again in some cases puerperal convulsions are induced apparently by a peculiar irritability of the nervous system. It has been remarked that there has been a greater disposition to puerperal convulsions in those patients who have been in early life subject to convulsive attacks, particularly of an epileptic character, and also in those who have suf-

* Romberg, *Diseases of the Nervous System*, ii., p. 188.

fered similarly in former labors, and have omitted those measures usually employed as precautions."

"A remarkable relation appears to exist between albuminuria and dropsy and puerperal convulsions, but how far these two conditions are related as cause and effect it is difficult to determine. Some suppose that the condition of the urine is simply the result of reflex irritation starting from the uterus, and that the convulsions are brought about in the same way; others believe that the albuminuria is the result merely of pressure on the kidney, and that the convulsions have no relation to this condition of the urine; while others, again, regard both conditions as due to 'a pathological state of the blood, to the occurrence of which pregnancy may some way dispose.' It is very doubtful whether either of these opinions be true, while it is certain that albuminuria often exists without convulsions: I have seen several cases of this kind myself. On the other hand, convulsions may occur without any preceding albuminuria. The same may also be said in regard to anasarca, which has no necessary connection either with convulsions or with albuminuria. In cases where albuminuria exists the urine is found also to contain less than its normal amount of urea, while the blood has it in excess; hence it has been surmised that the convulsions resulted from the influence of the uræmic poisoning in the central nervous system. The German observers, Frerichs and Lehmann, on the other hand, believe that it is not the urea itself, but its decomposition in the blood, and the formation there of carbonate of ammonia, which can undoubtedly be detected in the breath and perspiration, that is the chief cause of the convulsion."—*Meadows.*

The *Eccentric* causes of puerperal convulsions consist in irritation of the extremities of the incident nerves. The greatest and most frequent and important of all these are found in direct irritation of the uterus itself and of the uterine passages. This may be caused by the pressure of the head or of any other presenting part upon the incident spinal nerves of these organs. In some excessively nervous or epileptic conditions, the convulsions may be brought on by the changes of position of the fœtus in the first stages of labor, by the irritation resulting from over-distension of the uterus by excessive quantity of liquor amnii, and by the presence of a dead fœtus within the womb. The introduction of the hand into the uterus for the sake of removing an adherent placenta has sometimes immediately thrown the woman into convulsions. The same result may also follow the irritation caused by indurated fæces, by purgative medi-

cines, by irritability of the bladder, the stomach, and even of the mammæ.

Symptoms.—The symptoms of puerperal convulsions may be divided into *premonitory* and *actual* symptoms. And by a careful attention to the former, when they occur some days or even weeks before labor, we may be able to avoid the frightful complication of convulsions in child-bed.

The *premonitory* or predisponent symptoms may sometimes consist in a sense of fullness in the head, even to vertigo; of intense pain in a part or in the whole of the head; confusion of the understanding; a sense of ringing and of other noises in the ears; temporary confusion or the loss of power of vision, and temporary abolition of the power of thought, and even of sensation. For such symptoms, which may appear at any time in the later stages of pregnancy, Dr. Davis recommends the abstraction of blood, but a no less decided and much more beneficial result may be secured by the exhibition of the appropriate homœopathic remedy. For convulsions threatened during labor the same author gives the following predisponent symptoms: an excited state of the circulation; a gradual accession of cephalic symptoms, such as those above enumerated, with rigors, nausea, and even vomiting; a great excitement of the heart and arteries; immense irritation and restlessness; a great development of heat, unaccompanied by adequate moisture on the surface of the body; unusual strength and fullness of the pulse; engorgement of the vascular structure of the face, producing much turgescence and flushing; an approach to or actual delirium; great fullness and wildness of the eyes, often accompanied by an expression of extreme distress, or else of a state approaching to fatuity; perception of scintillations of light or the fancied presence of divers other bodies; and in many cases a sudden seizure with violent pains in the abdomen, differing in character from those of labor. Severe pain in the stomach and an intense pain in the forehead have been mentioned as premonitory of the worst kind of cases of convulsions. A tumid state of the hands and face sometimes precedes an attack; a dropsical swelling of the face alone, or face and upper extremities, is not uncommonly followed by convulsions, and if the urine is at the same time albuminous this condition should excite strong apprehension of such a catastrophe. Sometimes, however, there are no precursory symptoms; and however similar such attacks may be to epilepsy, they differ from this disorder in seldom or never being preceded by the *aura epileptica*.

The *actual* symptoms of puerperal convulsions are indeed scarcely to be distinguished from those common to epilepsy itself. They are thus described by Churchill: "During the attack the face is swollen, of a dark red or violet color, and distorted by spasmodic contractions; the eyes are agitated, the tongue protruded, and the under jaw repeatedly closed with force, so as to wound the tongue. A quantity of froth is ejected from the mouth, which is generally drawn more to one side of the face than to the other. The muscles of the body are thrown into violent and irregular action; the limbs are jerked in all directions, and with such force that it is sometimes difficult to keep the patient in bed. The respiration is at first irregular, and being forced through the closed teeth and the foam at the mouth, has a peculiar hissing sound; it subsequently becomes nearly suspended. The pulse is quick, and at the beginning full and hard, but afterward small and imperceptible. The body participates in the purple color of the face. The urine and fæces are often passed involuntarily. This terrible paroxysm, however, is not of very long duration. After a period varying from five minutes to half an hour, the convulsive movements become less violent, and gradually subside; the countenance is less distorted, and assumes a more natural and placid appearance; the eyelids close, the respiration becomes more regular, though still sibilant, and the circulation is restored, the pulse becoming more perceptible, though still very weak; the patient rests quietly in bed, and the paroxysm has terminated for the time.

"During the interval the patient's condition is very variable. She may partially recover consciousness, so as to recognize persons around her, and to be aware of something extraordinary having happened, without knowing what, and without being able to express herself clearly. In other cases the return of intelligence (without recollection) may be complete until the approach of the next fit, accompanied with great weakness, headache and confusion. In the more unfavorable cases the patients remain in a state of total insensibility, almost approaching to coma or asphyxia, with sibilant or stertorous breathing, and without muscular motion, or with a restless throwing about of the body and extremities. The calm is, however, of no very long duration; it may be half an hour or two hours, but sooner or later the paroxysms return, to be succeeded by an interval, which in its turn gives place to a paroxysm."

Under the head of *eclampsia parturientium*, puerperal convulsions are thus described by Romberg:* The convulsions coming under

* *Diseases of the Nervous System*, ii., p. 187.

this denomination break out suddenly, and the patient is at once deprived of consciousness. The face and neck swell and become red and livid. The carotid and temporal arteries pulsate violently, and the jugular veins swell; the eyelids are distended, the eyeballs are elevated, or stare rigidly, and their vessels are congested, or they roll about under the closed eyelids. The tongue projects and is bitten by the grinding teeth, causing it to bleed, and bloody froth issues from the mouth. The facial muscles twitch, the limbs are curved or stretched, and again contract with lightning-like rapidity. The whole trunk is at one time rigid, immovable, drawn backward to one side; the next moment it is thrown about by twitchings and convulsions so violent that the patient can scarcely be restrained. The muscles of respiration, and especially the diaphragm, are implicated; there is danger of suffocation. Vomiting supervenes, and urine and excrements escape involuntarily. The temperature is raised, the face drops with perspiration. The pulse is very frequent, full and strong, or weak and hard. The abdomen is tympanitic; the uterus is hard, and this hardness increases as often as convulsions are renewed.

These attacks are more apt to occur in primiparæ, although they are by no means confined to them. Some women even have the misfortune to be seized with them at each succeeding pregnancy; in such cases they are very apt to result in premature delivery. In different individuals these attacks terminate differently: some remain in a state of half stupor and great exhaustion for hours or days, and gradually recover; others become maniacal, and may even remain so for a long time, and eventually recover. In some cases the patient continues comatose, gradually passes into a state resembling apoplexy, and dies. In these cases the danger is said to be greater during the last months of pregnancy than during and after parturition. When the convulsions are originally associated with profound sopor and stertorous breathing, they are said to prove almost invariably fatal under the old-school treatment. Plethoric and robust women are in greater danger than weak and hysterical subjects. And when the intervals are very short between the paroxysms, or become imperceptible, death is at hand.

Dr. Hodge * states that "after much anxious experience and reflection it is evident to my mind that there is no essential pathological difference between the usual form of puerperal convulsions and those which occur in the non-parturient state in hysterical women. I have seen so many cases in the latter precisely similar, as regards their

* *Diseases Peculiar to Women*, p. 126.

phenomena at the time and after the attack, to those of the former, and so many of the puerperal form resembling those of the hysteric as to the precursory, attendant and consecutive symptoms, that I must believe that pathologically they are virtually the same. The only real difference is the degree of congestion, this being comparatively trifling in the unimpregnated state, very great during gestation, and still more so during labor. The engorgement in this case arises from the almost universal plethoric state of pregnant women, which during labor is enhanced, particularly as regards the brain, by the "pains" and the bearing-down efforts; these include, of course, the holding of the breath, the temporary suspension of respiration, and the consequent passive congestion in the lungs, right side of the heart, the brain, etc. Hence the danger and fatality of puerperal convulsions. The original nervous irritation is aggravated by this congestion, so that effusion of serum or blood may ensue, and the patient become comatose and die."

When this affection appears in the last months of pregnancy the infant almost always perishes, but it may be saved when the convulsions appear during parturition; in these cases the fits will usually be found synchronous with the uterine contraction—that is, each pain is attended by a convulsion. But if there have been no pains before the fits come on, the os uteri most frequently begins to dilate in all cases of puerperal convulsions of this kind—that is, during parturition: the condition of the os uteri, as dilated, dilating or as rigid, will afford important indications as to the course to be pursued and the remedies to be employed. In connection with these convulsions the uterine contractions are usually feeble and irregular; sometimes they either pass into the spasms or alternate with them. In some instances, according to Leadam, the opening of the os is the signal for the manifestation of convulsive action, each parturient effort being accompanied by a convulsion; in others, every paroxysm seems to cause a firm, spasmodic contraction of the os, and so interferes with and delays the progress of the labor. The convulsions sometimes continue at intervals until the birth, which, therefore, is an event looked forward to with great anxiety; and it has happened that labor has proceeded, even to the expulsion of the child and secundines, without the surrounding attendants being aware of it, in consequence of the convulsions so obscuring the parturient efforts that there was no outward manifestation of the labor, and also from the fact that uterine action is sometimes very powerful, and the labor is proportionately quick in some cases. This shows the duty of ascertaining without doubt the

actual condition of the uterus by a proper and timely examination. If delivery—whether it be at the full time or not—be inevitable, and if, in spite of the application of appropriate remedies, the convulsions continue or increase, then it will be a matter of serious consideration whether the birth of the child can be expedited by manual or instrumental interference with safety to the mother. The sooner the child is born, the sooner may we reckon on the probable cessation of the convulsions and the safety of the mother, although they do not always terminate when that desirable object is accomplished.

The proper course to be pursued under the different conditions of *Convulsions in Parturition* will now be indicated.

First. Ascertain, by examination, if any loaded condition of the rectum or of the bladder offers any impediment to the progress of the labor or predisposes to the convulsions.

Second. Remove any such obstructions by the use of the enema syringe or catheter.

Third. Administer the similar remedy according to the indications given at the close of the chapter—either one of those mentioned or any other which may be more homœopathic to the case.

Fourth. Should the convulsions not be relieved, it will be necessary to induce artificial delivery as soon as the os uteri is found to be sufficiently dilated or dilatable.

The course to be pursued in convulsions of pregnant women before the close of term at first corresponds to that necessary in severe cases of hysteria, of which, in fact, these convulsions are usually but an aggravated variety. The exceptional cases will consist principally of those who have either had epileptic attacks in early life, or whose parents had been troubled with this affection, or of those in whom the pregnancy itself has evidently developed the epileptic condition. In each of these cases the remedy homœopathic to the existing condition should be administered in as high a dose and at as long intervals as may coincide with the judgment of the physician. If the treatment fails, the convulsions grow more frequent and severe, and evidently threaten to produce miscarriage, the case must be treated as one of abortion from this cause.

The convulsions which make their appearance after parturition are generally believed to be far more dangerous than those which precede and accompany labor, since they are usually the result of profound exhaustion of the patient's system. This exhaustion may be principally nervous, and analogous to the "shock" which constitutes the most fatal form of puerperal fever; or it may be vascular, resulting

from excessive hæmorrhage during and immediately after the labor itself. The individuals most liable to the former class of exhaustion are those of a weak, nervous temperament, while the full-blooded and plethoric are most apt to suffer from severe losses of blood. In either case the condition is one of exceeding gravity; and unless the physician is sufficiently master of his business to enable him to give the right remedy without loss of time, he may have the mortification of seeing the convulsions become constantly more violent until the little remaining vitality is at last expended in futile efforts to maintain the respiration and circulation, and the patient is relieved by death.

It should always be remembered that there is still another influence to which the puerperal woman is remarkably sensitive, and which may prove as efficient and as fatal a cause of convulsions after labor as either the nervous or the sanguineous exhaustion just mentioned, and which comes with tenfold force if brought to bear upon patients already so exhausted. And this is fright, fear, or a sudden emotion of grief, or even of joy. The least intimation to the mother during labor that there was something wrong has been known instantly to stop all pains, and necessitate the use of instruments, resulting in the final destruction of mother and child. How much more, then, should we carefully avoid shocking the feelings and wounding the sensibilities of our patient in her enfeebled condition at the close of a labor, which may have been far more exhausting than is apparent, by rudely announcing the death or the deformity of her child! These trying circumstances, through which the young physician may at any time be called to pass, demand from him not only the most entire self-control and presence of mind under the most critical circumstances of labor, but also, and no less absolutely, the most careful and tender consideration for the *personal feelings* and *moral state*, as well as for the physical condition, of his patient afterward. In all these alarming conditions the homœopathic remedies, properly selected and administered, will be found endowed with an efficacy vastly superior to the debilitating or stupefying means employed by old-school practitioners. And however discouraging the symptoms may be, especially to the young physician, let him be sure neither to "lose his head" nor to give up in despair; but let him patiently and perseveringly administer the proper remedies, and leave the event with Him who doeth all things well, remembering, at the same time, that very many cases are thus saved, even of those which he might deem not only desperate, but perfectly hopeless.

Treatment.—The prodromic symptoms should be met by such

remedies as are appropriate, carefully selected from the Materia Medica. A nervous and excitable condition of the mind, persistent and congestive headache, insomnia, persistent pain in any part of the body, local anæsthesia, when occurring in pregnant women, should receive special attention. Where œdema exists the case should be carefully treated; the urine should be subjected to a careful examination for the presence of albumen and the absence of urea. "Although there are exceptional cases in which dropsy occurring in pregnant women is not followed by puerperal convulsions, yet the rule is quite the reverse. Hence you will be on your guard whenever it occurs, and more especially if the œdema began in the face and upper extremities. For in most cases of dropsy, whether incident to gestation or not, if the infiltration begins in this manner, we take it as a hint of renal disease or embarrassment of some kind. So your patient may have had a latent form of Bright's disease, which has been aggravated by her condition, or she may be suffering for the first time from an attack of acute desquamative nephritis, from congestion of the kidney or from uræmia, due to direct pressure of the gravid uterus upon one or both the ureters, the earliest token of which may be seen in the puffy and bloated face and eyelids. If you act upon this suggestion you may avert the threatened eclampsia—always providing the degeneration of the kidneys has not gone too far already, and that the pressure upon the ureters does not cause a complete retention and reabsorption of the urine."—*Ludlam.* Let it be the first duty of the physician to make sure that no ligatures or other encumbrances obstruct the circulation or in any manner aggravate the existing difficulty; that there be pure and fresh air; that the light be not too bright; and that all the attendant circumstances and conditions are rendered as favorable as possible for his patient. If the room is crowded, as is often the case, with friends, anxious, distracted and rushing about in confusion, *let him at once restore the room to order;* otherwise he may chance to find himself inextricably involved in the same hopeless confusion. Then, if not before, let him administer the remedy which seems to him most homœopathic to the symptoms and conditions of the case. Let him calmly and patiently wait for the action of the first dose, and before repeating it let him be fully satisfied not only that it is the right remedy, but that the beneficial action of this first dose is exhausted. If no improvement arise, and the appearance of new symptoms or the further development of the old ones should convince him that the right remedy had not been chosen at first, let him endeavor to select another in accordance with the present condition of the case. And

in all cases let him remember that the more violent the symptoms the less should he expect instantaneous relief—that the gradual subsidence of the nervous excitement and the corresponding gradual abatement of the spasmodic action are not only the best methods by which the patient may improve, but that they are also the only methods possible. In addition to the remedies already mentioned under Hysteria, the following may be studied with reference to the convulsions which precede or accompany labor, and to those which arise subsequently:

Aconite. In those cases where, in their incipiency, there is a hot, dry skin, thirst, restlessness, fear of death, more or less cerebral congestion,—in such cases a dose of Aconite once every half hour acts like a charm. In primiparæ, where at the outset of labor there is evidently great fear and anxiety, restlessness, feverishness and thirst—symptoms that might be the precursors of puerperal eclampsia—a dose or two of Aconite very frequently has a very calming influence.

Argentum nit. She has a presentiment of the approaching spasm. She is in constant motion from the time she comes out of one spasm till she goes into another. The spasms are violent, and are preceded by a sensation of expansion of the whole body, especially of the face and head. Sometimes the woman lies quietly for some time after a spasm has ceased, but becomes very restless before another begins.

Arnica. When the pulse is full and strong, and during every pain the blood rushes violently to the face and head; symptoms of paralysis of *the left side;* loss of consciousness; involuntary discharge of stool and urine; while the head is very hot, the body is nevertheless cool or of a natural temperature.

Belladonna. She has the appearance of being stunned; a semi-consciousness and loss of speech; convulsive movements in the limbs and muscles of the face; paralysis of the right side of the tongue; difficult deglutition; dilated pupils; red or livid countenance. She may have paleness and coldness of the face, with shivering; fixed or convulsive eyes; foam at the mouth; involuntary escape of the fæces and urine. Renewal of the fits at every pain; more or less tossing between the spasms, or deep sleep, with grimaces, or starts and cries, with fearful visions; violent pulsation of the carotids; jerking and twitching of muscles between the spasms; sound sleep or unconsciousness after a paroxysm.

Bryonia. Is often indicated after the spasms have been controlled, and there remain fullness of the pulse, abdominal tenderness and per-

spiration, dry, parched lips and thirst. The woman does not wish to move, and cannot bear to be moved.

Cantharis. Dysuria belonging to Cantharis. The presence of bright objects, the sight, the drinking or the sound of water, and touching the larynx, seem to reproduce the spasms, which are usually violent.

Caulophyllum. Convulsions, with very weak and irregular labor-pains. She feels very weak.

Causticum. When the paroxysms are complicated with screams, gnashing of the teeth, and violent movements of the limbs, etc.

Chamomilla. The spasms have been excited by a fit of anger, or she has one red cheek while the other is pale. Starts and shocks during sleep. Great impatience and disposition to anger. Spiteful excitability.

China. The loss of a large quantity of blood is the exciting cause of the eclampsia.

Cicuta. Strange contortions of the upper part of the body and limbs during the paroxysms, with blue face, and *frequent interruptions of breathing for a few moments.*

Cimicifuga. The spasms are preceded by great mental excitement and perturbation, with visions of objects which are not present, and are followed by languor or relaxation of the entire system. The paroxysms are very violent.

Cocculus. Spasms following difficult labors, and those which are developed by changing the position of the patient.

Coffea. To quiet the extreme excitability of the nervous system when spasms are apprehended, or if spasms have actually been developed, attended with cold extremities and grinding of the teeth.

Cuprum. Spasms complicated with violent vomiting. Opisthotonos with every paroxysm, with spreading out of the limbs and opening of the mouth. The spasms begin in the shape of cramps in the fingers and toes or in the whole of the extremities.

Gelseminum. This remedy bids fair to become one of our most useful agents in this fearful disorder. It seems indicated by the premonitory symptoms, where the head feels very large, or in those cases in which the spasms occur as the first symptom of the os uteri being unchanged or perhaps rigid. Distressing pains running from before backward in the abdomen, but more especially when the pains run upward.

Helleborus. A shock passes through the brain, as if from a shock from electricity, followed by considerable movements in the body.

Hydrophobin. The spasms are excited whenever she attempts to

drink water, or if she hears it pouring from one vessel into another. This remedy may also be indicated by the sight or sound of water affecting the patient unpleasantly, even though she desires the water.

Hyoscyamus. When there is a bluish color in the face, and twitchings and jactitation of every muscle in the body—those of the face, eyelids and all. Almost constant delirium.

Ignatia. Deep sighing and sobbing, with a strange compressed feeling in the brain. The convulsions commence and terminate with groaning and stretching of the limbs. The paroxysms are accompanied with vomiting. Fright, with grief, may have been the exciting cause.

Ipecac. One constant sensation of nausea the whole time, with occasional convulsions. Such symptoms—convulsions characterized by continuous nausea—are always relieved by Ipecac. alone.

Kali c. The spasm seems to be relieved or to pass off by frequent eructations.

Lachesis. The convulsions are particularly violent in the lower limbs, with coldness of the feet, stretching backward of the body and crying out.

Laurocerasus. She is conscious of a shock passing through her whole body before the spasm.

Mercurius. Much salivation, a constant driveling from the mouth; convulsions, mostly in the extremities.

Nux mosch. Particularly when there is a convulsive motion of the head from behind forward.

Nux v. Great torpor of the intestinal canal; in persons who are of an irritable disposition, and in those who are accustomed to wines and high living generally, and who lead a sedentary life.

Opium. Sopor, with stertorous respiration; the stertorous respiration continues constantly from one spasm till the next, and so on. Incoherent wandering and convulsive rigidity of the body, with redness, swelling and heat of the face; hot perspiration and insensible pupils. Suppression of the pains of labor may have been the proximate cause.

Phosphorus. Previous to the convulsion a sensation of heat rushes up the back into the head. This was several times perceived as a forerunner of the first convulsion.

Pulsatilla. The countenance is cold, clammy and pale. Loss of consciousness and of motion; stertorous breathing and full pulse. The labor-pains are deficient, irregular or sluggish—otherwise she is in good condition; mild and tearful; the patient demands fresh air.

Secale c. In scrawny, illy-nourished women, with too feeble labor-pains. "Ergotismus convulsivus."

Stramonium. This medicine is particularly indicated where the patient shows such signs of fear as to cause her to look frightened and to shrink back from the first objects she sees after opening her eyes. If she has had no spasms, she soon will have after betraying such symptoms, unless Stramonium be immediately administered. The same frightened appearance occurs also after the convulsions commence. Sardonic grin. Stammering or loss of speech. Puffed and red face; loss of consciousness and sensibility. Cries; frightful visions; laughter; singing; attempts to escape. The fits are renewed by the sight of brilliant objects, and sometimes by contact.

Verat. viride. Great activity of the arterial system. Convulsions or mania, or when the mania continues after the convulsions have ceased.

Zinc. Particularly if eruptions have recently disappeared, even old eruptions. Zinc has been known to cure obstinate puerperal convulsions after Phosphorus, apparently indicated, had failed.

CHAPTER XXI.

POST-PARTUM DERANGEMENTS.

RETAINED PLACENTA. (See page 201.)

BELLADONNA. Redness of the face and injected sclerotica; great distress and moaning; great heat and dryness of the vagina; dryness and heat of surface; profuse flow of hot blood, which speedily coagulates; the slightest jar of the bed causes suffering.

Cantharis. Swelling of the lips of the os; burning pain in the pelvic portion of the abdomen and in the back; feverishness; vomiting; great deal of anguish and distress, with predominantly burning pain.

Cimicifuga. For women who are subject to rheumatic affections; there is a distressing, tearing pain in the uterine region; there appears to be no uterine action.

Gelseminum. When, with the retained placenta, there are cutting pains in the lower part of the abdomen, usually running upward, or sometimes upward and backward.

Pulsatilla. This remedy is more frequently indicated and more generally useful than all others. It is indicated equally for retained placenta from want of expulsive power of the uterus, and for the spasmodic retention. The symptoms presenting must decide for or against its use. The patient is of a mild and yielding disposition; inclined to weep because her labor is not completed; intermittent flow of blood; restlessness; she cannot bear the heat of the room, of which she complains, and demands that fresh air be admitted.

Sabina. Pain, or an uneasy, bad feeling, extending from the sacrum to the pubes; a slight sensation as of motion in the abdomen; intense after-pains, notwithstanding the retention, with discharge of fluid blood and clots, in about equal proportion, with every pain.

Secale c. Constant sensation as of bearing down; it seems to her too constant and too strong to be effectual; passive hæmorrhage; the parts feel to her as if relaxed, and there is an absence of uterine action; especially suitable for thin, scrawny women.

Sepia. She complains of little sharp, shooting pains in the cervix uteri, sometimes with burning.

Caulophyllum and **Gossypium** have been commended for retained placenta.

Retention of Urine after Parturition.

Arnica. Retention of urine, with urging to urinate, there being a sore, bruised feeling prevailing. Mechanical injury is the apparent cause of the difficulty.

Arsenicum. There is no sensation as of desire to urinate; it is time the bladder should be evacuated, but there is a want of disposition to urinate, as well as a want of desire or urging to do so; in fact, there is, so far as the urinary organs are concerned, an entire want of sensation.

Belladonna. The urine can be passed only in drops at every effort, without pain. Very sensitive to jars of the bed.

Cantharis. Great desire to urinate, with cutting, burning pains in the bladder or in the urethra; complete strangury, or the urine may dribble or drop, with cutting, burning pain.

Causticum. Retention of urine, with frequent and urgent desire to urinate, but occasionally a few drops or a small quantity passes away involuntarily; the desire may be frequent and urgent, but unsuccessful, as only a little flows involuntarily.

Hyoscyamus. Retention of urine, with constant pressure in the bladder; apparent paralysis of the bladder.

Lycopodium. Retention of urine, with much violent pain in the back,

coming on in paroxysms, or the flow is suddenly interrupted, with increased pain in the back at every interruption.

Nux vomica. Painful and ineffectual desire to urinate, the pain being burning and tearing; retention of urine, with frequent urging to stool. Irritable, morose and scolding.

Pulsatilla. Retention of urine, with redness, heat and soreness of the external region of the bladder, which is painful to the touch; mild, tearful women. Great pressure on the bladder.

Stramonium. Retention of urine, with a sensation as if the urine could not be passed on account of the narrowness of the urethra; after straining a while a few drops are passed, no stream being formed in spite of all straining; retention without any painful sensation.

After-Pains. (See page 208.)

Arnica should be administered immediately after delivery, unless contraindicated; and this remedy is particularly called for by the bruised condition of the genital organs and the strain of the general muscular system. It aids in restoring the parts to their natural condition, thus preventing severe after-pains by removing the causes which otherwise would have produced them.

Belladonna is indicated when the pains come on suddenly, and after a time disappear with corresponding suddenness; or if the pains be severely forcing, as if the contents of the pelvis would be forced through the vulva. A jar of the bed is very unpleasant. The lochial discharge seems to her to be hot. The head and eyes are congested. Flow increased with each pain.

Bryonia. The after-pains are excited by the least motion, even by taking a deep inspiration; she wishes to lie perfectly quiescent. Headache as if the head would split. Thirst for large draughts of cold water; parched lips and dry mouth.

Caulophyllum is particularly suitable after protracted and exhausting labor. Pains which are apparently spasmodic across the lower part of the abdomen or in other parts, sometimes extending into the groins.

Chamomilla. The pains are very distressing, and she feels that she cannot bear them. She wishes to get away from herself. She is irritable and ill-natured. The lochia is dark colored. Thirst. Desire for fresh air.

Cimicifuga. The patient is very low-spirited, sleepless, restless and very sensitive to impressions; she feels her pains very acutely.

Coffea. She is sleepless; the pains are very distressing, and she feels them acutely. Or, desire to go to sleep but unability to do so.

Cuprum acet. Terrible cramping pains; pains which often produce cramps of the extremities, including the fingers and toes. Particularly indicated in multiparæ.

Ferrum. Violent pains in the loins and abdomen, like those of labor, with discharge of partly fluid and partly clotted blood; full, hard pulse; frequent short shuddering, headache and vertigo. Especially suitable for feeble women with fiery red face.

Gelseminum. The pain is severe, and inclines to run upward or upward and backward. Seems unable to regulate her muscular movements.

Hyoscyamus. Much jerking and twitching of various parts of the body; she is delirious; the pains are spasmodic.

Ignatia. Much sighing, sadness and despondency with the after-pains.

Kali carb. The pains are stitching and shooting, or they are in the back, shooting down into the gluteal region or hips.

Nux v. Aching pains. Every pain causes a feeling of desire to go to stool, or there is a constant sensation as though there was something in the rectum which should be evacuated. A *sore* feeling in the region of the uterus, to the extent that she dreads being moved or disturbed in any way. Inclined to be irritable. She likes to have the room warm and to be well covered. Fainting after every pain.

Pulsatilla. For women of mild and tearful disposition; the pains become worse toward evening; thirstlessness; bad taste in the mouth. She feels uncomfortable if the room be warm, and complains of its warmth; great desire for fresh air, and she feels better if the room be cool. Restless and changeable in her feelings—now better, now worse.

Rhus tox. The pains are always worse at night, with great restlessness; they last sometimes throughout the night, while there is not much pain during the day. Frequent desire to change her position, which change gives some relief for a short time. Likes a warm room and to be covered warmly. Sometimes cramps in calves.

Sabina. The pains run from the sacrum to the pubes. With every pain—the pains being generally severe—fluid and clotted blood is discharged. The pains sometimes extend from the back and sacrum to the uterus and down the thighs.

Secale corn. This remedy is especially adapted to thin, scrawny women. The pain is prolonged, as though pressing and forcing the womb. Brown, thin lochia. Although she may feel cold, yet she does not wish to be covered.

Sepia. Constant sensation of weight in the anus; pain shooting upward in the vagina. Pain which is felt mostly in the back; severe bearing down or forcing in the back, occurring in regular paroxysms.

Sulphur. Pains which are located especially in the uterus. The lochial discharge seems to be scant. She complains of feeling badly in the abdomen. Bleeding hæmorrhoids, which itch very much and are sore. Flushes of heat; weak and faint spells; feet either cold or burning hot, especially the soles.

Sulphuric acid. Great sense of general weakness, or a sense of trembling all over, without actual trembling. (Consult also the medicines for *disordered conditions of the lochial discharge.*)

Disordered Conditions of the Lochia. (See page 210.)

Aconite. A suppression of the lochia, or too scanty discharge, occurs soon after confinement, with distress in the abdomen, chest and head, apparently from congestion of blood in these parts. Feverishness, with thirst; uneasiness; fearfulness; she feels that something unfortunate will occur. Sharp cutting pains in the abdomen, which is very tender of pressure. Offensive lochia, other symptoms agreeing.

Baptisia. The lochial discharge is very acrid and very fœtid, and there is great debility, with prostration.

Belladonna. Offensive lochia, feeling hot to the parts. Flushed face and injected eyeballs; delirium and frightful visions. Pain in the region of the uterus, which comes and goes suddenly. Drowsiness, or she is half asleep and half awake; does not sleep soundly, and is not refreshed by her sleep. She is very sensitive to even a slight jar of her bed; great tenderness of the abdomen.

Bryonia. Suppression of the lochia, with sensation as if the head would burst. The least motion aggravates her suffering. Dryness of the lips and mouth. The lochia may be too profuse, with burning pains in the region of the womb. Thirst, with desire for large draughts at a time.

Calcarea carb. The lochial discharge lasts too long, in women who ordinarily menstruate too profusely, or the discharge has a milky appearance. Suitable especially to women of leucophlegmatic temperament.

Caulophyllum. The lochia lasts too long and remains bloody too long; it seems to ooze passively from the relaxed uterine vessels, and there is great exhaustion.

Chamomilla. Suppression of the lochia, followed by diarrhœa, colic,

toothache; irritable and impatient; thirst; redness of one cheek, while the other is pale.

Coffea. The discharge is too profuse, with an exalted nervous sensibility and great wakefulness.

Colocynth. Suppression of the lochia, with violent colic; suppression arising from anger; suppression with tympanitic abdomen and diarrhœa. She feels worse after taking food or drink. Great restlessness.

Carbo animalis. Lochia too long continued, thin, offensive, excoriating, with numbness of the limbs.

Creasote. Very offensive lochial discharge, which produces excoriation. The lochia almost ceases to flow, when it freshens up and becomes more profuse and bloody, and again almost disappears, to freshen up again.

Crocus. The lochial discharge appears in dark strings. Sensation of motion in the abdomen, which becomes much distended.

Dulcamara. Lochia suppressed by cold or dampness, and the quantity of milk is greatly diminished.

Erigeron. In cases where the least motion excites afresh a return of bloody lochial discharge, which is relieved by rest.

Hyoscyamus. Much delirium and jerking of the muscles; she says she is being drugged or poisoned. Very suspicious.

Ignatia. Derangements from the abuse of Chamomile tea. In some cases Nux v. Or if produced by fright or grief, with sighing and sobbing.

Merc. sol. The discharge is worse at night, with some inflammation and swelling of the genital organs. Swollen and sore groins.

Nux v. The lochia are scanty and offensive in women accustomed to highly seasoned food, coffee and wine; or the patient has an irritable rectum, calling her to stool frequently. Frequent calls to urinate, the urine producing a scalding sensation. Sensation of soreness in the uterine region; she does not wish to be moved or disturbed in any way. Prefers to be warm.

Opium. Suppression of lochia from fright, with sopor.

Platina. A little discharge will remain, but it will be black and clotted. The genital organs will be very tender. On account of the excessive sensitiveness she cannot bear the napkins usually applied. The discharge becomes intermittent, occurring in gushes. Very changeable in her sensations. Cannot bear a warm room.

Pulsatilla. In cases where the milk has suddenly disappeared from the breasts. The scanty lochial discharge remaining is milky; she is feverish, but has no thirst.

Rhus. The lochial discharge lasts too long, is thin and offensive. It has wellnigh exhausted her; it is thin, ichorous and offensive, or it occasionally becomes bloody. Shooting pains up the rectum. Restlessness at night. Must change often, with relief.

Secale c. In thin, scrawny women; very offensive and thin lochia; the discharge may be scanty or profuse. It may be painless or accompanied by prolonged bearing-down pains. Very dark discharge.

Sepia. Where the fœtid odor is the most characteristic symptom. Offensive lochia, excoriating, with little sharp shooting pains in the region of the neck of the uterus. Distressing bearing down in the back.

Silicia. Pure blood is caused to flow every time the infant nurses. The discharge is sometimes excoriating. After-pains in the hips.

Stramonium. Her mind is full of strange and absurd, but strongly marked ideas. Lochia having a cadaverous odor.

Sulphur. The discharge causes a sensation of weakness, and she has hot flushes; perspiration; heat in the soles of the feet, or her feet feel cold all the time. She has bleeding piles, which are sore and itch.

See also remedies under *Nymphomania, Metrorrhagia, Constipation, Diarrhœa* and *After-Pains.*

Pendulous Abdomen.

Belladonna. When there is much sensitiveness to touch, to pressure or to jarring while riding in a carriage or when walking. Under the influence of Belladonna the tenderness ceases, and the size of the abdomen will be greatly reduced gradually.

Crocus. There is a sense of motion, as of something alive bounding and leaping in the abdomen.

Platina. Occasional sensations of cramp in the uterine region; tenderness to touch; everything seems strange and horrible to her.

Podophyllum. Much nervous irritability and sleeplessness. She feels as if weak and unable to move about. Stools too frequent, but natural in appearance.

Sepia. Sensation of painful emptiness in the pit of the stomach. Little darting, shooting pains in the region of the cervix uteri; constipation.

Secale corn. In women of very lax muscular fibre, and who are of a thin, scrawny appearance. Study also Calc. carb., China, Colocynth, Kali carb., Nux vomica.

For RHAGADES AND CRACKS ON THE SURFACE OF THE ABDOMEN, study Hepar, Sepia, Silicia, Sulphur.

For ULCERATION OF THE UMBILICUS, Arsenicum generally suffices. Study also Apis, Lachesis, Lycopodium, Sepia, Silicia, Sulphur.

CHAPTER XXII.

POST-PARTUM DERANGEMENTS.—CONTINUED.

PUERPERAL FEVER (CHILD-BED FEVER).

THE multiform disease which goes by the various names of Child-bed Fever, Puerperal Fever and Puerperal Peritonitis has this double characteristic, that it attacks only pregnant and lying-in women, and involves in various degrees the genital organs and the viscera more immediately adjacent. Scarcely any disorder which the physician is called upon to treat is more insidious or more dangerous; certainly there is none which runs a more rapid course or which may prove more suddenly fatal. And when we reflect that this frightful malady is not necessarily confined to individual cases, that it may become epidemic, and even most virulently contagious, it will be evident that a thorough understanding of the disease, as essential to its successful treatment, will at once assume a tenfold importance.

"The breaking out of an epidemic child-bed fever, or even the occurrence of a single case, commonly excites a feeling of sharp interest and alarm as far as ever the rumor of it extends: the public curiosity becomes speedily aroused, and among many physicians whose opinions are taken, how wide is the diversity of their sentiments! If the public do become greatly alarmed on these occasions, it is because they know that any one of our women seized with child-bed fever is at once placed in a most perilous position; and we know it even better than they; and half our distress and anxiety arises from this, that we are ourselves uncertain what we have to do, what to contend with and by what principles to be guided." These very candid confessions of Dr. Meigs will at once serve to show the dangerous character of this disease, and the necessity which therefore exists for a thorough acquaintance with its essential nature and proper treatment.

No single form of disease, or class of diseases, has given rise to

greater differences of opinion among medical men as to its nature and causes, and in no others have serious physiological and pathological errors so manifestly led to erroneous and destructive methods of treatment. And although the homœopathic physician, from general principles avoiding some of those untimely interferences which have been seen to lead immediately to child-bed fever, and from selecting his remedies under the direct guidance of the existing conditions, rather than under that of a supposititious and often mistaken diagnosis, has in general far greater success than his allopathic neighbors, he will none the less require, for the sake of his students, if not for his own, a clear exposition of the *Natural History*, *Essential Nature*, *Causes*, *Symptoms*, *Diagnosis*, *Course and Tendencies*, and *Treatment* of this disease.

I. Natural History.—Under this title we consider child-bed fever, or the disease commonly so termed, in a general manner only. This disease may be sporadic, appearing in one or more isolated cases, which are supposed to arise in consequence of influences inherent in the constitution of the individual, or from such as are additionally developed by the incidental circumstances of her confinement. In general, the cases of puerperal fever which appear as sporadic are less difficult of cure than those met with in epidemics.

In different countries and at different times child-bed fever has assumed an *epidemic* form, raging with great virulence and fatality, and attacking almost every puerperal woman, but neither including any very extended range of territory, nor lasting more than a few months on any one occasion. Watson * states that puerperal peritonitis "is observed to reign as an epidemic especially in lying-in hospitals, and that it occurs at irregular intervals, sometimes leaving them quite exempt from its ravages for years together." The mortality of child-bed fever in private practice among old-school practitioners has always been very great, and in the lying-in institutions and hospitals this disease has sometimes proved so dreadfully fatal as to render these public charities a curse rather than a blessing to the communities in which they were situated. Of the one hundred and sixty cases of severe inflammation of the uterus and its appendages which occurred to Dr. Lee in London from March, 1827, to the end of April, 1835, and of which he gives a tabular view,† eighty-eight, or a little more than fifty per cent., recovered. In another author men-

* *Practice of Physic*, p. 819.

† *Lectures on the Theory and Practice of Midwifery*, by Robert Lee, M. D., F. R. S., p. 478.

tion is made of thirty-one cases being lost out of thirty-two, or 96⅞ per cent., while of twenty women in child-bed in Hôtel Dieu Hospital, Paris, in February, 1746, affected with puerperal fever, scarcely one recovered.

The question as to the contagious or non-contagious nature of child-bed fever has given rise to the most violent disputes and to the most opposite conclusions among medical men. A frightful array of facts may be collected from the works of innumerable authors, which seem to prove in the most incontestable and overwhelming manner not only that this disease is contagious, but that in many remarkable instances it has been confined to the practice of a single physician, every woman whom he attended during a course of weeks or months being stricken down with this fell disorder.* Dr. Churchill writes as follows: "It seems impossible to doubt that contagious matter capable of exciting puerperal fever may possibly be conveyed by a third party unaffected by it; for example, in the cases on record following the services of medical men and nurses who were in attendance upon erysipelas immediately before. The instances are too remarkable and too numerous to be regarded as coincidences, nor would even the prevalence of an epidemic of puerperal fever at the same time invalidate our conclusions; it might certainly render the cause more influential." Dr. West of Philadelphia states that "seven females delivered by Dr. S. Jackson in rapid succession were all attacked with puerperal fever, and five of them died. These were the only cases that occurred in that district, for the women became alarmed and sent for other assistance." Dr. Ramsbotham has known the disease to spread through a particular district, or to be confined to the practice of a particular person, almost every patient being attacked with it, whilst other practitioners had not a single case; and he considers the distemper as being capable of conveyance not only in common modes, but through the dress of the attendants on the patients.

At a meeting of the College of Physicians in Philadelphia, Dr. Warrington stated that "after assisting at an autopsy of puerperal peritonitis he was called to deliver three women in rapid succession. All these women were attacked with different forms of what is commonly called puerperal fever." "A young surgeon, shortly after examining the body of a sporadic case that had died, delivered three women, who all died of puerperal fever." Mr. Davis states "that in

* Vide *Puerperal Fever as a Private Pestilence*, by O. W. Holmes, M. D., Boston, 1855; *Boston Med. and Surg. Jour.*, vol. lii., pp. 95, 410; Ramsbotham's *Obstetrics*, p. 530.

the autumn of 1822 he met with twelve cases, while his medical friends in the neighborhood did not meet with any, or at least with very few. He could attribute this to no other cause than his having been present at the examination of two cases, and his having conveyed the infection to his patients, notwithstanding every precaution." Dr. Roberton of Manchester states that between the 3d of December, 1830, and January 4th, 1831, a midwife attended thirty patients of a public charity, sixteen of whom had puerperal fever, and all died. Other midwives of the same institution attended three hundred and eighty women during the same time, and none suffered from it.*

Hitherto we have only adduced proof of the direct communicability of puerperal fever by physicians or nurses who have been in attendance upon previous cases of the disease, or by physicians going to women in labor from autopsies of persons dead with the same complaint. But there are still other modes by which the poison which is capable of exciting this disease in puerperal women has been conveyed —modes which are necessary to be known in order to a full understanding of the natural history of the disease itself. A practitioner had been attending cases of typhus fever. Within the space of four days he delivered five women. All these women were attacked with puerperal fever, and all of them died. This was in a country practice, and the cases were remote from each other. Different practices intersected the practice of this medical man at various points, but no other cases were known to have occurred in the neighborhood. Again, a patient suffering from typhus fever was admitted into a lying-in hospital, where she remained for a few hours only. In the beds on the right and left of this patient were two lying-in women; both were attacked almost immediately with puerperal fever, and both died. A medical man was in constant attendance upon a patient suffering from gangrenous erysipelas, and between the 8th of January and the 22d of March he attended the labors of ten women; all had puerperal fever, and eight of the patients died. This was in a town of moderate size, and no other patients in the place were known to have had puerperal fever. "It has been made out very conclusively by Semelweis and others that the miasms derived from the dissecting-room will excite puerperal disease. Exposure of the puerperal woman to the poison of scarlatina will give rise to puerperal disease in patients proof against the reception of scarlet fever itself. The mortality amongst child-bed women seized with smallpox is well known, and such persons die with the symptoms of puerperal disease in addition

* Churchill's *System of Midwifery*, p. 549.

to the variola." * The mode in which these several similar or different poisons develop the disease called child-bed fever will be explained when in a subsequent section we consider the essential nature of this disease.

But since, as already stated, the opposite opinion, or that of the non-contagiousness of puerperal fever, is strongly maintained by many able physicians, it is but proper that we allow them also to speak. The most powerful and influential among these is Dr. C. D. Meigs, who writes as follows. We quote: "I have practiced midwifery for many long years; I have attended some thousands of women in labor, and passed through repeated epidemics of child-bed fever, both in town and in hospital. After all this experience, however, I do not upon careful reflection and self-examination find the least reason to suppose I have ever conveyed the disease from place to place in any single instance. In the course of my professional life I have made many microscopic researches of child-bed fever, but did never suspend my ministry as accoucheur on that account. Still, I certainly was never the medium of its transmission." This statement is indeed remarkable, but it is difficult with any conceivable amount of negative testimony of this kind to disprove the positive affirmative evidence of many other equally intelligent and no less trustworthy observers. The following words of Spallanzani are very much to the point: "It is the custom of certain dabblers in philosophy to deny facts, however particularly described, and though related by persons of the highest authority, merely because their own endeavors (in the same direction) fail of success. But they do not reflect that this is acting in direct opposition to the principles of sound logic by which we are taught *that a thousand negative facts cannot destroy a single positive fact.*" Thus the entire sum and substance of Dr. Meigs's testimony is perfectly expressed in the last phrase quoted from him: he certainly was not "a medium of transmission" of such poison; but this amounts to nothing in disproof of others being such mediums.

The full elucidation of this most important practical subject requires an additional statement in this connection. The statements already given—mostly in the very words of the unfortunate actors in these domestic tragedies—which prove the direct communication of poison sufficient to cause child-bed fever, comprise but a very small portion of those recorded in medical works; these prove what may be termed *common communicability*, by means of which the poison may be directly conveyed from a variety of sources and under a great

* Tyler Smith's *Lectures on Obstetrics*, p. 630.

variety of circumstances. The testimony of Dr. Meigs (and that of others similar, if any such there be) must be regarded as anomalous and as furnishing an example of most *uncommon incommunicability.* But as nature is never one-sided, we shall find in the recorded evidence of medical men some corresponding anomalies on the opposite side—some still more remarkable instances of most *uncommon communicability!* Thus, Dr. Merriman* states that he was present at the examination of a case of puerperal fever at two P. M. *He took care not to touch the body.* At nine o'clock the same evening he attended a woman in labor; she was so nearly delivered that he had scarcely anything to do. The next morning she had rigors, and died in forty-eight hours. Dr. Gooch relates the case of a general practitioner in large midwifery practice who lost so many patients from puerperal fever that he determined to deliver no more for some time, but that his partner should attend in his place. This plan was pursued for one month, during which not a case occurred in their practice. The elder then, being sufficiently recovered, returned to his practice, but the first patient he attended was attacked by the disease and died. Very similar was the experience of the unfortunate Dr. Rutter, formerly of Philadelphia, as related by Dr. Meigs.† This gentleman "seemed to be tracked by the cause of the disease, to judge from the numerous attacks of it in his lying-in patients. He was charged with being a carrier of contagion. Worn out with fatigue, and wounded in spirit by his cares for the unfortunate victims of an epidemic disease, Dr. Rutter left the city for the purpose of regaining some strength, and to escape from the repetition of such disheartening labors." He spent ten days rusticating at a distance of thirty-five miles from the city, and on his return he caused his head to be close shaved, took a warm bath, dressed throughout in clothes entirely new —leaving behind him even his pencil and his watch—and "went out to attend a lady in labor, who had a favorable parturition, yet was next day assailed by a horrible child-bed fever, of which she died!" "Dr. Rutter repeated this attempt at personal disinfection at a subsequent period, which was two years later, and met with the same ill success." Dr. Gordon of Aberdeen, Scotland, one of the earliest writers on child-bed fever, says: "I have abundant proofs that every person who had been with a patient in puerperal fever *became charged with an atmosphere of infection, which was* communicated to every pregnant woman who happened to come within its sphere." And he ac-

* *Lancet*, May 2, 1840. † *Child-bed Fever*, p. 105.

knowledges that he was himself the means of carrying the infection to a great number of women.

Reference has already been made to puerperal fever arising from the poison of erysipelas; a few facts will show the constant relation of these two forms of disease. The explanation of the cause of this relation will appear when we come to consider the essential nature of puerperal fever itself, in the following section. Dr. Drake, in his analysis of the several accounts of epidemic erysipelas in the interior valley of North America, states that pregnant, and especially lying-in, females were peculiarly liable to the erysipelatous inflammation, and the most fatal cases were the puerperal. Dr. Corson, describing a severe epidemic of erysipelas which occurred in Norristown, Pa., in the autumn of 1847, says: "Old and young, male and female, fell before it, and yet there seemed to be one class that it preferred. The mother, as she lay helpless and exhausted from the labor and agony of giving birth to her child, was marked as a victim. The deadly poison was infused into her veins, and in many instances a few hours sealed her doom." In the latter part of March, 1852, epidemic erysipelas made its appearance in Palmyra county, Pa.; "few lying-in women escaped its attack, and the ratio of mortality was quite large." Of a similar epidemic occurring in Montgomery county in the same year, Dr. Geiger states "that it spared neither age, sex, nor condition. It marked the parturient woman for its especial victim. Not a single woman living within the range of the disease who was delivered during its prevalence escaped an attack." * In the erysipelas which prevailed as an epidemic in Dayton, Ohio, it was found that women advanced in pregnancy were especially prone to premature labor, and the period of accouchement was looked to by both patient and physician with the deepest anxiety and solicitude. But one parturient woman within the range of Dr. Sutton's information escaped an attack of puerperal fever; and every one that was attacked died.

Thus we have shown—1. That puerperal fever may be directly communicated from one to another, through the medium of a third person—especially the nurse or physician. 2. That it is very sure to be thus transmitted by persons who have recently been engaged in making autopsies of such as have died of puerperal fever and of peritoneal or erysipelatous inflammation. 3. That it may be caused by the effluvia from dissecting-rooms, from typhus fever, from gangrenous and epidemic erysipelas and from scarlet fever. 4. That no amount of personal ablution, changing clothes, etc., will always pre-

* *Trans. Penna. State Med. Soc.*, vols. ii. and iii.

vent such communication of poisonous influence, since even the blood of the person acting as a medium is affected, and by the breath a certain infectious influence is given out, which acts upon the blood of the puerperal woman through her lungs, and thus carries to her system the germs of the disease. 5. From the various facts of the personal experience of different physicians it will be seen that some persons, like Dr. Meigs, seem to be incapable of thus absorbing and conveying this kind of infection, while others possess in a most remarkable degree this unfortunate faculty of retaining and imparting the poison for months, and even years.

These facts might be deemed to have been introduced with needless prolixity, did they not suffice to exert a controlling influence over the conduct of the physician in such cases, and afford ground for the following admirable advice by Dr. Copland: "A physician or surgeon engaged in obstetric practice, upon the occurrence of puerperal fever in any of his cases, should either explain the matter to her friends, and call in a physician not engaged in this practice, to whose care she ought to be committed; or he should relinquish the care of puerperal females during his attendance on cases of this form, or even of erysipelas; or he should change all his clothes and wash his hands after seeing cases of either of these maladies before proceeding to a puerperal female." (This latter precaution would prove almost always unavailing, as shown by the cases above given: fumigating himself and his clothes with chlorine gas, and washing his hands, even beneath the finger-nails, with a solution of chloride of zinc or carbolized soap, would be more effectual.)

"An obstetric practitioner should not make an autopsy of a case of puerperal fever, or of erysipelas, or of peritonitis, or of diffusive inflammation of the cellular tissue, of diseases occasioned by the necroscopic poison, nor even attend, dress or visit any such cases, without immediately afterward observing the precautions just stated, and allowing two or three days to elapse between such attendance and conducting engagements or visits to puerperal females."* In this last paragraph the prohibition should be deemed absolute, since, if they are violated, the subsequently advised precautions may prove most disastrously unavailing.

Puerperal fever runs a very rapid course, sometimes terminating fatally in a few hours; in other instances, in which the uterus itself is less immediately involved, and the disorder assumes more closely the form of a peritonitis, its duration is much longer, according to

* *Dictionary of Practical Medicine*, part xiii.

the treatment adopted. But it is important to be able to detect the first symptoms of the disease, and to apply the appropriate remedies in its earliest stages and on the very first appearance of the evil.

II. Essential Nature.—Although possessing a various and remarkable local development, child-bed fever no less truly involves the entire body in its course, since, indeed, it must have originated from causes no less universal in their influence upon the economy of the system. Since it appears in persons of dissimilar constitution, and is developed under various influences, it must necessarily assume very different forms, the principal of which are briefly mentioned here in order to present a clear view of the essential nature of the disease, reserving their more complete description to the subsequent section on *Symptoms*.

In child-bed fever, then, there may be—

1. Inflammation of the peritoneal covering of the uterus and of the general peritoneal sac, constituting what is usually termed puerperal peritonitis.

2. Inflammation of the uterus, or metritis; this may be either inflammation of the inner wall of the womb, endometritis, with or without uterine phlebitis; inflammation of the whole mass or muscular coat of the uterus, with ramollescence, and even putrescence of its entire texture; or, finally, inflammation of the external peritoneal stratum.

3. Inflammation of and suppuration in the uterine sinuses, whose canals are converted into abscesses filled with pus. In some of these cases of metro-phlebitis the womb itself seems wholly to escape, while the suppurative process becomes very rapidly and insidiously developed.

4. Inflammation of the ovaries and Fallopian tubes. In some instances these uterine appendages have been found very much diseased, while the uterus itself remained comparatively unaffected. In one remarkable case pus, discharged into the abdominal cavity from the free extremity of the Fallopian tube, was found to have occasioned fatal peritonitis.

That these varieties of inflammation may occur independently of each other, has been proved by repeated *post-mortem* examinations, but they are most frequently met with in different forms of combination. Puerperal peritonitis seldom occurs without some degree of inflammation of the uterine appendages, but both these structures may be severely affected, while the muscular coat of the uterus and the veins and absorbents remain wholly exempt from disease. In a similar

manner the vascular and muscular tissues of the womb are liable to severe attacks of inflammation, without any corresponding affection of the peritoneum by which they are covered, although it more frequently happens that inflammation excited originally either in the veins, absorbents or muscular coat involves also the peritoneum. This form of inflammation in the vascular and muscular tissues of the uterus may be so malignant as to become fatal even before thus extending to the peritoneal membranes. This is important to be borne in mind, since absence of pain and of tenderness in the abdomen does not preclude the possibility of a dangerous attack of child-bed fever. In cases of uterine phlebitis, purulent matter may be deposited not only in the veins of the womb, but in different parts of the body, and even in the lungs; and in puerperal peritonitis the pleura and other serous membranes may sympathize with the peritoneal inflammation.

There can be but little doubt in the mind of any one that the severe and varying phenomena which mark its inception, course and termination are due to blood-poisoning—the absorption into the blood of some poisonous matter, whether animal or vegetable; and it seems to be equally clear and reasonable that this blood-poisoning is first of the series of phenomena, if not their real cause, and not secondary and consequent. Dr. Stevens remarks that "this morbid condition of the blood is decidedly the first link in the chain of those phenomena which constitute fever, for even before the attack every drop of the vital current is changed in its properties; and wherever this deranged blood can circulate, there fever extends its empire; for the cause which produces this disease is not confined to a part, but acts on every fibre and in every tissue of the living system; it disturbs every function of the body and deranges every faculty of the mind." The blood drawn in some cases resembled that found in severe cases of typhoid fever. The quantity of fibrin is increased, although the solids are generally diminished in quantity; the red blood-cells are decreased, while the white cells are increased; the extractive matter, lactic acid and fat are increased, and there are traces of bile pigment.

Very strong ground has been taken by some writers regarding the identity of puerperal fever and erysipelas, and Dr. Churchill states that he has observed that the children of mothers who have been attacked by child-bed fever during the prevalence of epidemic erysipelas are very liable to be attacked by that disease. The late Sir James Simpson contended for the identity of puerperal and surgical fever.

III. Etiology.—The causes of child-bed fever may seem suffi-

ciently obvious in many cases, but in numerous other instances they are decidedly obscure. A natural and easy labor does not necessarily preclude an attack, nor indeed are the majority of difficult labors followed by this disorder. The particular influences which singly or in combination may lead to puerperal fever in any given case are not always assignable. Sometimes this disease appears to rise spontaneously, and without our being able to attribute it to any causes whatever. In such cases, therefore, we are driven back to first principles, and compelled to seek in some profound dyscrasia of the individual constitution, or, in what may be nearly the same thing, some hitherto unmanifested exhaustion of the patient's system, for the efficient cause of an attack which may prove as rapidly fatal in its termination as it was sudden and unforeseen in its onset.

As shown in a previous chapter, all the various forms of constitutional dyscrasia may develop themselves during pregnancy, so also may they—till then held as it were in reserve—finally ultimate themselves in still more dangerous manifestations of disease immediately after parturition. There are cases in which these morbid influences establish themselves, even before the full term, in the form of *febris gravidarum* (fever of pregnant women), which by its continuance after delivery becomes entitled to the additional designation of *et parturientium*, and of those lying in. Sometimes these morbid influences terminate the pregnancy before term, and thus destroy the child at the same time that they threaten the life of the mother. The influence which epidemic, traumatic and gangrenous erysipelas, and the peculiar miasms of typhus and scarlatina, may exert in causing fever of lying-in women has already been sufficiently indicated in the examples previously adduced. And the epidemic influence of puerperal fever itself in extending its ravages is but too well understood. And all that is meant by contagion, by the personal transmission of the poisonous effluvia of child-bed fever by physicians and nurses from one patient to another, is but a more direct and perhaps more highly concentrated development of what in its diffused form corresponds to the same epidemic influence. Every animal poison of a putrid nature, like that from *post-mortem* examinations of persons who have died from puerperal fever, as well as that from dissections in general, seems equally capable of establishing this peculiar fever in lying-in women.

In some cases it is evident that the direct application of such poisons to the genitalia of parturient women by means of the hands of accoucheurs, or even the presence of such infected persons in the lying-in room, has been followed in a very few hours by the most malig-

nant attacks of puerperal metritis and metro-phlebitis. Not less fatal were those cases of puerperal disease which resulted from receiving the infection of this malady imparted through the respiration of persons who had indeed been exposed to the influence of this disorder, but had not visited such cases for days or months, or even years, as in the case of Dr. Rutter and in the instances above quoted from Drs. Merriman and Gooch. In these cases certain individuals are shown to have been endowed with the most unfortunate faculty of retaining and perpetuating in their own persons a sort of concentrated miasm exactly corresponding to the general epidemic influence of this disease. And even as the raw utero-placental surface possesses a wonderful faculty of absorbing the subtle poison locally approximated to it, so the tissues of the peritoneum in the puerperal state seem endowed with a remarkable susceptibility of becoming specifically inflamed by means of the absorption into the general system of the *epidemic influence* of the same particular poison, or of its *personal influence* as imparted by the respiration of a person whose system has once been charged with it.

Suppression of the lochia has been regarded as one of the most frequent causes of child-bed fever. But of the two most distinct and most common forms of this disorder, metritis and peritonitis, the former alone appears to be any more than incidentally connected with such suppression. In cases of pure puerperal peritonitis the lochial discharge will sometimes continue undisturbed, while in cases of inflammation of the uterus, either in that of its interior surface or of its muscular tissue, or of both, the lochia may be much diminished, or even entirely suppressed. And yet in these latter cases the young physician will be most woefully deceived who allows himself to believe there is no child-bed fever because he finds no particular swelling or tenderness of the abdomen. Still, suppression of the lochia by cold applications or by styptic injections administered in cases of uterine hæmorrhage may very rapidly bring on phlebitis, and even gangrene of the uterus. It would scarcely seem possible that styptic or even cold injections could fail to produce such a repulsion of the lochial discharge as would in effect be equivalent to its reabsorption. In damp, moist weather puerperal fever is found to be much more prevalent—in part perhaps from the more ready and penetrating diffusibility of the poison, and in part no doubt from the general debilitating influence of such weather upon the lying-in women themselves. Overdistension of the bladder, long-continued pressure of the fœtal head against the particular parts of the interior of the pelvis in difficult

labors, and compression and even rupture or laceration of the uterus itself, have been mentioned by different authors as capable of producing child-bed fever. "The presence of inflammatory ulceration of the cervix during the first stage of the puerperal period has appeared to me powerfully to predispose the patient to puerperal fever. The uterus seems to retain a predisposition to inflammation in the puerperal state, even in the cases in which ulceration, having existed during pregnancy, has been cured (allopathically) before parturition occurred. I have met with repeated instances of puerperal fever under these circumstances."—*Bennett.* But such a result can hardly ever arise from these accidents unless there is present some additional miasmatic influence.

Fragments of the placenta still adhering to the uterine parietes and there decomposing may occasion utero-phlebitis. In like manner the open mouths of the uterine sinuses may become the receptacles of poisonous matters originating in the uterus itself; or even the form of adhesive inflammation by which these sinuses are naturally closed may, under certain conditions presently to be mentioned, lead also to phlebitis, and even to gangrene of the uterus. But since in many cases the influences exist without producing such results, since even the decomposition of portions of the membranes and of the placenta, occasioning an offensive lochial discharge, is not always followed by inflammation of the womb or any other form of child-bed fever, and since, as already abundantly shown, this disorder will spring up apparently from the slightest cause or from no obvious cause at all, the question arises, How are these discrepancies to be accounted for?

With regard to those cases which arise from epidemic influence, or from any form of poisonous effluvia from without, nothing here needs to be said, since evidently the puerperal state is one which renders the patient remarkably susceptible to all these influences. But do we not even here approach the solution of the mystery of the sporadic origin of this disease? That condition of a mass which requires but the addition of a little external warmth in order to set it on fire is in no very remarkable manner different from that which presently leads to spontaneous combustion. The exhaustion of the vital forces, that which in surgical language is technically termed "*shock*," affords the real clue to much that is obscure and anomalous in puerperal fever. Nature always puts her best foot foremost, especially in this matter of gestation and parturition—the former a long-continued and all-absorbing function, of which the latter may be an equally exhausting crisis. In some of these cases, where child-bed fever arises from no

external cause, and proves rapidly fatal, we see reason to believe in such profound exhaustion of the vital forces as may lead to *ramollissement*, putrescence and gangrene of the womb, when such fatal degeneration has been only developed within a very few hours after delivery. To this final act of the grand function of reproduction are summoned all the remaining energies of the entire system; the work is indeed accomplished, but the instrument is destroyed and the worker is no more! The womb has been compelled to expend an amount of vital force in a few hours which ordinarily might have supplied the whole system for years. Or is it that these vital forces bear so near a relation to electricity that their excessive development, through the nerves and muscles and blood-vessels of the womb, is followed by a disposition to putridity similar to that which is seen to take place when lightning strikes the whole body? * Such are the ideas associated with the shock of lightning, and not unlike are the consequences which follow such nervous "shock" as we have attempted to portray. What is most remarkable of all is, that in some of these cases nature gives no signal of distress till she thus hauls down her colors in sudden despair. Similar indeed is the case in some instances of paralytic shock, in which the apparently strong man is struck down in an instant and without a moment's warning.

Such is the extreme pathological view of what fortunately takes place but seldom. The physiological condition which we now proceed to describe is that which occurs in other cases in which the above-described profound exhaustion does not obtain. Toward the one great end of sustaining the fœtus in utero all the vital energies of the mother's system have been for months determined. In the fulfillment of this high use her own health may have been perfect and her strength not overcome. And even through the last critical act of the drama, that of parturition—in which all the muscles of her body and all the nobler powers of her system are called into action—she may pass with comparative ease. True, she is fatigued and weakened by such tremendous exertions. But a few days of rest would make ample amends for this, if this were all. But it is not, for hitherto we have given but a superficial picture of the physiological reality. All the mother's circulation and the entire economy of her nutrition have been made to assume one single direction, and the great currents of her life have but flown in unison with the lesser currents of the living

* "In the most rapidly fatal cases nothing has been met with beyond non-coagulability, thinness and blackness of the blood. The blood in these cases resembles that of persons killed by lightning or by hydrocyanic acid."—*T. Smith.*

form within her. At once all this is stopped, the vital union between the two is rudely severed, and the living streams, flowing as before to supply the unborn babe, find in their place only the emptiness of desolation, and are themselves wasted.

The whole physiological life of the mother receives a shock which, if less fatally destructive than that already described as resulting from exhaustion of the vital forces, still profoundly disturbs her entire system. But a few brief hours before all her vital energies moved on in vigorous harmony, as a fair ship moves on under the influence of a strong and favorable breeze. But now all is changed, the current of her life is suddenly arrested, and her entire system, so far as it had been engaged in supplying the young life within her, comes to a sudden stand-still—in this respect resembling the condition of a ship taken aback in her course by failure of the wind, or rather when on the tack she loses the wind and the empty sails flap idly against the masts, leaving her helpless and at the mercy of any adverse influence. The "shock" from exhaustion is as if a vessel struck upon a rock; this "shock" from sudden arrest of the great function of nourishing the fœtus in utero is like that experienced by a vessel which, losing the wind and having no longer steerage-way, drifts helplessly upon the waste of waters. In the former class of cases sporadic child-bed fever may be spontaneously developed in the most malignant form of metritis and metro-phlebitis; in the latter, the slightest breath of epidemic peritonitis, erysipelas, or of any other of the animal poisons, may suffice to kindle at once the flames of puerperal fever.

Having thus at length shown how subject the puerperal woman is to influences from without or from within her own body, which may develop child-bed fever, it remains only to state what may already have been foreseen, that in her helpless and peculiarly delicate period of transition from the energetic performance of the great function of nourishing the fœtus in utero, in which she is safe as a ship at anchor, to that other and equally safe condition into which she subsequently comes of nourishing her babe, as in lactation,—during the whole of this transition state she is liable to be thrown into a fever which may prove a malignant puerperal metro-peritonitis, or assume any other of the various forms common to child-bed fever, by any of the influences above enumerated. And the same result may also follow violent mental or moral emotions. This latter class of influences is especially apt to be efficient in unmarried women, and particularly in cases of abortion. In such cases either the violence of the means employed to bring about the abortion, or the unsuitable external con-

ditions and attendant circumstances, or the profound disturbance of the moral sphere by fear and grief, or all these combined, very often lead to fatal uterine and peritoneal inflammation.

IV. Symptoms.—The causes, phenomena and post-mortem results of puerperal fever have led authors to divide the disease into three forms—viz., 1. The inflammatory; 2. The contagious, zymotic or malignant; 3. The gastro-enteric. These divisions, however, can scarcely avail in the treatment, especially to the homœopathic practitioner, and it is even doubtful whether the last mentioned is entitled to be called puerperal fever at all.

Yet while the homœopathic physician will always seek to give the remedy which most faithfully represents the totality of the symptoms, still, it will somewhat conduce to a clearer understanding of this frightful malady if we arrange its more prominent symptoms with some reference to the three most common and often distinct forms of the disease in which they may be expected to appear; taking note also of the order of their appearance, as near as may be, in the rapid development of the disease.

The symptoms may be local or constitutional; and in most cases the latter are the first to make their appearance. And their general character will usually indicate either the one or the other of the three principal forms of child-bed fever—that in which the womb is principally affected, that in which the peritoneum seems to be the primary and chief seat of the disorder, or that which is known by the name of uterine phlebitis. In some cases, however, the symptoms, from whichever source first arising, appear to involve all these structures as well as their adjacent organs nearly in an equal manner.

In *puerperal metritis*, or that form of child-bed fever in which the uterus is principally affected, the symptoms may vary in intensity and malignancy in the most remarkable manner, and the disease itself may rapidly involve also the uterine appendages and adjacent peritoneal tissues. The attack may begin before delivery or almost immediately after; such attacks are usually exceedingly malignant in character, and inclined to run with great rapidity to a fatal termination. Usually, however, the disease begins on the second, third or fourth day, although it may occur still later. It may begin with distinct rigors, or there may be merely an imperfect and scarcely noticed chilliness. The pulse is very rapid, full and soft, varying from 120 to 150, or even more. In some instances there is neither pain, distension nor tenderness of the abdomen; in others the pain is very acute throughout, the distension enormous, and the tenderness

exquisite. There may also be pain and tenderness at the epigastrium, with nausea and even vomiting. "Profuse sweating is a very common and distressing accompaniment of this disorder. In some cases this is so strongly marked and constitutes so large a part of the disease that Dr. Blundell described it as a distinct form of puerperal fever, under the name of hydrosis. The sweat and the breath are very often accompanied by a sweetish, pus-like odor. The sweating of puerperal fever does not diminish the secretion of urine, nor does it abate the quickness of the pulse. An intolerable thirst prevails, and the patient drinks immense quantities of whatever fluid she may be allowed. Dark spots or ecchymoses appear upon the wrists or other parts of the body." At first the lochia may be unaffected; they may even be increased in quantity, but more commonly they are entirely suppressed. The tongue is flabby, broad and slimy, and covered by a mucous or creamy coating. The countenance is pale and inexpressive, or, where the pain is acute, anxious and covered with perspiration. As the disease advances, usually about the third day, diarrhœa may supervene. The patient is nervous, depressed and fearful; the pulse is soft, small and increasing in rapidity; the respiration quick, hurried, high and often panting. And where this latter symptom occurs in connection with excessive distension of the bowels, it must be regarded as a very bad indication, since the impossibility of properly oxygenating the blood where the lungs have so little play, and the very rapidity of their movement—attempting to compensate by the number of the respiratory motions for what they lack in amount—combine to degenerate the physical organization and exhaust the vital forces with the greatest speed. The abdomen in many cases is swollen, tympanitic and painful; sometimes, from the extension of the inflammation to the peritoneum, it is universally tender, sometimes tender in a particular part only. The lochia, if not entirely arrested, are generally, after a day or two, changed in quality and become fœtid. The flow of milk is almost invariably checked; in the worst cases sometimes it is entirely prevented; in other cases it is repressed after the secretion has taken place. When any of the appendages of the uterus are involved, such as the ovaries or the Fallopian tubes, the patient will describe a particular portion of the abdomen, on one side or the other, as the seat of special pain or sensitiveness to pressure. An examination per vaginam will serve to point out these complications likewise.

In an epidemic of puerperal fever described by Dr. Gooch the cases began a few days after delivery, and the leading symptoms

were "diffused pain and tenderness, with some swelling of the abdomen, a quick pulse, which was generally at first full and vibrating. Sometimes it was small, but still hard and incompressible; the skin was hot, though not so hot as in other fevers; the tongue was white and moist, and the milk suppressed. As the disease advanced the belly became less painful, but more swelled, and the breathing short; toward the end the pulse was very frequent and tremulous, and the skin covered with a clammy sweat; even in this state the tongue continued moist and the mind clear, and death took place about the fifth day." In a subsequent epidemic which appeared in Paris the symptoms assumed the typhoid form from the first, beginning with a long and severe rigor, often a few hours after delivery; pain very intense over the whole abdomen, which rapidly became swollen; pulse feeble, compressible, undulating, often 150; respiration hurried, anxiety extreme, severe frontal headache; countenance sunk, pale, and covered with clammy sweat; constant vomiting of green matters; purging, stools fœtid. The patients sank rapidly at the end of a few days, or even hours. There was no regularity in either lochia or milk." In the commencement of this form of child-bed fever the nervous system of organic life and the blood * appear to be suddenly and seriously affected, as shown by the general loss of vascular tone and of nervous power, by the disturbance of all the vital functions, by the rapid exhaustion of the powers of life, by the sudden death which often ensues, and by the accompanying softening and putrescence of the womb, as shown by *post-mortem* examinations. "Inflammation of the muscular tissue and lining membrane of the uterus is characterized by great disturbance of the nervous system, distressing cephalalgia, and is attended by fever of low type. Occasionally the cerebral symptoms are so intense as entirely to mask the uterine disease. It is ushered in by the same symptoms, as regards rigors, acceleration of the pulse and state of the tongue, as those which attend the other varieties of puerperal inflammation. Its tendency is to produce softening, suppuration and gangrene of the substance of the uterus, and it is one of the most fatal of all the puerperal inflammations."—*T. Smith.*

In *puerperal peritonitis*, or that form of child-bed fever in which the peritoneum appears to be primarily and principally involved, the disease may commence before delivery, but it is more apt to arise in from twenty hours to three days afterward. Sudden rigors usually constitute the first obvious symptom, or there may be instead severe pain, but

* "In some of the worst examples, pathology has found no other change than fluidity and altered color of the blood."—*T. Smith.*

rising of the pulse generally precedes them both; then follow heat of the skin, thirst, flushed face and hurried respiration. Next there may be nausea, vomiting—which, by its spasmodic contraction of the abdominal muscles, greatly heightens the sufferings of the patient—pain in the head and increased sensibility of the abdomen. In some cases the tenderness of the abdomen is contemporary with the rigors, or immediately succeeds them. The weight of the bed-clothes is insupportable, and the least movement of the body is attended with exquisite suffering. Sometimes there are pains, either slight or severe, continuous or paroxysmal, which, beginning in the hypogastrium or in one of the iliac regions, gradually extend over the whole abdomen. But while the excessive sensibility of the abdomen, aggravated by pressure and motion, is characteristic of the peritoneal form of child-bed fever, the other distinct pains are not so constantly present. As the disease advances the abdomen becomes still more tender and sensitive to movement or pressure; not only is the weight of the lightest covering intolerable, but the patient lies on her back with her knees drawn up, in order as much as possible to avoid tension and pressure of the abdominal parietes. As the disease makes still further progress the abdomen becomes tumid and tympanitic. This may be followed by effusion into the cavity of the peritoneum indicated by a peculiar doughy feeling.

The lochia are variously affected; in many cases this discharge continues undisturbed, or it may become fœtid, or diminished in quantity, or entirely suppressed. The secretion of the milk is much more positively affected; if the attack begins before the flow is established, it is prevented; if afterward, the secretion is suspended and the breasts become flaccid, and the patient may at the same time become entirely indifferent to the fate of her infant. Rapidity of pulse is characteristic of this disorder; its range varies from 120 to 160, and the severity of the attack will be well measured by this symptom, since as the disease advances the pulse becomes contracted, thready, intermittent, and toward the last almost imperceptible. The tongue generally has a whitish coating in the centre, with red around the edges; sometimes it is dry and brown in the centre, with yellowish or white fur at the edges. There may be nausea and vomiting of the ingesta, of bilious green, brown or black fluids; and there may also be diarrhœa, with dejections dark and fœtid toward the close of bad cases. The urine is generally turbid or high colored, scanty, and in some cases passed with difficulty. The heat of the skin may often be not much more than is natural, but toward the last the skin may become cold and clammy.

The countenance will usually mark the advance of the disorder by features drawn up and expressive of great distress. The dark areola surrounding the eyes, the dilated pupil, the glassy surface and bloodless conjunctiva give a lustrous and unearthly appearance to the eyes in all cases of puerperal fever, whatever the special complication, whenever the disease is fully formed. The intellectual faculties often remain unaffected to the last.

Such are some of the most prominent symptoms which will appear in different cases of this disorder, in different forms and combinations; for while their variety is so great that all do not appear in any single case, scarcely any are constant, if we except the rapidity of the pulse and the abdominal tenderness. This abdominal tenderness, when the substance of the uterus—metritis—alone is involved, is only made out under such firm pressure as will bear down the abdominal parietes and make the pressure direct upon the uterus, which is then found to be extremely sensitive; but in peritonitis the slightest pressure upon the abdomen gives intense pain.

In this, as in the form of child-bed fever more immediately affecting the uterus, the disorder runs a rapid course, and the vital forces are manifestly very weak, even in cases which do not appear to assume the lowest or typhoid symptoms. In some cases, as already stated, this disorder is transferred or extends to the pleural sac; still more rarely does it involve the serous membranes of the brain; in either case the invasion of the inflammation will be marked by sharp, lancinating pains, worse on motion.

In *uterine phlebitis*, or at least in its earlier stages, the symptoms do not seem to vary remarkably from those common to other forms of puerperal metritis; in some cases there may be a greater freedom from pain, the pulse alone, ranging from one hundred and ten to one hundred and fifty, indicating the great danger. This form of disease, in the common and gross pathology of the schools, has been attributed to reabsorption of purulent matter from the utero-placental surface. But, even if this be possible, it is probable that the mischief lies farther back and still deeper, in a primary disordered state of the blood itself. Puerperal fever, as described in its more malignant form under the head of puerperal metritis, may destroy patients in a few hours, even before there has been sufficient time for the occurrence of phlebitic inflammation; and in such cases, as already stated, no pathological changes are met with beyond a diseased state of the blood. And it is to this morbid condition of the blood in a milder

form, and not to reabsorption, that we should look for the real cause of uterine phlebitis.

Before this form of disease is so far advanced as to be indicated by objective symptoms, by external suppuration, it may be recognized, according to the following observations of Dr. Meigs, by the (subjective) moral symptoms: "In peritonitis, pure and simple, the mind is clear, the nervous system not being disturbed by the presence of pus-corpuscles in the blood; the woman recovers or dies without those hysterical, or rather hysteroidal and even maniacal, symptoms that invariably mark a purulent infection of the blood. The alarm I wish to awaken in your mind is one connected with the very great probability that hysterical or hysteroidal affections, in women recently delivered and assailed with fever, are really the exhibitions of that curious influence that pus in the blood, or pyæmia, exerts upon the nervous system. In all the individuals, male or female, that I have attended in mortal illness from wounds of veins in venesection, I have invariably noted this kind of hysterical intoxication, caused by purulent infection of the blood. As the disease advances the more palpable phenomena attendant upon the formation of pus in the veins are developed by the deposit of purulent matter in various parts of the body, especially in the vicinity of the large joints. We find in such cases swellings in the neighborhood of the articulations, erysipelatous blushes, and large suppurations in the vicinity of the joints, or patches of slough or gangrene form at the sides of the erysipelatous blushes."

V. Diagnosis.—There can be little real difficulty in distinguishing child-bed fever, in any of its various forms, from any other disease. Its occurrence soon after delivery, the gravity of the symptoms and their rapid progress present a *tout ensemble* found in no other malady. And while the homœopathic physician will always prescribe according to the symptoms and conditions present, without depending upon the name by which the affection may be characterized, still it is of the highest importance that he should recognize a case of child-bed fever at the earliest possible moment. And to this he will be impelled by the gravest considerations, that he may from the very first afford to his patient that devoted and intelligent attention which such a case requires, perhaps more than any other; that he may make sure himself of not becoming the medium of transfer of the puerperal poison from one patient to another; and that he may secure himself from suspicion of ignorance and incompetency.

In most cases of child-bed fever, as shown in the preceding pages,

the disease will be ushered in either by rigors more or less distinct or by serious acceleration of the pulse. For the appearance of either of these symptoms the physician should therefore be on his guard, especially if he has reason to suspect the possible presence of the epidemic influence of puerperal peritonitis, of erysipelas, or of any other of those influences already described as capable of developing fever in the puerperal state. He should make sure that the nurse is intelligent enough to inform him at once if rigors, or even chilliness, appear; and he should himself carefully observe the pulse at every visit. As long as this is below one hundred the patient is comparatively safe, but when it suddenly rises above one hundred there is serious reason to apprehend the onset of child-bed fever, if it be not already insidiously at work within the pelvis. And in fact any severe symptoms arising in the puerperal woman should at once command the most careful attention. The pains of peritonitis may be distinguished from the after-pains by observing that the latter are attended by a perceptible contraction of the uterus, and that the after-pains are diminishing about the time—the third day—when the pains of puerperal peritonitis make their appearance; and that the last are particularly aggravated by pressure and motion, and that they become more and more severe. In like manner it will be observed that in child-bed fever the constitutional disturbance and hypogastric tenderness, and even the acceleration of the pulse, constantly increase day by day, instead of subsiding, as would be the case were these symptoms dependent upon after-pains or hysteralgia alone.

VI. Course and Tendencies.—Child-bed fever in either of its forms runs a very rapid course; it is capable of terminating life in a few hours, or it may continue for several days, more or less, according to the nature of the patient's system, to the particular character of the attack, and to the kind of treatment employed; that form of the disease proving most rapidly fatal in which there is a profound "shock" of the nervous system; that in which the vascular system is so disorganized as to induce softening and putrescency of the uterus coming next in order of sudden fatality; then the low, adynamic form of metritis or malignant child-bed fever; then the primary puerperal peritonitis; and finally uterine phlebitis.

The general tendency of the disease is to a fatal termination, unless arrested by efficient treatment; but this tendency pursues in different cases a variety of courses: in some the nervous system is "shocked" and destroyed; in others there is "dissolution of the blood," which

may destroy life at once; in others there is disorganization of the tissues; in others, finally, the vital forces are exhausted by the intense suffering, by the gradual loss of oxygenation of the blood inseparable from excessive tympanites, and by the general severity of all the symptoms.

VII. TREATMENT.—In treating cases of puerperal fever it is of the greatest importance to regard the moral state of the patient, both in the selection of the remedy and with reference to securing her against all disturbing emotions. The room should be as quiet and as cheerful and pleasant as possible; the diet should be carefully regulated; cooling drinks should be freely allowed; and the utmost cleanliness and purity of the patient's person, her clothing and bed-clothing, and the atmosphere, should be observed. The medicines specially adapted to the treatment of this grave disease will be found laid down under the article on *Metritis*.

SPURIOUS PERITONITIS.

Some authors have described under the title of false or spurious peritonitis an affection occasionally met with in puerperal women, which in many of its symptoms bears a close resemblance to child-bed fever, and more especially to the peritonic form of that disease. It occurs mostly in women of nervous temperament, who are "delicate" and inclined to hysteria. The pain, which is or appears to be very severe, is located by the patient in the region of the womb and its surroundings, but is probably seated in the muscular wall of the abdomen, or in the musular fibres of the intestines. Although there may be evidences of a febrile condition, such as dry mouth, quick and jerking pulse and dry skin, yet the affection is evidently unconnected with inflammatory action, and is probably entirely neurotic in its character. The pain is described as unbearable and excruciating, so that the patient cannot bear even the most gentle touch or the pressure of the bed-coverings, and there is great mental excitement accompanying.

It is important that this affection should be distinguished from true puerperal peritonitis. Its nervous and hysterical character is made apparent if, by withdrawing the patient's attention from the seat of pain by persuasive conversation or other means, considerable pressure can be made upon the abdomen by the hand without exciting remonstrance or increasing the suffering, and upon directing the woman's attention to her trouble the extreme pain and sensitiveness to pressure returns. Dr. Rigby thus writes: "If by soothing words and prom-

ises of cautious proceeding we induce her to let us apply our hand upon the abdomen so gently that it does not even rest its weight upon it, we shall find that we may now gradually increase the pressure until by degrees it becomes considerable, not only without her feeling any increase of pain, but with complete relief, the pressure of the hand appearing, as it were, to benumb the pain. If we withdraw the hand in the same gradual manner, no pain will be produced, but if we remove it suddenly, a spasm of the muscles, with intense pain, is instantly excited." It is stated that this disorder may pass into a grave form of inflammatory disease, but this can scarcely happen under judicious homœopathic treatment.

A great variety of remedies may be indicated by the symptoms belonging to this strange disorder, the principal of which are—ACON., BELL., CHAM., COFF., CIMICIF., COLOC., CUP., GELSEM., HYOS., IGNAT., IPEC., KALI C., LACH., NUX V., OPIUM, PHOS., PULS., SPIGEL., VERAT. VIR., ZINC VAL. The article on *Metritis* may be consulted with advantage.

CHAPTER XXIII.

POST-PARTUM DERANGEMENTS.—CONTINUED.

PUERPERAL MANIA.

ALTHOUGH puerperal mania is of itself seldom a fatal disease, there is none in the catalogue of maladies to which the pregnant and parturient woman is exposed more varied or more distressing, and at times alarming, in its phenomena. It is liable to occur during pregnancy, to set in suddenly and without any apparent cause during labor, or to manifest itself subsequent to delivery. There are, however, two periods during which the child-bearing woman is especially liable to its occurrence—viz., immediately after parturition and before the system has had time to recover its tone, and secondly, during lactation. Esquirol* observed that of ninety-two women affected with puerperal insanity who were admitted into the Salpêtrière, sixteen were attacked from the first to the fourth day after delivery; twenty-one from the fifth to the fifteenth day; seventeen from the

* *Des Maladies Mentales.*

sixteenth to the sixtieth; nineteen from the sixtieth day to the twelfth month of lactation; nineteen after weaning. In regard to the frequency of its occurrence, Dr. Haslam reports eighty-four cases out of sixteen hundred and forty-four insane women admitted at Bethlem Hospital; Esquirol reports ninety-two cases out of eleven hundred and nineteen admitted at the Salpêtrière; Sir James Y. Simpson states that "the statistics of insanity appear to show that about ten per cent. of all the females found in lunatic asylums have become the inmates of these institutions in consequence of puerperal mania." "Of eight hundred and eighty-one women admitted to the Dixmont Hospital for the Insane at Pittsburg, Pa., the cause of insanity in one hundred and eight cases is ascribed to the puerperal state, constituting about twelve per centum of all the females who became inmates of this institution from 1856 to December 1, 1871. Of two thousand one hundred and thirty-three women admitted to the Pennsylvania Hospital for the Insane at Philadelphia, the supposed cause of insanity in one hundred and eighty-five cases, or about nine per centum, was conditions superinduced by the puerperal state." *

The pathology of puerperal insanity is quite obscure. Some authors have regarded it as a true phrenitis—inflammation of the brain and its meninges—while others maintain that it is due solely to exhaustion and the irritation consequent on the puerperal period. It is probable that there are various causes, both remote and proximate, which give rise to this disorder, the system being peculiarly susceptible to impressions during the parturient and post-partum period in consequence of its general depression; the discrepancies of the various writers being accounted for by a want of proper discrimination in the results of their necroscopical researches. Amongst the *predisposing causes* we may mention hereditary disposition to insanity, frequent child-bearing, anæmia and exhaustion, albuminuria, excitation of the sexual system, puerperal convulsions and puerperal fever. The *proximate causes* may be divided into physical, such as prolonged and difficult labor, injuries from instrumental delivery, flooding, etc.; and such moral causes as have a tendency to excite or depress the mind, as fright, fear, joy, grief, anxiety, etc. It often happens, however, that cases of insanity occur in which no cause, either occasioning or exciting, can be fairly made out. Many authors, Gooch more especially, contend that the probability of a recurrence of the insanity in future labors is very remote, while others, on the contrary, assert that an attack, instead of giving immunity against future

* Dr. J. C. Burgher, in *Transactions American Institute of Homœopathy*, 1872.

attacks, seems rather to render the woman more liable to a recurrence of the malady. The writer is cognizant of an instance in his own practice in which four consecutive pregnancies were followed by puerperal insanity of varying duration.

Cases of puerperal mania may be divided into two classes, each of which may vary as to time and cause of its appearance. These may be termed *acute mania* and *melancholia*, the first being characterized by a high degree of fever, violent delirium, great general disturbance of the system and all the indications of acute inflammation, while the other is marked rather by a depressed physical and mental condition. "The former occurs either immediately after delivery or at the commencement of lactation; the latter more often after suckling has been continued some time, and where the patient is becoming debilitated by it. The one is acute, both in its onset and progress, the other insidious and protracted. Death is not an infrequent result of the one, but it seldom happens in the other."—*Meadows.*

Symptoms of Acute Mania.—The symptoms of this disorder are very variable and run through all the varied phases of insanity. The attack is usually ushered in by premonitory symptoms. Dr. Haslam asserts that "the first symptoms of its approach after delivery are—want of sleep, the countenance becomes flushed, a constrictive pain is often felt in the head, the eyes assume a morbid lustre and wildly glance at objects in rapid succession; the milk is afterward secreted in less quantity, and when the mind becomes more violently disordered it is totally suppressed." This succession of symptoms is, however, not observable in every case; and the patient may even jump, as it were, from a condition of sanity to one of insanity without any noticeable warning. Insomnia, irritability of temper, pain in the head, restlessness, anxious expression of countenance, occasional loss of memory and consciousness, may be enumerated as amongst the most constant symptoms of the earlier stage. The patient may either sink into obstinate sullenness, occasionally interrupted by violent outbursts of passion, or she may become furiously maniacal and threaten destruction to all around her. "The face is pale, features pinched, pulse small, irritable and usually accelerated; the temperature of the body rather below the normal standard; skin often clammy; with great debility she is blatantly noisy; stares wildly at imaginary objects; instead of answering a question she repeats it, or she talks incoherently, uttering her words with great rapidity. She picks at the bed-clothes, grasps at anything or any one about her; curses and swears; objects to being confined to bed; complains of

being watched, and tries to escape. Occasionally obscene language and lascivious actions are indulged in to an extent that excites our amazement. Masturbation is sometimes noticed, but probably more from a wish to allay irritation than a desire to excite it. The obscenity of word and manner often continues until convalescence is well advanced. She imagines that some calamity has befallen her husband, or that her babe is dead or has been stolen; and if brought to her she says it is not hers, refuses to nurse it, and even attempts to kill it if left within her reach. Sometimes she is impressed with the idea that her husband is unfaithful, and has conspired with others to poison her. Confidence and affection give place to suspicion and hatred. Sometimes she will manifest great anxiety with regard to herself—fears that she will die, thinks that she has been poisoned, that she is flooding to death, that her blood has turned to water, etc. Suicide is often attempted by violently throwing herself on the floor, attempting to jump from a window, strangle herself with a handkerchief or cap-string, etc.; the evident result of an abstract impulse without method or premeditation. She refuses to eat; the tongue is coated; the bowels usually constipated, the secretion of urine diminished and the lochia sometimes suppressed." *

The *Diagnosis* of this form of puerperal mania is readily made. Gooch very properly observes that the history of the case is essential to the forming of a correct diagnosis, but when this history is taken into consideration, and the phenomena above described, or other symptoms indicative of insanity, are observed, the nature of the disorder becomes apparent. Nevertheless, the disease may be mistaken for the delirium occurring during fever or acute phrenitis, or even for that of mania-a-potu. In cases, however, where any doubt as to the nature of the malady obtrudes itself, a very searching examination and comparison of symptoms and conditions will set the matter in its true light. The *Prognosis* is not unfavorable. Dr. Burrows had thirty-five recoveries out of thirty-seven cases, while Esquirol had but fifty-five out of ninety-two. The statistics furnished by old-school practitioners show about seventy-five per cent. of recoveries from this form of the disease.

Symptoms of Melancholia.—This form of puerperal insanity differs very materially from that just described. It is usually characterized by debility and anæmia, and is generally occasioned by the drain upon the system in consequence of profuse hæmorrhage during or subsequent to labor, or of lactation. The face is pale, and the coun-

* Dr. J. C. Burgher, *loc. cit.*

tenance has an expression of the deepest dejection. The patient usually sits quietly, and although she will speak when spoken to, and answer questions, generally originates no conversation and gives expression to no wants or desires. The pulse is usually nearly normal; the temperature somewhat below that of health; the tongue is generally coated, the bowels constipated and digestion impaired. The derangement occasionally takes the form of religious melancholy, in which case she deplores her sinful condition and speaks in the most despondent manner of her soul's salvation. "In a case recently occurring in my own practice," writes Dr. Burgher, "the patient argued that her own damnation was necessary to secure the salvation of the other members of her family; and yet she manifested an indifference toward her husband and a dislike toward her children, whom she would order from her presence, and even refused to nurse her babe." There is usually an entire absence of anything like excitement, the patient, on the contrary, being in a state of decided mental depression. Gooch says that there is an incipient stage, in which the mind is wrong, yet right enough to recognize that it is wrong; and in these respects it differs from acute mania.

The course of this form of mania is generally more tedious than that of the acute form, and there is some danger of its becoming chronic; but this sad termination very seldom results, the restoration of the best physical health and strength being followed by the restoration of mental and moral health. It seldom or never ends fatally. Women who have an hereditary tendency to insanity are most obnoxious to this disease; and it is likewise apt to occur where hysteria has manifested itself during pregnancy, especially during the latter months.

The *Treatment* of puerperal mania requires the exercise of a great deal of common sense and sound judgment. All sources of irritation should be removed if possible; appropriate medicines should be given according to the indications afforded, and such diet and regimen prescribed as would be best calculated to support the strength of the patient and bring her into the most favorable physical condition. Especially in the second form of the disease—*melancholia*—the patient being in a condition of anæmia and debility, a good and nourishing diet is of great importance; and in both forms of the disease every effort should be made to secure for the afflicted patient such surroundings as have a tendency to calm the disordered nervous system. She should have a suitable attendant, and should never be left alone; and everything by which suicide might be effected should be carefully

kept from her. It may even be necessary to resort to forcible restraint, but this should be avoided if possible. If absolutely required, the "strait-jacket" should be used. Out-door exercise, other things agreeing, should be taken daily during favorable weather, and will be found beneficial, as will appropriate baths.

The following medicaments will be found of service, according to the indications given, though many others not here enumerated may be used, either for the disordered mental condition or its accompanying physical derangements. The remedies with their indications mentioned in the articles on *Nymphomania*, *Hysteria* and *Metritis* may also be consulted with advantage.

Aconite. Where there is much fear manifested—fear of death, of strangers, of getting up; if caused by a fright.

Aurum. Very unhappy; continual thought of suicide; manifest weakness of memory and intellect; great sleeplessness day and night.

Belladonna. Desire to escape or hide herself; paroxysms of rage and fury; sleepless nights; fear of ghosts; sometimes desires other people to kill her, that she may be out of her misery; much moaning.

Hyoscyamus. Indomitable rage and horrid anguish; does not know her relatives; complains of having been poisoned; complete loss of sense; desires to be naked; constantly throwing off her bed-covers or clothes; entire loss of modesty; fear of being poisoned.

Kali carb. Great sadness; weeps much, and is afraid she is going to die; great absence of mind; seems at a loss to know how to begin to say or do what she wishes to do; makes several attempts, but is finally obliged to give it up; can't express herself; abdomen distended with flatulency; thirst, restlessness and tossing.

Petroleum. Full of strange delusions, as—thinks there is another baby in bed with her requiring attention, or that she has a third leg or arm; has sharp pains shooting up the dorsal spine into the occiput.

Platina. Has a sort of voluptuous crawling up and about the genital organs; very haughty; looks down very disdainfully upon her attendants; black, tarry discharge from the vagina. Horrifying thoughts.

Pulsatilla. Sad, weeping mood; taciturn; very mild and gentle in all her ways; weeps very easily. When closing her eyes sees pictures and all sorts of strange sights; hears all kinds of operatic airs. Sleeplessness during early part of night.

Stramonium. Nymphomania, with obscene gestures and language. Desires light and company; much worse in darkness and solitude;

very loquacious, in a prayerful, beseeching, imploring language; face often red and bloated. She is fearful and full of strange notions.

Sulphur. Disposition to meditate on religious subjects, with despair of salvation; forgets the names and words she wants to use; flushes of heat; weak, fainty spells and cold feet; sleeps very lightly.

Veratrum. Religious melancholy or nymphomania, with desire to embrace everybody, and even inanimate substances; much thirst for very cold water; constantly craving cool and refreshing things.

Zincum. A marked degree of melancholy, with fear of thieves, demons and other frightful figures. It seems to be impossible for her to keep the feet still; they are in almost constant motion.

For other remedies see *Nymphomania*, *Hysteria* and *Metritis*.

Phlegmasia Dolens.

There is no disease in the catalogue of those to which child-bearing women are liable concerning the ætiology and pathology of which greater diversity of opinion has been expressed by various writers, and even at the present day no satisfactory conclusions have been arrived at. It was formerly regarded as peculiar to the lying-in state, but this view is by no means correct, for it not unfrequently occurs at other times than after childbirth, attacks even men, and is not confined to the lower extremities, the upper being occasionally the seat of the disease. Necroscopical research has shown that there is usually free serous effusion into the limb, inflammation and sometimes suppuration of the lymphatics, and occasionally a plugging up of these vessels by plastic lymph, and inflammation and obliteration of some of the larger veins of the extremity. This last-named is apparently the most important and certainly the most constant condition, and has given rise to the opinion that the disease consisted essentially in an inflammation of the crural veins, proceeding, as Dr. Robert Lee believed, from the uterine branches of the hypogastric veins. This view, however, has been stoutly combated by Rigby, Mackenzie and others. It occurs after easy as well as difficult labors; sometimes results from puerperal fever; most frequently attacks the left leg, and occasionally recurs many times in the same person.

When fully developed in parturient women, it usually consists in a swelling of the affected extremity, especially of the thigh, the skin being somewhat whiter than usual, tense and shining, and very sensitive of even slight pressure; but the swelling is not anasarcous and does not pit on pressure. An attack is usually ushered in by slight rigors and febrile phenomena; pain in the lower part of the abdomen

follows, which extends to the hips and back, passes under Poupart's ligament, and thence down the thigh and into the calf of the leg. It frequently, however, proceeds from the calf of the leg upward. The whole extremity becomes excessively swollen, hot and painful, but not red, and hence the term phlegmasia *alba* dolens. The lochia and milk may or may not be suppressed; the constitutional disturbance and fever become greatly increased. The tenderness on pressure is most marked along the course of the femoral vein, and the veins of the affected region, together with the associated lymphatics, may be felt to be hard and cordlike, and are sometimes marked out by a faint red line. Denman describes the on-coming of the disease in the following terms: "Before the appearance of any swelling or sense of pain in the limb about to be affected, women become very irritable, with a sense of great weakness, and grievously oppressed in their spirits, without any apparent sufficient reason, complaining only of transient pains in the region of the uterus; and from these the approach of the disease has been frequently foretold. After a short time they are seized with an extremely acute pain in the calf of the leg, extending to the inside of the heel, and then, observing the course of the lymphatics, stretching up to the ham, along the internal part of the thigh to the groin, occasioning a slight soreness on the lower part of the abdomen." It occasionally happens, however, that there are no premonitory symptoms, but the pain in the leg is the first indication of the disease, which rapidly becomes swollen, tense, stiff and excessively sensitive to the touch.

As before remarked, the swelling does not pit on pressure, and if it be punctured little or no fluid escapes. Although the pain is greatly increased if the limb be allowed to hang down, the swelling is not affected by position. The progress of the disease is usually very rapid, especially as regards the swelling, which frequently arrives at its height, doubling the size of the limb, in twenty-four hours, or even in a shorter period of time. As the disease advances the parts lying within the pelvis become more and more irritable; there is often difficulty in evacuating the bladder and rectum, and the constitutional disturbance is very great. The glands in the groin are sometimes affected, and become swollen and even suppurate, and abscesses may form in very bad cases in different parts of the limb.

This condition of the parts and of the system may continue for a longer or shorter period. Sometimes after two or three days the constitutional symptoms subside, the pain is greatly lessened or almost entirely disappears, while the limb remains swollen, though softer

and apparently œdematous, as it now retains the impression of the finger. Sometimes this does not take place for one or more weeks. Even after this subsidence of acute symptoms, however, the limb remains for a long time stiff and powerless, and occasionally does not return to a normal condition for months, and even years. Burns remarks that it is not generally a fatal disease, "but it is tedious and often accompanied with hectic symptoms. Death, however, may be caused by suppuration or gangrene; or by exhaustion proceeding from the violence of the constitutional disease; or by exertion made by the patient, which has sometimes suddenly proved fatal; or, after the leg appears to be getting better, daily shivering with vomiting, pain in other parts, and rapid pulse, with delirium (pyæmia), precede death." The *prognosis*, however, may be regarded as favorable especially under homœopathic treatment, the remedies used being specifically adapted to the whole condition, and the strength of the patient not wasted by severe medication and depletion.

The older writers associated this disease with a disappearance and "translation" of the lochia or milk. Dr. Hosack regarded it as an inflammatory disease, affecting not only the limb but the whole system, proceeding from suppression of the natural excretions, the effect of cold stimulating drinks and other causes, and not connected with the lochia. Dr. Tilbury Fox is of the opinion that both veins and lymphatics are obstructed, which is due simply to extrinsic pressure or to inflammatory changes in the coats of the vessels, leading to coagulation and depending upon virus action.

Treatment.—The diet should of course be low and non-stimulating during the period of high inflammatory action and great constitutional disturbance, but when resolution has fairly been established more generous food may be given with advantage. If abscesses form, they should not be treated according to ordinary surgical rules. No lancing. The following are the most frequently indicated medicines for the treatment of this disease, with their indications:

Apis. Fever, with constant restlessness and tossing without relief; absence of thirst; scanty urine; the swelling has a whitish, transparent look; the pain is usually stinging or there are sharp plunging pains.

Arnica. If the disease sets in immediately after a very difficult labor, particularly if she feels bruised and sore.

Arsenicum. Great restlessness, every motion producing a sensation

of exhaustion; thirst for frequent sips of cold water; cold and chilly; wishes to be covered up warm; burning pains; swelling pale and œdematous.

Belladonna. Cutting pains as if with knives; sensation of heaviness in the thighs, hypogastrium and sexual parts; the least jar of the bed or floor is painful; fever, with burning thirst; cannot bear to be touched; much moaning and sleeplessness; throbbing of the carotids; injected eyeballs; cannot bear noise or light.

Bryonia. Drawing or lancinating pains from the hip to the foot; aggravation from touch or the least motion; copious perspiration without relief; pulling in the abdomen and down the legs as if the menses would appear; a pale pink swelling of the leg; dry lips and mouth, with desire for large quantities of cold water; aggravation in the evening and early part of the night.

Calcarea carb. A whitish swelling of the foot and leg, with a sensation of coldness, as though covered with a cold damp cloth; suppression of milk, with a sensation of coldness all through the body; leucophlegmatic temperament; menses have always been too frequent and too profuse.

Kali carb. Swelling of the foot and leg, with stitching and shooting pains; shooting and stitching pains in the abdomen; abdomen distended with flatulency; distressing pain in the back, extending down into the glutei muscles; restlessness, with tossing and thirst.

Nux vomica. Red swelling of the leg with dark, painful spots; a powerless, bruised sensation in the leg; a bruised, sore sensation low down in the abdomen, with frequent desire to urinate and frequent inclination to stool; loss of appetite; aggravation after three o'clock in the morning; great depression of spirits.

Pulsatilla. Pale swelling in the foot and limb; suppression of the milk; mild, tearful, gentle disposition; a warm room aggravates all her sufferings; craves the fresh, open air; thirstless; a very offensive clammy taste in the mouth, particularly after sleeping.

Lycopodium. Swelling of the foot and limb; the saphena vein is swollen very large, and it is very tender, and can be distinctly traced all the way up; there is much loud rumbling and moving of flatulency in the abdomen; red sand in the urine; pain in the back before urination; much restlessness and tossing at night.

Rhus tox. At the very outset of the disease there is a marked degree of powerlessness in the limb; cannot draw it up; there is often a red streak running up the course of the saphena vein; great restlessness, relief being found for a short time after every change of posi-

tion; worse after twelve o'clock at night; worse from water and wetting the part; usually wants to be covered up warm.

Sulphur. Frequent flushes of heat; weak, fainty spells; short sleeps, from which she starts up wide awake; little papular eruptions on the leg and over the body. (For other remedies see *Metritis.*)

CHAPTER XXIV.

DISORDERS OF LACTATION.

THE only injurious effect of pregnancy upon the milk of the nursing mother is to render it less nutritious; consequently, the nursling must suffer for want of that nourishment which would otherwise be devoted to its support; it feeds, as it were, upon the husks, and of course it becomes sickly and loses flesh.

Sore Nipples.

It is best to make preparation for nursing, so that the nipples shall not be troublesome by becoming tender, cracked or ulcerated. If they become tender or painful during pregnancy, some such remedy as Graphites, Lycopodium, Petroleum, Pulsatilla, Sepia, Silicia or Sulphur will cure them, so that no trouble will be experienced during the nursing period. All these troubles of sore nipples arise from some dyscrasia developed by pregnancy and nursing; hence they are especially curable even while nursing.

Agaricus. If the patient be troubled with chilblains, which itch and burn very much and are red; or if the nipple itches and burns much and looks red.

Arnica. When in the first days of nursing the nipples only feel sore, as if bruised. It is often indicated, and often cures in a few days when early applied.

Calcarea c. An ulcer appears on the nipple, discharging pus; the patient is otherwise a subject for this remedy.

Chamomilla. The nipples are much inflamed and are very tender. She can hardly endure the pain of nursing. She feels irritable and cross, with impatience.

Castor equorum. In neglected cases, where the nipple is nearly ulcerated off; it only hangs as it were by small strings.

Croton t. Every time the child draws at the nipple a pain runs through to the scapula of that side, which is excruciating. The nipples are very sore to the touch, but the chief suffering is the pain running to the scapula.

Graphites. The nipple seems to have little vesicles on it; at least it oozes out a thick, glutinous fluid, which forms a crust that is removed by nursing, when the same formation again occurs, and so on.

Lycopodium. The nipple bleeds very much and is very sore, and the child draws so much blood from the nipple that when it vomits it seems to be vomiting blood. Lycopodium given to the mother will soon cause the nipples to heal.

Mercurius. The nipple feels very *raw* and *sore*. Sensitive gums, sore teeth, enlarged cervical glands, and other mercurial symptoms.

Phosphorus. The nipples are hot and sore; the abdomen feels weak and empty; much heat in the lower part of the back across the region of the kidneys.

Phytolacca. Nipples cracked and scabby, and exceedingly sensitive.

Pulsatilla. In mild, tearful patients, who weep at every nursing. The pain from nursing often extends into the chest, up into the neck, down the back, and often changes from place to place.

Sepia. The nipples crack very much across the crown in various places; deep cracks; very sore.

Silicia. The nipple ulcerates very easily, and is very sore and tender.

Sulphur. After nursing the nipple smarts and burns very much. It chaps badly about the base and bleeds. Constitutional symptoms will sometimes determine the selection of this remedy in order to cure the nipples.

The proper mode of administering the remedy is to give one dose dry on the tongue, and to dissolve a few globules of the same remedy in water, or water and brandy, and apply the solution to the nipple immediately after nursing. In this manner all sore nipples may be cured more speedily and certainly than by any other means.

As before remarked, the child should be put to the breast soon after being born. After being washed and dressed, it may be allowed to sleep for a while, but when it awakens it should be put to the breast, and not otherwise fed, unless it is not satisfied with the breast. In this case it may be fed with milk, or cream and water, two parts of the latter to one of the former. The child should be educated to

regular periods of nursing; it should not be put to the breast or fed every time it cries; let it be turned over or its position changed, and be patted and quieted, till the period has expired, say two hours, two and a half, or three hours: some definite period of interval should be decided upon and most rigorously adhered to. If the mother has sufficient nourishment for her babe, no other need be added, provided she be sufficiently strong and healthy for the occasion.

If from any cause it becomes necessary that the child should depend in part or entirely upon other nourishment, that should be provided which most nearly resembles the mother's milk. Cream diluted with water is the best. After five or six months, when the child requires more nourishing food, one of the most suitable articles is readily prepared as follows: Take a quantity of flour, tie it very tightly in a bag or cloth, then dip it quickly into water just to moisten the surface, and then roll it in dry flour, then dip it in again, and so on till it is quite thickly coated with a sort of paste; now put this into boiling water and let it boil for four or five hours. The contents of the bag will then be thoroughly cooked, when it may be grated and made into pap as required for use; for this latter purpose water or milk may be employed. A small pinch of salt and perhaps a little sugar will be useful. Wheat bread thoroughly baked, dried in the oven, reduced to a powder and made into a pap, is also very useful. As the child gets more and more teeth, its diet may be more and more varied and liberal, but until its first dentition is accomplished a meat diet should be as much as possible avoided.

Sometimes children will not take milk; then cracked cocoa, made as ordinarily for table use, and an equal quantity of milk added, with a little bread, forms a very acceptable article of diet, both healthy and nutritious.

Remedies for Abnormal Secretion of the Milk.

The subject of the secretion of milk has been treated of on page 214, to which the reader is referred. It sometimes happens that milk is secreted more or less abundantly, but, owing to some derangement of the maternal system, it is of a quality not calculated to afford sufficient nourishment for the child, or even causes decided sickness. In such cases the mother should be carefully treated in accordance with homœopathic principles, when it will be found that as health is restored the lacteal fluid improves, no longer disagrees with the child, and nourishes it as it should do. The child should not be deprived of its natural sustenance for any light reason, nor until homœopathic

medication, acting on both mother and offspring, has utterly failed to bring about the secretion of a natural and healthful milk on the one hand, and a normal receptivity on the other. In all cases where it is suspected that the quality of the milk is not good, it should be carefully examined and tested; and in conducting this examination the microscope will be found a very efficient aid.

The following remedies are confidently recommended:

Aconite should be administered when there is hot, dry skin, much thirst, restlessness, discouragement, anxiety; breasts hard and knotted.

Æthusa cyn. The child takes the breast with avidity; nurses plentifully, then vomits copiously and is exhausted, but soon rallies and cries for a fresh supply. The child's bowels are either costive or loose; it cries much, and does not thrive. The mother is not well; the lochia is too thin and watery; she is very nervous; has a bitter taste in her mouth; milk disagrees with her; the abdomen is swollen and hard. In such cases Æthusa should be administered to both mother and child.

Agnus castus. The mother is very sad and depressed; frequently says she will die; the milk is very scanty.

Belladonna. The breasts feel heavy, and appear hard and red, the redness often running in radii; flushed face and injected eyeballs; full, bounding pulse; drowsy, throbbing headache; sensitive to noise and light. From taking cold.

Borax. The milk is too thick and tastes badly; often curdles soon after it has been drawn. Nausea as of pregnancy in the morning.

Bryonia. The breasts feel heavy, a sort of stony heaviness—rather pale, but hard; dry lips and mouth; constipation of burnt, dry fæces; splitting headache; nausea and faintness on sitting up.

Calc. c. The breasts are distended, the milk scanty; she is cold; feels the cold air very readily; there seems to be a want of vital activity to bring the milk forward; leucophlegmatic constitution.

Carbo an. Painful nodosities of the mammæ. Nursing causes stitching pains in the mammæ, which arrest the breathing. She cannot bear to have the breasts touched or handled. The milk is thin, and has a saltish taste. Gets tired on taking food.

Causticum. The milk has almost disappeared in consequence of over-fatigue, night-watching and anxiety. It is especially suitable for delicate, light-complexioned women. Generally constipation. Sensation in the stomach as though lime were slacking.

Chamomilla. The breasts are very tender; the nipples inflamed and

swollen; she is restless; thinks she can hardly endure her sufferings, is fretful, sleepless and cross; when caused by a fit of passion.

China. The woman is very weak in consequence of loss of blood during labor, or too profuse lochial discharge. She feels worse every other day. Feeling of fullness in the abdomen. The milk is scanty, thin and watery.

Cina. Gnawing sensation in the stomach, as from hunger, which is constant. Itching of the nose; does not sleep well; feels cross and irritable, and is not easily satisfied.

Croton t. The breasts may or may not be swollen, but the pain extends from the nipple through to the shoulder-blade every time the child draws at the breast; the suffering is excruciating. An excellent remedy, even if the breasts are hard and swollen.

Dulcamara. The milk fails of being secreted, apparently in consequence of the patient having taken cold, which has settled in the breasts; the mammæ are swollen, inactive, painless, and itch.

Kali bich. The milk as it flows from the breast has the appearance of being composed of stringy masses and water.

Lachesis. The milk is thin and blue, and is rejected by the infant. She feels disconsolate and sad on awaking in the morning, and throughout the day has a dissatisfied and unhappy feeling. The whole disorder may be the result of some long-standing mental trouble.

Mercurius. This remedy is especially suitable if there be a syphilitic taint of system. The breasts are swollen and hard, with a feeling as if they were raw and sore; ptyalism; scorbutic appearance of the gums, and other symptoms indicative of mercury.

Nux v. Especially suited to women who use habitually highly-seasoned and rich food, wines, etc., or if the disorder arises in consequence of an error of diet. Constipation and disordered condition of the lochia.

Pulsatilla. The breasts are much swollen, and rheumatic pains extend to the muscles of the chest, shoulders, neck, axillæ, and down the arms, etc. She is feverish and tearful, but not thirsty. Feels better in a cool room. The milk is thin and watery, and the true milk-globule is almost entirely absent. Bad taste in the mouth in the morning. Fatty rich food disagrees. Craves cool, fresh air; the warm, close room causes her to feel very badly.

Rheum. Sour-smelling diarrhœic stools, with colic and shuddering during stool. The milk causes a similar diarrhœa in the child; almost immediately after nursing the babe has a loose evacuation, which is sour-smelling, and is accompanied with colic.

Rhus t. The breasts are painfully distended and red in streaks, and there is a rheumatic condition of the whole body. Stiffness of the joints; the first movement is painful and stiff, but she can move easily afterward. She cannot lie long in one position; she must change in order to find an easier place.

Sepia. In women of very delicate and sensitive skin. Flushes of heat; painful sensation of weakness in the epigastric region; cold hands and feet; she is disgusted at the smell of food.

Silicia. The infant refuses the breast or vomits immediately after nursing. It often refuses to nurse at first, but afterward takes the breast with hesitancy, and then vomits; it does not grow as it should. The mother is not well; she has the silicia constipation, or other symptoms indicative of that remedy.

Zinc. She is very fidgety, especially in the feet, which she cannot keep still.

Failure or Scanty Supply of the Milk.

When the mother has not a sufficient quantity of nourishment for her infant, the deficit is often owing to some unnatural state of her own system, and the proper homœopathic remedy should be sought to change that condition, so that a natural supply may be afforded. The habit of forcing a supply by means of porter or other similar stimulant is alike injurious to the mother and to the child. The proper remedy will develop a healthy condition, and consequently a good supply of milk. Where there is a scarcity of milk from any cause, study the following medicines, and consult likewise those mentioned in the section immediately preceding:

Aconite. The mammæ are congested, burning hot, hard and distended, with little or no milk. Anxiety and restlessness.

Agnus c. Frequently indicated, particularly when a despairing sadness is the predominant symptom.

Asa f. When there is excessive sensibility of the vital organism, and the veins are unnaturally distended. More or less frequently indicated.

Belladonna. The breasts feel large and heavy. Headache, and the eyes are congested. She does not sleep well; she lies half sleeping and half waking—between the two.

Bryonia. Dry, cracked lips, dry mouth, constipation, as if the fæces were burnt. No appetite; nausea after eating.

Calcarea c. In leucophlegmatic constitutions. Rather of a chilly

nature. Menses had been too often and too profuse; usually subject to leucorrhœa.

Causticum. When, as an attendant symptom, threatened amaurosis exists. Pulsations and noises in the ears. Anxiety and despondency; the woman has been subjected to night-watching, care, trouble, etc.

Chamomilla. When the mammæ are hard and tender to the touch, with drawing pains. Insulting, cross and uncivil in temper.

China. Where there is debility from loss of animal fluids—particularly blood—or from diarrhœa or leucorrhœa. Much pain between the shoulders.

Coffea. Much excitability and sleeplessness.

Dulcamara. Particularly when there has been suppression from exposure to the cold and damp air. The milk is scanty, the skin is delicate and sensitive to cold, and liable to eruptions from being exposed to the cold.

Merc. sol. Milk scanty, with scorbutic gums, swelling of the glands, etc.

Phosph. acid. Scanty milk, debility and *great apathy*.

Pulsatilla. In mild and tearful women, in apparent good health, who have but little milk. This remedy is often called for in this affection.

Rhus t. Entire want of appetite, mental derangement and thoughts of suicide. Vitiated lochia, *lasting too long*, and powerlessness of the lower extremities.

Secale c. In women who are much exhausted from venous hæmorrhage. In thin, scrawny women. The breasts do not properly fill with milk; there is much stinging in them.

Sulphur. Flushes of heat, weak and faint spells, heat on the top of the head, cold feet, very faint and hungry at about noon, she cannot wait for her dinner, etc.

If the milk seems abundant, and yet *the child does not thrive*, the fault may be in the mother, or it may be in the child. Administer, according to your best judgment, such remedies to the mother as Calc. c., China, Cina, Mercurius or Sulphur; or to the child, Calc. c., Silicia, Baryta c., Borax, or whatever may seem most appropriate, according to the particular indications and conditions; or the same remedy to both at the same time.

Galactorrhœa and Excessive Lactation.

In cases of spontaneous flow of milk, keeping the breasts constantly wet, relief from such an uncomfortable state may be obtained by the

appropriate remedy, according to the indications given below. The function of lactation being one purely physiological, and provided for in the economy by suitable forces under the stimulus of the maternal instinct and affection, most women enjoy perfect health during its continuance. Many indeed are never so well as when giving suck to their children. Under the influence of this process there arises a greater activity of all the assimilative functions at the same time, and in conjunction with a greater strength of appetite and corresponding energy of the digestive powers. The process of conversion of food is unusually rapid, the excess going to form the milk. Where a greater amount is thus formed than is required, the system becomes gradually exhausted, even in health, just as the preparation of a less amount may overtask the system when in a condition already enfeebled. This over-production in the former case may be due simply to excess of vitality, while in the latter case it may result from a corresponding effort of nature to supply the required material support, even under difficulties.

But there are cases in which an excess of the secretion of the milk seems just as much the result of some interior morbid condition as its more or less complete failure would be. This is especially seen in the intimate relation which such excessive flow of milk—or what for all practical purposes amounts to the same thing, *undue lactation*—bears to insanity. And in the following extract from the excellent work of Tyler Smith the reader will see the injurious effects which may arise from excessive lactation of either sort, and learn to anticipate the mischief from the first symptoms:

"The cases of insanity which occur as the result of *undue lactation* are very similar to cases of puerperal insanity, only that their symptoms come on in a more gradual manner. When nursing women complain of loss of sight or hearing, or headache, either their nourishment and stimulus should be increased, or suckling should be at once discontinued. Where there is any predisposition to insanity, mothers should not, if possible, be allowed to suckle their children. In all cases of this kind the dependence of the mania upon exhaustion is abundantly evident. *It is especially likely to happen when pregnancy and lactation are allowed to proceed simultaneously.*

"There are in the subjects of this form of disease the same suicidal and homicidal tendencies as in puerperal insanity. I once met with a case in which a mother delivered of twins became affected in her mind from suckling, and a wet-nurse was procured in the person of a young girl who had given birth to an illegitimate child. She had

nursed her own infant for some time, and then, while being drained by the twins, again became pregnant. Signs of insanity manifested themselves, and she was one day found dead, hanging behind the door of her room. This form of insanity comes on weeks or months after the close of lactation. I have no doubt that the woman Brough, who killed, two or three years since, several of her children at Esher, and who is now a confirmed lunatic at Bethlehem, had suffered from over-lactation. She had weaned a child not long before the dreadful tragedy, had complained of loss of sight and severe nervous disorder, and had suffered in her head in previous lactations. The preventive treatment in this form of insanity consists, of course, in weaning as soon as any marked signs of nervous disorder are perceived. In the management of such cases great care in guarding the patient is necessary, and the treatment of this disease must be a supporting and stimulating one, combined with perfect rest, and the avoidance, as far as possible, of all moral and physical excitement."

Thus galactorrhœa, or excessive or undue lactation, is seen to be capable of producing the most destructive results in the mental and physical economy. The symptoms which indicate that lactation is morbidly affecting the mother are: "A sinking and fainting at the epigastrium, with a sense of emptiness, which lasts a long time, and soon returns even after food has been taken; a general weariness and fatigue; a want of refreshment from sleep; an aching and dragging in the loins, and pain between the blade-bones or in the side beneath the left breast; distressing exhaustion after the infant has been at the breast; the pulse is quick and feeble; the extremities cold; there are dyspnœa and palpitation on making the least exertion or ascending the stairs. If the cause is continued, headache and vertigo, noises in the ears, numbness of the extremities, impaired vision, exciting fears of amaurosis, loss of memory, irritability and despondency, with thirst, dryness of the tongue and night perspiration, ensue. Pulmonary consumption may be developed; the general appearances of anæmia, menorrhagia, leucorrhœa, œdema of the face and extremities, and neuralgic affections of various kinds supervene, and mania has not unfrequently formed the sequel. Thus organic disease of the brain, lungs and uterus may be added to the evils attendant on undue lactation."—*Leadam.*

Except in the most extreme cases of exhaustion from excessive flow of milk, or protracted lactation, we do not advise the use of any other stimulus than the appropriate remedy. There may be cases in which a little wine may be temporarily useful, but rest, cessation from nurs-

ing, and, if necessary, from all the care of the child in any way, suitable food and the true homœopathic remedy, will do all that art can accomplish to restore exhausted nature.

In cases of *galactorrhœa*, or excessive spontaneous flow of the milk, use, according to the particular attending symptoms and conditions, BELLADONNA, BRYONIA, BORAX, CALCAREA C., CHINA, CONIUM, PHOSPHORUS, PULSATILLA, RHUS or STRAMONIUM.

In cases of *deterioration of health from nursing*, undue or protracted lactation, where appear debility, loss of appetite, hectic fever, night-sweats, etc., study CALCAREA CARB., CALCAREA PHOS., CHINA, LYCOPODIUM, PHOSPHORUS, PHOSPH. ACID, SULPHUR, SILICIA, etc.

Cramps in the stomach from nursing may require CARBO AN., CARBO VEG., CHINA or PHOSPHORUS.

For great sense of emptiness in the pit of the stomach from nursing, study CARBO AN., SEPIA, IGNATIA and OLEANDER.

MASTITIS—INFLAMMATION OF THE BREASTS.

Inflammation of one or both breasts, with a manifest tendency to suppuration, is apt to be of frequent occurrence in nursing women. And in some persons this difficulty, originally arising from constitutional predisposition, becomes almost a confirmed habit, since they seldom or never can nurse a child without experiencing the exceeding distress and annoyance of a gathered breast.

The inflammation may be located principally in the external mamma, affecting particularly the areolar tissue and partaking of the nature of erysipelas. Or the inflammation may be seated more deeply in the substance of the breast. Or, again, the inflammation may be developed principally and especially in the mammary gland itself. Finally, there are cases in which the inflammation seems to involve the entire substance of the breast and structure of the organ in one indistinguishable mass. More often, however, the pains scattered through the breast, and the various diverging painful indurations, lead to the conclusion that the gland with its ramifications is the particular seat of the disease.

And in thus determining the nature of the affection, the cause of it, or the manner in which it arises, will often be of service. For if the breast evidently became inflamed from undue exposure to cold air in the delicate state of early lactation, a general inflammation may be expected to ensue, while difficulties belonging to the process of the secretion and discharge of the contents of the lactiferous tubes may sometimes be seen plainly to precede inflammation in those tubes and

in the gland itself. Much is due also to previous history and constitutional diathesis; influences which in some would prove perfectly innocuous, in others rapidly develop inflammation, which no less rapidly tends to suppuration. In such cases the greatest care, assisted by a dose or two of the antipsoric which seems most suited to the patient's constitution, will go far to prevent the suffering inseparable from a gathered breast.

Where the milk is copiously secreted, and either from inability on the part of the child, in its absence, or from obstruction of the milk-tubes, or from deficiency of the nipple, the milk cannot be freely drawn in the natural way, every effort should be made without loss of time to secure this end by such other means as may be possible. Sometimes the breast may be drawn by another child, or by a friend, or by young puppies; the proper remedy in the mean time should be carefully selected and faithfully administered, in order as rapidly as possible to remove all difficulty which may be amenable to such medication or which may be resulting from the obstruction. In cold weather the inflamed breasts should be kept warmly protected; and besides this the less external application is made to them the better. If the inflammation is caused and kept up by a tender and ulcerated state of the nipples, let these be particularly attended to in accordance with the directions already given. Properly used, homœopathic remedies may be made effectual in resolving the inflammation and averting suppuration, in a great majority of cases that are attended to at once.

Aconite. When a chill in dry, cold air has been the exciting cause, and a true synochal fever prevails. There is fear, anxiety and restlessness, thirst for cold water, etc.

Belladonna. When the breasts feel heavy; there are red streaks running like radii from a central point; she is occasionally chilly; a dull and stupid feeling prevails.

Bryonia. Her breasts have a stony heaviness in them; they are hot, hard and painful, but not very red. She feels sick on first sitting up in bed or in a chair, and still more sick on standing up. Rough, dry lips, thirst and constipation; stools dry, looking as if burnt. She feels worse when moving, and keeps very still.

Carbo animal. Darting in the mamma, arresting the breathing and aggravated by pressure. She can scarcely tolerate the application of the child to the breast; it takes her breath away to apply it.

Cactus. Particularly indicated in scrofulous subjects, where there

is the greatest sensibility to cold air. Inflammation and suppuration of the breast, with a sense of fullness in the chest.

Graphites. In all cases where there are so many old cicatrices from former ulcerations that the milk can scarcely flow. This remedy, high, will now cause the milk to flow easily and ward off the impending abscess; it has proved perfectly efficacious in many such cases. The same success is claimed for Phytolacca in similar cases. I have, however, the greatest confidence in Graphites; this remedy, although many times tried, has never failed me in a single case.

Hepar. When suppuration seems inevitable, and there is no other particularly characteristic symptom. Give a single dose, high, and await the result, either in resolution or in suppuration.

Lachesis. When the breast has a bluish or purplish appearance, and she has chills at night and flushes of heat by day.

Mercurius sol. Hard swelling of the breast, with sore and raw sort of feeling; the milk is not good, so the babe refuses it. She has scorbutic gums and other general symptoms of Mercury.

Phosphorus. Inflammation of the mammæ, even threatening ulceration, with *stitching* or cutting pain. (Hectic fever and night-sweats.) In fistulous ulcers with blue appearance.

Phytolacca dec. Particularly where the hardness is very apparent from the first. Very sensitive nipples or breasts, which are more or less painful; even after suppuration has taken place these characteristics continue.

Silicia. In fistulous ulcers particularly, the discharge being thin and watery, or thick and offensive. The substance of the mamma seems to be discharged in the pus; one lobe after another seems to ulcerate and discharge into one common ulcer, often with pain; or there may be several orifices, one for each lobe.

Sulphur. Inflammation running in radii from the nipple. Suppuration profuse, with chilliness in the fore part of the day, and heat in the after part. Some hæmorrhoids in complication. In old ulcerations, where the breast has raw places on it. The breasts feel hot. She has night-sweats, flushes of heat, weak and faint spells, irresistible hunger at 11 A. M.

Croton tig. When nursing, a pain runs directly from the breast through to the back; a sore drawing pain, very severe.

Kali c. Tearing, stitching pains on the flow of milk.

Rhus tox. Restless; must change position often or walk about.

Directions for Weaning.

Weaning ought not to be attempted under ordinary circumstances until the child has become accustomed to other articles of diet. See in this connection the article on the *Nutrition of Infants.*

If the mother's health cannot be kept strong and vigorous, the child may be gradually taught to depend upon other sources at the age of six months; and in a short time it may thrive while receiving but little from the mother for the three or four subsequent months. The mother should never allow the child from the first day to sleep at the breast. Once let the child acquire this habit, and it will terribly exhaust the mother by lying on her breast all night. For this reason it is important that children never begin to acquire the habit referred to. Other things being equal, it is better that the child should not be weaned until it has six or eight teeth.

The process of dentition is accomplished in groups, and the child should never be weaned during the evolution of one of these groups. The first group consists of the two middle lower incisors; these usually make their appearance at about the sixth or seventh month, and within from one to fifteen days of each other. Then the child usually rests from four to six weeks. The second group consists of the two middle upper incisors, and after their appearance there is another interval of rest for a few weeks. From the sixth to the tenth month the lateral incisors appear, the two lower first, and after a brief interval the two upper ones. Now a longer period of rest intervenes —nearly two months and from the twelfth to the fourteenth month the anterior molars appear, two below first, then two above.

There is now another and still longer period of rest, and from the fifteenth to the twentieth month the canine or stomach and eye-teeth come forth—the two lower first, then the upper two. And again, after another period of rest, and by the time the child is twenty-four or thirty months old, the last four molars are cut—making in all twenty teeth. This work being fully accomplished, the period of infancy is completely passed, and the limit of this period of teething ended. Yet if we are tempted to look a little farther, we shall see that childhood properly ends with the casting of the deciduous teeth, youth extends to the complete establishment of puberty and adolescence, and manhood and womanhood follow after.

From the above review it appears how necessary it is that we *select for so important an event as weaning one of these periods of rest from the evolution of teeth.* For the infant to be deprived of its mother's

breast is a great change, morally and physically; and this change is much less shocking to the infant's system, and much more easily borne in all respects, if imposed when it is not cutting teeth.

CHAPTER XXV.

ABORTION.

ABORTION is said to consist in the separation and expulsion of the immature ovum from the uterus.* This very comprehensive definition covers the whole period from the moment of fecundation up to any time short of the complete fulfillment of the entire time of normal utero-gestation. In its more general acceptation the term *abortion* is made to refer to such degree of immaturity of the ovum as necessarily ensures its destruction on expulsion; in this sense the use of the term would be restricted to the period of non-viability. "An abortion may be possible at any time from the commencement of pregnancy to the end of the sixth month." But since there are successive stages of development, which exactly correspond to definite periods of time in gestation, it becomes desirable to assign more definite terms which may serve to indicate the particular period in which the abortion itself occurs. Accordingly, the abortion is properly called *ovular* when the expulsion takes place in the first three weeks, or before the embryo can be distinguished in the ovum. The term *effluxion* was applied by the ancients to those cases in which the product of conception passed off or flowed away in the first week. The abortion may be termed *embryonic* when it takes place prior to the third month, as if before quickening. When the abortion occurs after this time, and before the period of viability, or before the end of the sixth month, it may be termed *fœtal.* After the period of viability the expulsion of the fœtus, although more or less liable to be followed by its destruction according as it occurs at a period more or less remote from full term, is still not necessarily fatal. Hence the expulsion which occurs at any time after the period of viability, and before the completion of the full term, is called *premature delivery.* The term *miscarriage* is popularly applied to any expulsion or premature delivery which results in the destruction of the product of conception.

* Tyler Smith's *Obstetrics*, p. 177.

Abortions are more frequent in the first two or three months than in those subsequent: thus, of 602 recorded cases, 275 occurred at three months and 147 at four months. It is believed that many cases of *ovular abortion* * or *effluxion* occur unnoticed and unsuspected, as well in those who have borne children as in those who are always sterile.

Causes.—The influences which are capable of producing abortion include almost the entire range of those which injuriously affect the female economy. These causes of abortion may be from without or from within; external or internal; originating in the system of the woman herself or approaching her from the outer world. But in either case and in every instance they derive no small part of their efficiency from the delicate and sensitive nature or psoric condition of the constitution itself. Thus it is well known that some women undergo the severest forms of chronic and even of acute disease, and the rudest accidental or intentional violence, without aborting; while in others this misfortune will often occur either spontaneously or from the slightest provoking cause, such as a misstep or strain in lifting.†

Since abortion consists in the separation and expulsion of the ovum, as in ordinary labor, this must result from contraction of the uterus itself. This contraction of the uterine fibres is therefore to be considered as the immediate cause of the abortion in every case. All other causes may be termed either predisposing or exciting, and for convenience in study they may be classed under three heads: I. *Pre-existing Conditions;* II. *Conditions principally Developed by the Pregnancy itself;* III. *Independent Influences.*

I. *Pre-existing Conditions.*—In this class must be enumerated all those disorders which in any given case may seem to determine the abortion, although the same causes may fail to be followed by this result in other instances. The great majority of cases of abortion, from whatever cause or combination of causes produced, occur from the second to the fourth month of pregnancy.

Disorders of the uterus or of its appendages, which were existent before pregnancy, often become causes of abortion.

Displacements to which the uterus may be subject, and which do

* Abortion is properly restricted to the loss of the product of conception; and it seems to be an unnecessary and useless complication of the subject to include under this head such discharges of unimpregnated ovules as may occur in women to whom sexual intercourse is a thing unknown, and such as have already been described under *Ovular Menstruation.*

† Mauriceau, quoted by Davis, ii., p. 1031.

not prevent conception, may occasion the subsequent separation and expulsion of its product. In cases of habitual *prolapsus uteri* the gravid uterus may become impacted in the pelvis before rising above the sacral promontory at quickening, and the irritation consequent upon such impaction will necessarily be followed by abortion. The same is true of *retroversion*, the most serious of all uterine displacements, and which becomes all the more formidable when complicated with pregnancy. Retroversion in the pregnant state may be gradual in its development, or may have existed to some extent unnoticed till the increasing size of the uterus at the third or fourth month occasions serious difficulty. Or the gravid uterus may become suddenly retroverted by accident or overexertion, but this accident can hardly ever result during pregnancy unless a predisposition to it had been established by former retroversion. *Anteversion*, by irritation of the neck of the bladder, may lead to abortion.

Inflammation, *ulceration* and *cancerous disease* of the uterus may become the efficient cause of abortion. Severe *leucorrhœa* (especially that which results from chronic inflammation of the cervix), *ulcerations of the cervix*, *fissures* and *induration* of the cervix, *phagedenic*, *syphilitic* and *cancerous* ulcerations of the cervix or of the parietes of the uterus, while they do not always prevent conception, will, in the great majority of cases, powerfully tend to produce abortion. *Syphilis* in the mother, whether recent or chronic, whether present as an ulcerative affection on any part of the genitalia or existing as a constitutional taint in the system, will more or less invariably lead to abortion; while if the syphilitic poison be imparted to the ovule by the fecundating semen of the male alone, the result may be seen in offspring born alive, indeed, but destined to wither and perish, decreasing in weight from the moment of their birth. In either case it seems an admirable provision of Providence that, in its severer forms at least, this awful malady should become self-limited, instead of being permitted to extend its destructive influence through all succeeding generations.

Scrofula is stated by some authors to be an efficient cause of abortion, but this must needs be taken with some qualification, since it is well known that many women of most remarkable scrofulous habit are no less remarkably fruitful, raising in some instances large families of children, all of whom show evident marks of the same scrofulous diathesis. When the scrofulous influence has resulted in a condition bordering on cachexia, abortion may result from general debil-

ity. And yet it should be remembered that *tubercular consumption*, the most common and fatal form of scrofulous disease, neither indisposes to conception nor predisposes to abortion.

Plethora, or a remarkably full habit of body, and *obesity*, or an abnormal accumulation of fat, may be considered forms of scrofulous development, and either of these conditions may lead to abortion. Plethora may promote abortion by inducing local and destructive congestion. This congestion may be either simply *uterine*, as seen in the menstrual nisus and in the greater tendency to abort at the menstrual periods, especially the first, second and third; or it may be *placental*, as in placental apoplexy or placentitis; or it may be *umbilical* congestion, and destroy the fœtal life, as it were, by strangulating its circulation.

Nervous irritability or *sensibility of the uterus* may be the determining cause of the abortion. The irritability is so called because it forms a part of the constitution; such women will abort from sympathy with affections of the bladder, rectum, kidneys, stomach and parotid, thyroid and mammary glands, or from disorders in other parts which in other persons would be followed by no such consequence. *Ovarian irritation* in women who have been subject to dysmenorrhœa has a strong tendency to produce abortion at the catamenial dates. Lactation usually serves to prevent conception, but where it does not the irritation of the mammæ from constant suckling, like any other long-continued irritation of these glands, may produce abortion. And, finally, a pre-established habit of aborting may of itself become a powerful cause of abortion in each succeeding pregnancy, women having been known to abort in twenty or more successive pregnancies. If, however, the history of such cases be carefully inquired into, some efficient cause, such as syphilis, retroflexion, etc., will be discovered.

II. *Conditions principally Developed by Pregnancy itself.*—Both the first-mentioned and the present class of causes of abortion are included by Dr. Whitehead under the general head of predisposing causes. "By predisposing causes are meant certain morbid conditions, local or constitutional, already in the system, or a particular susceptibility to morbid action during pregnancy, by the operation of which the process is liable to be prematurely arrested."*

In some constitutions any one of the various disorders incident to pregnancy may threaten to lead to abortion, and in some cases sev-

*On the Causes and Treatment of Abortion and Sterility: By James Whitehead, F. R. C. S. London, 1847.

eral of these seem to combine to produce this result. Among these may be mentioned the different forms of *gastric* and *intestinal disorder*, from nausea and vomiting to the most obstinate constipation. Although it is not probable that these affections would result in abortion unless there were present some abnormal irritability of the uterus itself, and although they may have their origin in the same psoric miasm that occasions the uterine irritability, still these affections are entirely developed under and by the condition of pregnancy.

Similar in their origin and influence are those local disorders of the uterus and its appendages which appear for the first time in connection with the state of pregnancy; among which may be enumerated dropsies of the uterus, fibrous and polypous tumors, and all the uterine displacements which result from the pregnant condition. *Placenta prævia* may be the cause of abortion, although this is doubted by Cazeaux. Whitehead says: "When the placenta happens to be implanted with its centre over the os uteri, abortion is inevitable; and this almost invariably takes place before the end of the fifth month."

Disorders of the ovum itself in its different stages of development, and of its immediate appendages, may also be enumerated in this place as causes of abortion, since almost all of them are directly and necessarily the results of morbid conditions of the mother. The important exceptions to this general remark are found in certain cases in which the morbid condition of the ovum is derived from the fecundating principle of the male. The mother, for example, may be perfectly healthy; while yet in every instance the product of conception becomes blighted in its earliest development or destroyed by abortion resulting from disease inherent in the ovum itself. In such cases the source of the mischief will be found in some taint in the system of the husband—syphilitic, for instance—which may thus be imparted to the ovum through the semen; sometimes also the wife becomes in this manner infected with constitutional disease. Suitable treatment directed to the husband will remove this cause of abortion, and the subsequent conceptions may terminate in healthy offspring.

Disease of the ovum may excite the uterus to contraction before the actual death of the ovum has occurred. *Moles*, *hydatids*, and in fact every possible form of *blighted ova*, necessarily involve abortion. And the death of the ovum, rendering it a foreign body in the uterus, will be followed by its expulsion sooner or later, except in those not very uncommon cases in which the ovum is entirely reabsorbed.

Diseases of the placenta, such as syphilitic or fatty degeneration,

inflammation, hypertrophy, induration, tubercular deposition, and apoplectic congestion and hæmorrhage, are the most fruitful causes of abortion acting through the fœtus. The length of time elapsing after the establishment of the diseased placental condition and the on-coming of the abortion will depend greatly upon the extent and rate of progress of the disease itself.

III. *Independent Influences.*—By this expression we mean simply those influences which appear subsequently to and independent of the pregnant condition.

1. Physical over-exertion of any kind, riding on horseback or in carriages over rough roads, railway traveling, laborious occupations, fatiguing exercises, long walks, violent efforts, such as lifting, running, jumping, by exciting the circulation or straining the parts, may occasion uterine hæmorrhage or pains, or both, which unless arrested will inevitably produce abortion.

2. Accidental or intentional violence, directly applied to the genitalia, leads to a similar result, by causing such rupture or separation of the membranes or disturbance of the ovum itself, or by reflex irritation, as arouses the contractile and expulsive action of the uterus. "On the other hand, though there seems in some persons a remarkable liability to abortion through the influence of reflex action, yet in others violent mental emotion, serious accidents, diseases, injuries, and operations even of great magnitude and on parts which would *à priori* be thought to be specially dangerous in this respect—such, for instance, as the breast, the uterus, vagina, and even the ovaries, as in ovariotomy—are endured without producing the slightest ill effects." *Meadows.*

3. Various drugs, administered intentionally, for other purposes, or accidentally, occasion the same result, either by direct action upon the uterus and neighboring organs, or by indirect action through the spinal cord. Among the most remarkable are *Secale c.*, *Cimicifuga*, *Sabina*, *Caulophyllum*, *Apis*, *Aloes*, *Cantharis*, *Borax*, *Quinine*, *Mercury*. There are many others, which in larger or smaller quantities are said to have produced abortion. Violently acting emetics and purgatives of any kind may lead to the same result from uterine sympathy with the gastric and intestinal irritation.

4. Excessive indulgence in coition, especially in the earlier months, by the passional excitation of the uterus and its appendages, disturbs the ovum and occasions its expulsion.

5. Moral over-excitement of every kind, paroxysms of sudden and violent anger, sudden surprises or affright, horrible sights, situations

of imminent danger, violent emotions of grief or despair for the departure or loss of friends, may produce abortion.

6. Local diseases of contiguous organs, such as diarrhœa and dysentery, may produce abortion from sympathetic irritation.

7. Gonorrhœal inflammation of the uterus, where pre-existing, should be classed in the first order of causes of abortion. In such cases it may give rise to the severest form of purulent uterine leucorrhœa, to erosion, induration, ulceration, and even fissures of the cervix uteri—conditions from which, if they are not remedied by appropriate treatment, abortion will almost necessarily result. In other instances gonorrhœa may have been contracted during the existing pregnancy, and may occasion, especially in strong plethoric women, a high degree of excitement and symptoms of inflammatory fever, which may lead to abortion. Whitehead mentions some remarkable cases illustrative of the influence of gonorrhœa in producing repeated miscarriages. Syphilis as a primary infection may also cause abortion; its powerful influence as a constitutional affection in destroying the product of conception has already been noticed.

8. Certain general disorders are very sure to produce abortion, often with very great danger to the mother. This is the case with intermittent fever, especially in its severest forms, the abortion which it causes being almost invariably fatal. Variola becomes a no less certain and dangerous cause of abortion. The same may be said of yellow fever and spotted fever. This is true principally of the allopathic practice: so far as these terrible diseases are made to yield more readily to their appropriate homœopathic remedies, just so far the danger may be averted both from mother and child.

Symptoms.—The symptoms which may indicate an impending abortion may be as numerous as are those of the various general or local disorders which have been mentioned as its possible causes, and they will necessarily correspond in constitutional character and intensity to the nature and violence of the influences by which the abortion is immediately occasioned. In the earlier stages of gestation, the amount of disturbance of the system is less in proportion to the comparatively trifling amount of force expended in producing the abortion itself. When this results from pre-existing influences, chronic disease or bad health in the mother, there may be shiverings succeeded by heat, anorexia, nausea, thirst, spontaneous lassitude, palpitations, a sense of coldness in the abdomen, coldness of the extremities, pallid complexion, sadness, tumefaction and lividity of the eyelids or dark discoloration beneath the eyes, a sense of sinking at the epigastrium or an in-

describable deathly feeling, recession of the milk and consequent flaccidity of the breasts, from which a serous fluid sometimes exudes, and general *malaise* and profound melancholy. The more immediate and positive symptoms of abortion are—

I. A sanguineous discharge, together with pains in the loins, the abdomen and the sacrum. The pains which precede abortion are very much like those which precede or accompany a catamenial period. They may also precede the hæmorrhage in cases of threatened abortion, and may subside and the danger pass away before hæmorrhage appears. But after the occurrence of this latter symptom, abortion will almost always result sooner or later, unless the progress of the mischief is arrested by suitable treatment.

II. Bearing-down sensation, or feeling of weight in the abdomen and pelvis. These sensations may be independent of the more positive pains; some women abort without having suffered much if any decided pain.

After the rupture of the membranes by accident, by instruments and other artificial means, after the placenta or membranes become separated from the walls of the uterus, or after the death of the fœtus, chills or rigors make their appearance, the pains become more frequent and decided and the hæmorrhage more free. But before the expulsion of the fœtus the hæmorrhage is seldom very profuse. The placenta almost always remains after the expulsion of the fœtus, and then, as in natural labor, the loss of blood may be severe until arrested by the removal of the placenta and subsequent more complete contraction of the uterine walls. Instances have been observed, however, in which the placenta or membranes have remained for weeks after the extrusion of the embryo, occasioning an almost constant loss of blood during the entire period.

In some instances the placenta remains in the uterus till decomposed; pyæmia, uterine phlebitis and death may result from the reabsorption of particles of the putrefying mass. In embryonic abortion, however, after the expulsion of the embryo itself, the membranes may remain without danger of the putrefactive decomposition which usually attacks the retained placenta of later months. In other cases, after the gradual death of the embryo from imperfect nutrition, organic ovular disease, or other constitutional cause, the placenta enlarges, assumes unusual forms and a singular structure, exhibiting a cavity in which the remains of the fœtus can scarcely be found; or the entire ovum becomes transformed into a fleshy mole or hydatiginous mass.

Diagnosis. — An abortion may be deemed possible, probable, threatening or inevitable in any given case, according to the nature and intensity of the influences present and capable of more or less rapidly producing such a result. But it is necessary first to determine the existence of pregnancy; and when, as in the first two months, it becomes difficult or even impossible to ascertain this with absolute conclusiveness, the question arises whether the pains and discharge of blood result from a return of interrupted menses or from an approaching abortion. And this question is the less easy to decide in advance since the pains and other consequences of an impending abortion at this early period greatly resemble those of irregular and difficult menstruation.*

In general it may be stated that in abortion the os uteri is open the hæmorrhage precedes the pains, and that the pains themselves are not sensibly relieved by the flow; while in difficult menstruation the pains usually precede the hæmorrhage, the mouth of the uterus is closed, and the pains either entirely cease or sensibly diminish when the discharge is well established. In some instances of dysmenorrhœa the pains continue during the entire period of the flow, but the fact of the occurrence of such severe dysmenorrhœa as a habit of the individual either removes at once the suspicion of her being pregnant at any particular period, or entirely neutralizes this exceptional symptom as a sign indicative of pregnancy. Nor, indeed, is it essential for the homœopathic physician to determine with certainty the exact condition in any given case in order to do for his patient all that her case requires or all that it is possible to accomplish, since, prescribing carefully and accurately for the existing symptoms, he will moderate the violence of the suffering in dysmenorrhœa; or if the case is one of pregnancy and threatened ovular abortion, the same remedies will be the best to subdue the violence of the abnormal action, and thus preserve, if possible, the product of conception.

It is of course unnecessary to recount here the indications already fully stated in a preceding chapter by which the existence of pregnancy is rendered probable in the earlier months. If these are present in number more or less conclusive, especially if the patient, having formerly been very regular, and having now missed her courses for one or two or more periods, experiences a return of the discharge, accompanied with pains which rather increase than abate

* "Les douleurs qui accompagnent la menstruation difficile, surtout après une suspension, de plusieurs mois resemblent beaucoup, par leur siège, leur intermittence, à celles de l'avortement."—*Cazeaux*, p. 343.

as the flow continues—the flow itself being more profuse than was usual with her in menstruating—and the mouth of the uterus sufficiently dilated to admit the end of the finger, there is every reason to believe her suffering from abortion rather than dysmenorrhœa. And this conclusion will be greatly strengthened or otherwise by the comparison of this attack with her usual monthly periods, and by considering whether, in case she were actually *enceinte*, she had been subjected to any influences capable of producing an abortion. If the patient knows herself to have menstruated while pregnant on former occasions, this circumstance, while it might to some extent predispose to abortion, would require a more particular examination of the condition of the os and cervix uteri, and of the coagula or other matters discharged. And the final detection of portions of an aborted ovum in such cases would become an important point of reference in the future conditions of the patient.

So much for the diagnosis of abortion in the earlier months, as distinguished from dysmenorrhœa, where the existence of pregnancy had not been definitely ascertained. The diagnosis of abortion, in the more advanced stages, where there is no doubt of the existence of pregnancy, is a very different matter. Here an opinion must be given, usually, with the same caution that we should employ as to the recovery of a sick person in critical circumstances, the question being, not whether it is impending or actual abortion or dysmenorrhœa, but whether the threatened abortion must necessarily become absolute destruction of the product of conception. Here, except in cases already very far advanced, we should never affirm an abortion to be inevitable until we have faithfully employed all the means within our knowledge to arrest the destructive process. Dr. Whitehead relates some remarkable cases of successful treatment in which the abortion seemed necessarily inevitable; one of them, a woman who had aborted in six successive pregnancies, and who was enabled to go through the seventh successfully, in spite of repeated attacks of venous congestion to the pelvis, with apparent death of the fœtus, by repeated bleedings and the employment of extract of hyoscyamus and camphor. And when such apparently desperate cases are rescued under the allopathic régime, how much more ought we not to expect with the more varied and efficient resources at our command? "When the pain comes on at regular intervals, with hardness of the uterus and dilatation of its mouth, this is a serious symptom, for it shows that the uterus will no longer retain its contents, but is preparing to expel them."—*Dr. Rigby.*

A certain dilatation of the internal orifice of the uterus, in which, under the influence of the uterine contractions, the cervix gradually tapers from the os externum up to the body of the uterus, and can no longer be distinguished from the uterus, is mentioned by Cazeaux as having been originally observed by him to be a sign of inevitable abortion. Pain may set in at the first with but little or no loss of blood. This absence of hæmorrhage may be due to a separation taking place high up, and the blood being effused between the membranes and the ovum. In such cases the loss of the fœtus is almost inevitable. On the other hand, if the separation takes place near the os there is a chance for the escape of the blood, which does not remain to excite uterine action. Davis says, "Separation at or near the os uteri will not be so dangerous, and in all probability there will be hæmorrhage without pain, which is the contrary when it takes place near the fundus."

But, generally speaking, abortion is only inevitable when the fœtus is already dead, or when the separation of the placenta is so great that the remaining utero-placental attachments are incapable of supporting the fœtal life. Thus the diagnosis of abortion in the earlier periods of gestation is dependent upon the determination of two "unknown quantities"—that of pregnancy on the one side, which may or may not be actually present; and that of the power of the remedies used to arrest the progress of the mischief—remedies whose success or failure in any given case can only be determined by the experiment. But in the more advanced stages of pregnancy we escape, in many instances, both these sources of doubt, since the existence of the pregnancy itself is undoubted on the one hand, and the determination of the death of the fœtus—which is often possible with sufficient certitude—on the other hand removes all hope of change from the action of medicines. In all cases of threatened abortion, however violent the symptoms, we may still find some ground of hope in the administration of the indicated remedies so long as the fœtus continues to live. But the condition is manifestly different where the symptoms either result from or indicate the death of the child. The principal circumstances which indicate the *death of the fœtus* are—1. The diminution instead of the increase of the size of the abdomen. 2. The flaccidity and shrinking of the breasts, the dragging sensation in the loins and sense of weight in the hypogastrium. 3. The cessation of motion formerly perceived in the uterus. 4. The impossibility of hearing the sound of the fœtal heart becomes, after the fifth month, an almost infallible sign of the death of the fœtus. And

where this death occurs as a consequence of disease or failure of nutrition on the part of the mother, and so takes place in a gradual manner, the danger which the fœtus is undergoing may be detected by observing the gradually increasing faintness of the beating of its heart. But this means of judging of the health and death of the fœtus, since it is hardly applicable before the fourth month of pregnancy, is of no use in the majority of cases of threatened abortion.

Prognosis. — The prognosis will depend very largely upon the period of pregnancy at which it takes place, the previous condition of the patient, to some extent upon the producing cause, but more especially upon the amount of blood wasted during the attack. As a general rule, the earlier it takes place the less danger to life; but this is not always borne out, for fatal results have followed abortion occurring within the first month of pregnancy. The danger results principally from the hæmorrhage, and thus it will be seen to what extent the previous condition of the patient may influence the result; for a woman in robust condition may withstand a loss of blood that would prove very serious, and perhaps fatal, to one in a weakly and delicate condition. It should be borne in mind that until the ovular membranes and the placenta are expelled there is a liability, and in fact almost a certainty, of the continuance of the flow of blood, which if prolonged will produce such a disturbance in even the strongest woman as may be dangerous to life, not only by its immediate but by its after effects. Moreover, abortion, and especially repeated abortions, may give rise to a variety of diseases of the uterus, which gradually undermine health, and will lead to loss of life if not judiciously treated and cured.

The Induction of Abortion or Premature Delivery.

The practice of abortion in some so-called Christian nations, and not the least in our own country, is as extensive as infanticide ever was among the most degraded heathen nations. And while the former custom is in reality no less wicked than the latter, and should be no less revolting to the maternal feelings, it obviously exerts a much more destructive influence, often upon the life, always upon the health, of the mother.

The civil law, in making a distinction between the criminality of the production of abortion before and after the period of quickening, opened the door for a very low estimate of the moral turpitude of the former act. And while in fact the spirit of the law seems now to be improving, the tendency of the practice of many otherwise most

estimable physicians, and of some recent publications on this subject, serves rather to lower than to elevate the standard of moral sentiment in this respect. But since we are permitted to look into the most secret recesses of reproductive vitality, and to understand the true nature of conception *as the wonderful marriage union of two distinct living forms into one, which, though still dependent, is not more so at that moment than it is after the period of quickening*, and since we realize that this new creation will, if undisturbed by the ruthless hand of the destroyer, *become a new creature*, we must reverence the higher law, and assume for ourselves, in this most important respect, the highest ground.

These were noble words of our colleague: "From a child still-born we can hope nothing, *but a child born alive, however feeble*, MAY BECOME A MAN!"* "Modern physiological researches have left us in no doubt as to the precise point and time where and when the work of independent organization begins which constitutes the distinct individuality of the new being. It is from the fusion or junction of the male and female principles, represented by the ovule and the spermatozoa. From that hour, soul and body, the subjective and the objective, in their mysterious union, are being created. The pure instinct of primal Christianity voiced itself in the grand words of Saint Augustine: *Homo est qui futurus est*—What will be a man is one. The old civil laws taught it in their axiom: *Infans jam conceptus pro jam nato habetur*—A child conceived is to be considered a child born. Modern science teaches it beyond all doubt. The British Parliament, in the new Salmon Act, discarding the old absurdities about quickening and viability, declares conception to be the proper date from which human life, in its entire sanctity, is to be estimated."† These remarks and quotations are intended to show that there is the same moral guilt, as there is the same destruction of a living child, in the improper production of ovular, embryonic and fœtal abortion, as there is in such unjustifiable induction of premature labor as would be acknowledged to be equivalent to infanticide.

The *moral aspect* of the question of induction of abortion is thus forcibly presented by the same writer; and we transfer to our pages Dr. Holcombe's own words, not only because they so admirably express the sentiments we wish to convey, but also from the hope that the name of one so widely known and so much esteemed in the homœ-

* Dr. C. Hering.

† Dr. W. H. Holcombe, *United States Medical and Surgical Journal*, vol. i., p. 390.

opathic ranks may promote the adoption of principles which we cannot but regard as alike essential to the true dignity of the medical profession and to the best good of mankind: "The true moral position is this: The destruction of the ovum is always homicide—justifiable, perhaps, under a few extraordinary and painful conditions, after the failure of all reasonable medical and surgical means; and then imposing such solemn and fearful moral responsibilities that it should only be accomplished after the mature deliberation and concurrent advice of several respectable members of the profession."—*Holcombe.* "The procuring of abortion under all circumstances is a direct violation of the laws of the physical constitution, and almost always a violation of that holy commandment, 'Thou shalt not kill.'"—*Professor A. E. Small.* The only substantial ground upon which the conscientious physician can justify the induction of abortion or premature labor to himself and to the moral sense of his fellow-men, is to be found in the necessity which may exist of saving the life of the mother by this as the only feasible means.

And the *legal aspect* of the question is not different. "If the fœtus be already and from the very outset a living human being, and existing independently of its mother, though drawing its substance from her, its destruction in every stage of pregnancy is MURDER. Every act of procuring abortion, rules Judge King of Philadelphia, contrary to the usual interpretation of the law, is murder, whether the person perpetrating such act intended to kill the woman, or merely feloniously to destroy the fruit of her womb."* Without undertaking to give the various forms of law and practice in the different nations of Europe and States of our own country—many of which may be found in the treatise of Dr. Hale already referred to—suffice it to say that the induction of abortion can only become legally, as it is only morally justifiable, when it becomes the only means for the preservation of the mother's life.

The conditions which may require the induction of abortion at any stage of pregnancy, and the means by which such a result may be secured with least danger to the mother, have been considered on page 283, under the heading, The Induction of Premature Labor.

TREATMENT OF ANTICIPATED OR THREATENED ABORTION.

The anticipative treatment of abortion will consist in the removal by the appropriate medication of those constitutional dyscrasias—sometimes apparently local, but always in reality constitutional and

* Vide Dr. Hale's *Treatise on Abortion*, p. 315.

often hereditary—which either have before existed or have become developed under the influence of the pregnancy itself. In this connection therefore we have but to refer to the chapters on the Diseases Peculiar to Women and on the Disorders of Pregnancy. These include the first and second divisions of our classification of the causes of abortion. Those cases of still more imminently threatened abortion which arise under the operation of the third class, or independent influences, will in like manner require treatment especially adapted to each particular exciting cause and to each individual case.

Those cases which arise from physical violence, nervous irritability or moral excitement, will of course require the most perfect quiet both of body and of mind. When the symptoms of an impending abortion result from the operation of drugs, they should be remedied by the exhibition of such antidotes as are most strongly indicated by the symptoms themselves. The removal of the cause as rapidly as possible will be found the best method of arresting the tendency to abortion which may arise from the attacks of diseases primarily local, or of those more general fevers of infectious, zymotic or malarious origin.

The principal object of the physician, of course, should be to remedy the abortive tendency, to anticipate and prevent the attack, and, when for the first time consulted at a more advanced period, to arrest if possible the disorganizing and destructive process. But when the physician is called in too late, and it is evident that abortion must take place, he should treat the case very much as if it were *one of labor requiring especial attention.* For abortion, particularly when resulting from any of the wide range of causes enumerated above under the head of independent influences, is much more dangerous than ordinary labor. And in those most critical cases in which the mischief to the ovum is already irreparable, the careful administration of the homœopathically indicated remedies will go far to moderate the violence of the symptoms, diminish the loss from hæmorrhage, and preserve the life and subsequent health of the mother.

In abortion, as in labor, the principal danger—which is from hæmorrhage—arises after the expulsion of the fœtus, and from the retention of the membranes or placenta. In these cases the efforts of nature must be assisted by the appropriate medicines, or the finger may be used to remove the membranes or placenta; or, failing that, resort may be had to the placental forceps, of which those invented by the late Professor Joseph G. Loomis are the best. It is desirable to remove the ovum entire if possible, both from the greater ease

with which this is accomplished by nature, and on account of the mischief which will inevitably result from the retention within the uterine cavity of any portion of the ovular membranes. But "as a general rule the membranes remain after the expulsion of the fœtus, and the earlier the abortion, the longer the placenta or membranes have a tendency to remain. This is probably owing to the extended adhesion of the ovum to the internal superficies of the uterus, and the feeble power of the uterus to contract on its contents."—*T. Smith.* Sometimes the membranes of an early ovum will remain for weeks, keeping up a more or less constant hæmorrhage, as before stated; and for this condition *China* has proved a most efficient remedy, being indicated by the very considerable loss of blood, and serving in a remarkable manner to arouse the expulsive action of the uterus. This indication for the selection of China has been strongly confirmed by the prompt results which followed its exhibition in some cases of long-retained membranes and consequent hæmorrhage in twin pregnancies.

The following remedies should be carefully studied, and if the proper homœopathic simile to the case in hand is not to be found among them, the search should be extended through the whole Materia Medica, for the medicine which presents the most perfect picture of the *tout ensemble* of the case will not only do the most good, but will usually be the only one which—in bad cases especially—will do any good. And both the dose itself, and the frequency of its repetition, should be made to conform to the nature and exigencies of the case, according to the best judgment and experience of the attending physician. The rule of Hahnemann, to wait for the exhaustion of the action of one dose before administering another, is as sound as it is universal in its application. But it is the particular application of this rule to each individual case which calls for the exercise of the closest observation and of the wisest discrimination, since it must be evident that the action of a remedy adapted to relieve the most violent symptoms of an actual abortion, will be more rapidly exhausted than that of one calculated to cure in advance the constitutional taint or actual chronic disease which may predispose to abortion.

Aconite. If a pregnant woman has fright and the fear remains, and she seems to not get over it, she must take Aconite at once. Or if she have hæmorrhage and fear of death, is sure she will die, or she is very giddy on rising from a recumbent position, she has to lie

down again, cannot remain up. In many cases there is an unconscious fear, which seems to control the patient; she is afraid to get out of bed, to turn over or to move; or she is afraid to go from room to room, or to go out, and fears that something untoward will happen.

Aletris far. Habitual tendency to abort, with a sensation of weight in the uterine region, and tendency to prolapse of the womb.

Apis. Stinging pains occur in one or the other ovarian region more and more frequently till labor-pains are produced; sometimes flowing, and finally abortion. The urine is usually scanty, and there is absence of thirst. Prolonged and difficult constipation is often connected with such cases. Apis will invariably relieve these symptoms, and pregnancy may then continue to the full term.

Arnica. In cases of shocks, falls, bruises or concussions a pregnant woman should always take Arnica at once, more particularly if she commences to flow, with or without pain, or to have pains without flowing. She has a bruised feeling, so that it hurts her to move. If the period of quickening has passed the motion of the child hurts her; she is sure the child is lying across the abdomen.

Asarum. Indicated in threatened abortion from excessive sensibility of all the nerves, so that from even imagining something unpleasant might occur, a disagreeable sensation thrills through her, momentarily arresting all her thoughts and functions.

Belladonna. A pressing toward the vulva, as if all the internal organs would issue therefrom. Pain in the back as if it would break. Flushed face, red eyes, throbbing carotids and heat in the head. More or less discharge of blood from the vulva, the discharge sometimes feeling very hot. The least jar is unpleasant to her. She moans a great deal, which seems to afford relief.

Bryonia. Discharge of dark red blood; pain in the back aggravated by motion; burning pain in the uterus; head aches as if it would split. Thirst for a large quantity of fluid. Pain all over, limbs and all; lips and mouth dry; thirst; desires to keep still; nausea on sitting up. Constipation, the stool being dry as if burned, and difficult to evacuate.

Calcarea carb. Leucophlegmatic constitution. The history of her case reveals a disposition to hæmorrhage; menses too often, too abundant and too long; cold and damp feet; vertigo. If we now find her threatened with a miscarriage, labor-pains, flowing, etc., we shall be likely to arrest her troubles with Calc. c., unless there are more decided symptomatic indications for another remedy.

Camphor. Particularly indicated in seasons of epidemic influenza, when women abort almost as generally as the influenza prevails. Especially if she have pale, loose and cold skin, with general disposition to catarrhal discharges.

Cannabis. In cases where women have been or still are affected with violent gonorrhœa.

Cantharis. The key-note for this remedy in such cases is an almost constant desire to urinate, sometimes ineffectual, but when successful only a few drops are passed, with cutting and burning pain.

Carbo veg. When the menses are usually too pale and too scanty or too copious and premature, with a decided varicose condition of the genital organs.

Caulophyllum. Severe pains in the back and loins, threatening abortion, with great want of uterine tonicity; the uterine contractions are feeble, and are attended with but slight loss of blood.

Chamomilla. She has labor-pains, with more or less discharge of dark blood and *frequent urination*, the urine being profuse and pale. Her pains excite great restlessness and agony, and irritability of temper. Spiteful irritability; she is "snappish" when speaking.

China. She has a sensation of distension in the abdomen, as if it were packed full; she wishes to discharge flatus, but its evacuation either upward or downward affords no relief. If she has hæmorrhages, see this remedy under Metrorrhagia.

Cimicifuga. Habitual abortion, where cold chills and pricking pains in the breasts are attendant symptoms. Especially for abortions occurring in women of rheumatic tendencies.

Cinnamon. After a false step or a strain in the loins; the chief symptom is a profuse flow of blood, bright red.

Cocculus. Much bilious vomiting; paralytic pain in the back, rendering the lower extremities almost entirely useless.

Conium. Much vertigo on turning over when lying down. Urine intermits at every micturition.

Creosote. Her hæmorrhage seems to pass into a corrosive, ichorous discharge, and then to freshen up again, and so on.

Crocus. The discharge is composed of black strings; as fast as the blood flows from the vulva it is formed into black string-like masses; and if a quantity of blood has been discharged and a portion of the mass be raised on a slender instrument, it will present this black and string-like appearance, though knotted together to some extent.

Dulcamara. Where the threatened miscarriage has been induced by exposure in a damp, cold place, as in a milk-house or cellar.

Ferrum. Flowing and pain, with a fiery red face. She is very weak and pale. Great nervous erythism.

Gelseminum is a very valuable remedy, especially when the pains are inclined to run upward or upward and backward, are of sharp character and are quite distressing. Loss of will-power over the muscles.

Hyoscyamus. She is delirious and rather spasmodic, with rigidity of the limbs. She loses her sight and hearing. She may at the same time discharge bright red blood with labor-like pains.

Ignatia. Much sighing and sobbing; suppressed grief has been the exciting cause; sensation of "goneness" in the pit of the stomach.

Ipecac. The key-note for this remedy is one continual sense of nausea, without a moment's relief, or pain about the umbilicus, passing off into the uterus, or a continued and profuse flow of bright red blood. Either of the above symptoms is an almost positive indication, and when present this remedy will nearly always cure the entire case without resort to any other remedy.

Kali carb. If the labor-like pains commence in the back and pass off down the thighs, or if the pains are more like stitches. Much backache when walking. She feels that she must lie or sit down. Constipation; the stools are large and are passed with difficulty. Stitches in the region of the kidneys; pallor; saculated swelling over the eyes.

Lycopodium. The abdomen is in a constant state of fermentation, or her pains are shooting from right to left across the abdomen. Or she has intolerable pain in the back before passing water, with almost entire relief as soon as the urine flows. The motion of the child is excessive and tumultuous; red sand in the urine; feeling of dryness of the vagina; borborygmus; weeping; sadness; leucorrhœa; faintness; itching about the vulva.

Mercurius. Where there is phlegmonous swelling of the labia, swelling of the inguinal glands, etc.

Nux mos. Suitable to hysterical women who are disposed to fainting spells. Mouth and throat are very dry; the tongue sticks to the roof of the mouth.

Nux v. Every pain produces a desire to defecate and to urinate, particularly the former; this is an almost certain indication. Frequent desire to urinate, with burning and scalding when urinating; brick-dust sediment in the urine. She is in a very irritable condition from high living, drinking wine, etc. Constipation of large difficult stools, or small and frequent stools, with pain in the anus. Sore feel-

ing in the region of the womb; she dreads being moved, and feels cross about it.

Opium. Abortion threatening after a great fright; spasmodic labor-like pains. Especially suitable when occurring in the latter part of pregnancy.

Phosphorus. Particularly applicable in tall, slender persons. Great sense of weakness in the abdomen. Stools narrow, long, dry and difficult. Profuse and long-lasting flow of blood.

Platina. Discharge of a quantity of thick black blood. A tremulous sensation extending from the vulva into the abdomen. The mons veneris and vulva feel cold and sensitive to the touch.

Plumbum. Constipation, stools in balls like sheep's dung; much depression of spirits; pain drawing from the abdomen to the backbone as though the abdomen were drawn upward by a string.

Podophyllum. Pain in the region of the ovaries, especially at night, disturbing sleep; she is very nervous and restless. This condition may recur night after night until finally symptoms of abortion set in. Prolapsus uteri; the womb is disposed to fall very low, even painfully so. Stools too frequent, although natural; with prolapsus ani with stool.

Pulsatilla. When the discharge is arrested for a little, then returns with redoubled violence; this cessation and renewal are frequently repeated. Mild and tearful women of yielding temperament are most easily affected by this remedy. Cannot bear a close or warm room, and wants air.

Rhus. When the patient has been wrenched or strained, as when she slips, and is strained in trying to save herself from falling, or in lifting. Her pains at first are worse at night, particularly the last part of the night; and she is restless, and must move frequently to find relief. Cramps in calves; metrorrhagia.

Sabina. This remedy seems particularly applicable to cases of abortion occurring habitually at the third month. The pain extends from the back directly through to the pubes. The discharge is profuse, with about equal proportions of clotted and of fluid blood, red or dark.

Secale c. In feeble, cachectic women, having a wan, fearful countenance, pulse almost extinct, fear of death, copious flow of black liquid blood, and convulsive movements.

Sepia. She has yellow spots on her face; a yellow saddle across the bridge of her nose. She has a sense of weight in the anus; constipation, stools mixed with slime; great urging and involuntary straining,

often ineffectual. This sense of weight like a heavy ball, when well marked, is almost an unfailing symptom, and is almost always present when Sepia is indicated. Abortion occurring especially from the fifth to the seventh month. Frequent flashes of heat; motions of the fœtus are feebie; much itching about the vulva; inclines to faint; painful sensation of emptiness in the pit of the stomach.

Silicia. Is particularly indicated where there are spinal affections and constipation of difficult stools, as if the rectum had not power to expel them, and where the stool recedes after having been partially forced down to the anus.

Stramonium. Threatened abortion, with unceasing loquacity; she talks, prays, implores, sings, constantly uttering something in this line.

Sulphur. She has frequent flashes of heat, cold feet, heat on the top of the head; weak fainting spells; eruptions upon the face and other parts of the body; leucorrhœa. Hæmorrhoids, which bleed profusely, are sore to touch and itch very much. She sleeps badly, awaking often. Faint and hungry about 11 A. M. Vomits her food. Is intolerant of noise. A slight effort causes great fatigue.

Veratrum a. This medicine is indicated where there has been nausea, vomiting and diarrhœa at every menstrual period, or exhausting diarrhœa. With every pain there is a cold sweat upon the forehead. Retching.

Zinc. There is much restlessness of the feet and legs, or a sort of fidgety condition attending her symptoms of abortion.

Nitric acid. Hæmorrhages from the uterus in first half of pregnancy from over-exertion, with mental depression.

Viburnum. Threatened abortion, with *very severe* pains and discharge of clotted blood.

CHAPTER XXVI.

DISEASES OF WOMEN.

IN describing the forms of disease to which women are peculiarly liable, and especially in pointing out the remedies which may be required in their treatment, it will be seen that we do not attempt to give all the symptoms. And this is true also of all the forms of disease and of all the remedies mentioned in this work. And since, in some instances, remedies are mentioned with scarce more than a single indication for their use, it seems important at the outset to guard against the serious error of supposing that we recommend a medicine from a single symptom—a practice especially deprecated by Hahnemann. And it might be sufficient to state here that in all cases where remedies are introduced, whether with one symptomatic indication or with many, they are so introduced *as remedies which should be studied* in connection with the class of disorders under consideration—not as remedies which should be given one after another till the patient is relieved, by death or otherwise.

But some other considerations and explanations need to be introduced here. In the different forms of structural or organic disease, some of which have no direct counterpart as yet in the pathogenesis of our remedies, we are compelled to look for the great characteristic constitutional symptoms, the most prominent and peculiar features of the case, even apart, if necessary, from functional derangements and from structural disorganization. Such symptoms—which are purely constitutional, just the reverse of the local, *since they may appear in connection* with any form of disease—become the *peculiar characteristics*, the *key-notes*, of their respective cases. Such symptoms must be prominently contained in whatever remedy is suited to the case. We believe that each case has its head-symptom, which leads all the rest—its key-note, from which all the others take their pitch. And we believe also that the remedy which contains this characterizing head-symptom will invariably be found to contain all the other symptoms of the case. Thus, if this be true, as we believe it to be, the clue then given will afford us the means of extending the curative action and sphere of the medicine far beyond what it had reached, or could be expected to reach, by direct pathogenesis, as well as enable us to prescribe with greater certainty and facility.

These distinguishing characteristics, these key-notes, which form

the individual and constitutional symptoms of the patient, are *sensational* symptoms, rather than such as are known as functional derangements or structural disorganizations. And the method we pursue in relying upon these in the absence of other indications, and of attaching very great importance to them, even where other symptoms are not wanting, is sustained by two substantial reasons: First, in many cases we can do no better, since, as already stated, few if any of our remedies either have, or can ever be expected to have, direct pathogenetic symptoms to correspond to the innumerable ultimate forms of structural disease which we are often called upon to treat. Second, this method has been found reliable by much experience, the purely *constitutional symptoms*, such as those of periodicity and the conditions of aggravation and amelioration, strictly sensational symptoms, *being found to constitute infallible indications in the choice of the remedy*, where all other guides are wanting.

Of course, under such circumstances it would be alike useless and impossible to repeat with the particular remedies, under the different forms of disease in which they may be useful, a long detail of pathogenetic symptoms. Where the characteristic symptoms are present and recognized, they will suggest the corresponding remedies for more particular examination.

So, on the other hand, we cannot attempt to give all the symptoms which may occur under the particular forms of disease described. The symptoms which may and even do arise under some of these forms of disease, such as hysteria, for example, would fill volumes. For nearly every part of the female system will be found to sympathize with the more purely local sufferings connected with uterine difficulties; and every possible kind of distress, every imaginable morbid sensation, and even the simulated appearance of every form of disease, may arise in connection with nervous disorders of the uterus.

We do not wish to be misunderstood as recommending a method of generalizing, by advising to pay particular attention to the constitutional symptoms, such, for instance, as aggravation at three o'clock in the morning. That is indeed a very general indication and a very common symptom in a particular remedy. But in the individual case of our patient *it is the very particular form of her system's vital and constitutional reaction against a special morbific influence.* The local symptoms are the more common, and are those which are alike common to many individuals and to many medicines; but the constitutional symptoms, as they are *more remote*, are also more especially the characteristic and individual symptoms, since they are confessedly

the indications of the profound reaction of the individual system itself. These constitutional symptoms, while thus reflecting the profoundest reaction of the system against the morbid influence, and so establishing their claims to be considered as of the very first importance, will also be found to carry with them, as it were, all the more important local symptoms. Thus the remedy which is found to answer best to such a form of *periodic aggravation* as has just been mentioned, at three in the morning, will also be found to cover the other symptoms sufficiently. And if we do not find in our pathogenesis all such symptoms, it is because the pathogenesis itself is necessarily incomplete. This is well illustrated by a case which came under my observation many years ago. A young physician had charge of a case of miscarriage in which the subsequent hæmorrhage proved very intractable. The miscarriage was at three months in a tolerably healthy young woman, and was brought on by running to reach a ferry-boat. Every remedy known to the young physician was tried in vain. At last he resorted to the *tampon* in the latter part of the evening, in hope to save his patient's life, and remained during the night to watch its effect. This means proved effectual for some hours, and he began to hope the danger was passed. But *at three in the morning* the hæmorrhage returned, with such violence as almost to expel the tampon. The remarkable character of the aggravation led him to give *Nux vom.*, which was followed by immediate and permanent relief.

Menstrual Derangements.

As has been explained in a previous chapter of this work, menstruation is a physiological process appearing in the order of nature. (See page 69, *et seq.*) In those cases in which it does not take place so easily and so effectually as is therein described, the deviation occurs because the condition of the patient is not that of the right line of perfect health in other and constitutional ways. From ill health, then, in one form or another, arise all the various forms of menstrual derangements. And in treating such cases we seek but to obey the call of nature for the re-establishment of good health; we give the proper medicament, and the function becomes established, re-established or properly established, as the case may be, because we thus cure the constitutional or other malady under which the system is laboring.

It is proper to remark, at this point, that it is the duty of practitioners of medicine to instruct their female patients in regard to the

importance of frequently changing the menstrual napkin, concerning which the vulgar and erroneous notion prevails that frequent changing increases or prolongs the flow. Changes should be made often enough to secure cleanliness, which is essential to the preservation of health.

AMENORRHŒA.

Amenorrhœa, or absent menstruation, may result from very different causes, and may occur, under one or the other of its various forms, at any period of the pubertal life of the female. These various forms of amenorrhœa may be arranged in three distinct classes: First, *emansio mensium*, in which the menses have never made their appearance. Second, *suppressio mensium*, in which the menses, having made their appearance, have subsequently ceased. And third, *partial amenorrhœa*, in which the menses are wanting, perhaps for months in succession, but may appear occasionally and at irregular intervals.

Each of these classes of amenorrhœa will need to be more particularly considered, with reference to its nature, causes, symptoms, consequences and treatment.

EMANSIO MENSIUM, or entire absence of the menses in women who have so long passed the first age of puberty that the case cannot be regarded as one of simple delayed menstruation, depends upon a very great variety of conditions of the system, of which some are entirely beyond the control of art, some do not need to be interfered with, the remainder only being amenable to medication.

I. The first of these conditions is that which may be called *congenital malformation*, in which the ovaries are either entirely wanting or have remained imperfectly developed or become atrophied. Similar to these are the cases in which these organs have been destroyed before puberty by accident or disease. The patients in whom this condition exists "may have the body generally well developed and healthy, the circulation active and regular, and the organic functions (save one) fully performed. But the breasts are not prominent, the genital characteristics and sexual propensities are not developed, the voice is deeper than usual, a slight beard appears on the upper lip, and there is a mixture of masculine with feminine peculiarities." Such cases are evidently beyond the reach of art.

There are other cases of amenorrhœa from malformation of less serious nature, which may be relieved by suitable treatment. These

are instances in which the menstrual flow occurs internally, but cannot appear externally by reason of an imperforate hymen, absence of the vagina, adherence of its sides, or an impervious os uteri. The periodical efforts at menstruation enable us to determine in such cases that the ovaries are not wanting. And where the menstrual nisus appears without corresponding discharge, a careful examination should be made till the nature of the difficulty is satisfactorily ascertained. The retention of the menses by an imperforate hymen is by no means dangerous, and admits of ready relief by a slight operation when the diagnosis is satisfactorily established. The retention which results from adhesion of the parietes of the vagina or occlusion of the os uteri is far more serious, since, if not relieved by an operation of greater severity, it must lead to fatal results. Inspection alone, or the touch upon the vulva, will discover the tumor which indicates menses retained by imperforate hymen. But the introduction of the finger within the vagina, or even the exploration by the rectum, will be requisite to determine whether the uterus is wanting, its mouth sealed up, or whether obliteration of the vagina be not the cause of the retention. Congenital atræsia of the uterus, complicated by retention of the menstrual blood, may be suspected in those cases in which the hymen and vagina are pervious, but where at each menstrual epoch the sufferings increase in intensity—where the menstrual molimen is most violent, but no external discharge appears. There may be a gradually increasing tumefaction of the abdomen, and with the menstrual periods real uterine colics, sometimes accompanied with chills, with frequent vomiting, syncope and convulsions. And if no artificial opening is made for the exit of the blood, the difficulty must, sooner or later, become fatal, either by the rupture of the walls of the uterus, by an inflammation of the peritoneum, which is being continually irritated and distended, or by an attack of general marasmus, exhausting the patient weakened by such severe and prolonged sufferings.

II. A second class of cases of absence of menstruation consists of those which need no treatment. And it is important to discriminate these cases aright, since the female will perhaps suffer more from medication where none is required than from want of it where it really may be needed. And these cases, now stated to be such as do not need treatment, are the exact opposites of those already described as being beyond all treatment. For as those were cases of amenorrhœa from total absence of the ovaries and of ovulation, so these are cases of amenorrhœa in which the ovaries are present, but in which their

functional action is so performed as to produce no menstrual flow. And to all appearance, and in fact so far as the present light of science and of experience shows, these cases are perfectly healthy, since many women have been known to conceive and bear healthy children and rear families who never menstruated. And in all those cases in which young women have entered upon the age of puberty without having experienced the menstrual flow, but still remain to all appearance in perfect health—whether we regard them as cases of amenorrhœa from incomplete development (that is, retarded menstruation) or of ovulation without corresponding menstrual flow—*all these need no medical treatment so long as they present no positive morbid symptom.* "In some cases it constitutes an idiosyncrasy. In certain families the establishment of this function will in every instance be delayed until the subject is fifteen or twenty years old. Its first appearance is greatly influenced by external circumstances and surroundings, education, exercise and associations. But more frequently its delay depends upon a depraved condition of the general health. In many cases there is a developing dyscrasia, as, for example, tuberculosis, which interferes with and interrupts the coming on of the menses."—*Ludlam.*

As we have already shown, those whose sexual development, and consequent ovulation and menstruation, occur late, may prove to be endowed with a corresponding longevity and power of bearing children long after the usual period of the change of life. This point should be well understood, in order that the physician, planting himself on the ground of true physiology, may be able to allay the fears of anxious mothers, who are alarmed if their daughters fail to menstruate in their fourteenth year. It may be sufficient to state here that there must be other morbid symptoms and conditions than mere non-appearance of the menstrual flow to justify medical interference in the case of young women; but when such general or special disorders of the system do occur, apparently in consequence of the delay of this function, then such treatment should be resorted to as may be suitable for the entire case, and thus serious disease may be warded off.

III. The third class of cases of *emansio mensium* consists of those which are amenable to and which require medical treatment.

The first class was composed of those malformations in which ovulation, and of course menstruation, were simply impossible, by reason of the absence of the requisite organs. These cases admit of no treatment. The second class, in which the amenorrhœa is the result

of some peculiarity of the system by which perfect ovulation may be unaccompanied with menstruation, or in which the amenorrhœa is simply the result of incomplete development, *without morbid symptoms* (retarded menstruation), requires no medical treatment. But in the third class, the amenorrhœa—whether accompanying complete or incomplete sexual development—is a truly morbid condition, as shown by the attendant constitutional disturbances of the entire system. This class of cases is not only amenable to medical treatment, but affords some of the most brilliant illustrations of the truth of the homœopathic principles and of the action of the homœopathic remedies.

We have been thus particular in recapitulating, because it seems of the first importance to understand the difference between that form of late development which may be the result of constitutional strength and which is unaccompanied by morbid symptoms, and that which is the consequence of constitutional dyscrasia, and which is always evidenced by symptoms indicating the anæmic or chlorotic condition, or by painful and ineffectual attempts at menstruation, or rather ovulation. For as we have shown that ovulation is the primary and menstruation the secondary function, so amenorrhœa is mostly to be considered to be the result of absence of ovulation, as in those cases in which the ovaries are entirely wanting, or identical with or the consequence of imperfect ovulation where these organs are present.

Symptoms.—Those cases of amenorrhœa in young persons which are unaccompanied by any pain or other morbid symptoms, and for which therefore we are not called upon to prescribe, are doubtless due to incomplete development of the ovaries; while those cases of amenorrhœa which are accompanied with periodical but futile and painful attempts at menstruation, and in which the general health evidently suffers, are in like manner to be attributed to failure of functional action on the part of organs already sufficiently developed.

And this will appear the more evident from the consideration of the fact that the very late development of the ovaries, and consequently late menstruation, is not only entirely painless, but may be an attendant of more than usual health and strength. And this will still further appear from the nature of the two entirely opposite classes of sufferers from amenorrhœa.

Those comprising the first of these two classes are weak, pale, delicate young women; spare and thin or fleshy and leucophlegmatic; in either case having feeble circulation, as evidenced by gen-

eral chilliness and sensitiveness to the cold; imperfect nutrition, as shown by their indifference to or disgust for food; or, still worse, imperfect assimilation, as shown by their insatiable appetite. Those composing the second class, on the contrary, show all the appearance of perfect and robust health; they are plump; their cheeks red, their complexion florid and their habit plethoric. In the former of these classes of amenorrhœa the sufferings are more chronic and more generally diffused over the entire system; in the latter they are more acute and severe, and more concentrated in the form of local congestions. "In both, the attempt at menstruation may be made each month, accompanied by shiverings, pain in the back and loins, weight at the lower part of the abdomen, aching down along the thighs, general lassitude and uneasiness, and sometimes pain in the thyroid gland." These symptoms, after continuing a few hours or a day or two, pass away without any menstrual secretion, to be repeated each succeeding month, or the proper secretion may be substituted by a leucorrhœa. "But the effects of this abortive effort are not so temporary; severe headaches occur occasionally, sometimes with intolerance of light and sound; the patient complains of throbbing and a sense of fullness in the head; pain is felt in the side; the stomach and bowels become irregular in their functions, the countenance pale and the strength much reduced." Paroxysms of dyspnœa and hysteria and hysteralgia come on, and the patient has the appearance of confirmed ill-health—is sometimes said to be going into decline. There is general chilliness or disposition to attacks of fever, according to the plethoric or lymphatic temperament of the patient; pain in the chest; and if the patient be of the florid constitution her case may easily terminate in quick consumption; while if leucophlegmatic the same fatal termination may be reached by a somewhat more tedious course.

A careful study of the different remedies mentioned at the close of this section will enable the physician to determine upon the medicine to be administered.

Suppressio Mensium constitutes the second form of amenorrhœa, in which the menses having made their appearance have subsequently ceased.

This may be sudden in its onset (violent, accidental suppression), or it may come on in a gradual manner. In the former case it may lead immediately to severe and dangerous forms of disease; in the latter, it may precede the development of some profound constitu-

tional disorder, such as phthisis, or it may result from organic derangement of the uterus or of the ovaries themselves.

Acute Suppression of the menses may result from exposure to cold and wet, or both, immediately preceding the appearance of the menses or during their flow; from violent shock to the nervous system, as in cases of fright; from sudden and severe mental distress; or from any profound disturbing influences, whether physical or moral, received during the menstrual period.

Chronic Suppression of the menses may result from any slowly operating debilitating influences; from too close sedentary confinement, as in young girls at school; from too severe mental application; from lack of sufficient nourishment; from leucorrhœa; and, as already stated, from the development of some constitutional dyscrasia, such as consumption, etc., or from morbid growths of the uterus, ovaritis or endometritis. It may likewise accompany or follow attacks of acute disease, especially inflammatory or febrile affections, and has been known to be a consequence even of removal from one place to another, emigrants being frequently thus affected.

Symptoms.—The more sudden the suppression and the more severe and profound the causes which produce it, so much the more violent will be the resulting symptoms. In most cases there is more or less fever, headache, hot skin, quick pulse, thirst, nausea, and other indications of general constitutional disorder. Or the ill effects of the suppression may be developed in local inflammation, as in inflammation of the lungs, uterus and ovaries. And in cases of nervous temperament and scrofulous diathesis there is often a remarkable disposition to be attacked with inflammation of the brain from the menstrual suppression. In such cases the return of the menses would usually be followed by a subsidence of the cerebral symptoms. The appearance of the menstrual flux in other severe illnesses, where there had been no previous suppression, is regarded as constituting a very grave complication.

Hysterical affections, or even neuralgic sufferings, in other instances may result from suppression of the menses, and these may successively attack the head, lungs and stomach. Sometimes the more profound consequences of nervous debility and disorder, such as fainting, loss of vision, amaurosis, apoplexy, and even paralysis, make their appearance in connection with such suppression. And the more violent disorders that follow acute, sudden suppression of the menses are very apt to terminate fatally.

"Suppressed menstruation, either sudden or gradual, is not unfre-

quently followed, even when uterine inflammation is not developed, by serious general symptoms, obstinate vomiting, severe hysteria, and sometimes by the establishment in the economy of a supplementary hæmorrhage, to which the name of vicarious menstruation has been given. The mucous membrane of the nasal fossæ, of the lungs, stomach and bowels is the most ordinary seat of this hæmorrhage, which takes place in some instances with the regularity of normal menstruation, and in others at irregular periods. All the other mucous membranes, and also the skin itself in various regions, have been the seat of vicarious menstruation. It has not unfrequently been observed from the surface of wounds or sores."—*Bennett.*

This so-called vicarious menstruation constitutes a form of hæmorrhage in general less grave than that from other sources. Where it attacks the lungs, for instance, it does not, like other hæmoptysis, indicate the presence of tubercles, but rather a state of the system which may sooner or later lead to them, if not remedied. The manner in which the chronic or gradual form of suppression takes place should also receive consideration. The suppression may not occur all at once, but be first preceded by more or less irregularity of menstruation in respect to time. One or more periods may be passed over, the menstrual flow returning again in a diminished quantity, and then finally ceasing. Or the irregularity may be more with regard to quantity alone, the menses with each preceding month becoming less, until they disappear altogether. Or the discharge for some time before its total suppression may have been growing more and more light-colored; this is said to be the most frequent manner in which chronic suppression occurs. The menses may be supplanted by a perfectly white discharge, or they diminish in quantity, become of a paler color and with shorter intervals; then a menstrual period arrives in which the fluid excreted is perfectly colorless, while the next period may be characterized by discharge of the natural color. Or, again, the leucorrhœa which so often causes amenorrhœa encroaches more and more upon the menses, both in the time and in the quality of the discharge, until it finally completely replaces the menstrual flow.

The same gradual diminution of the menses may lead to their *premature cessation*, and this may be in reality the period of the change of life. In such cases, nature, after a few years of rest of the sexual organs, sometimes restores their activity; and women who had supposed themselves to have finally passed the critical age are surprised to find a full and complete return of the menstrual flow. All this but serves to show that the amenorrhœa, from whatever cause or

combination of causes it arises, is not in itself a disease, or even necessarily a morbid condition, as during pregnancy and after the change of life the menses are wanting from causes which, although perfectly natural, are entirely opposite, the person remaining in perfect health. In other cases, however, the disappearance of the menses indicates a disordered state of the whole system, which may be unimportant and temporary or deep-seated and severe, according to the nature of the influences which produced it. There are, however, cases of suppression of the menses which, arising from influences comparatively slight, do not so profoundly affect the system, and in which, even without particular treatment, the menses may spontaneously return after missing but one or two periods, or may continue to be suppressed for several years even, without producing any apparent degree of ill-health.

Treatment.—In all cases the treatment must be governed by the causes, as in cases of suppression from wet, from fright, etc., and by the totality of the symptoms. In the acute form of the suppression the appropriate remedy may be repeated oftener, according to the violence of the symptoms and the severity of the suffering, taking care to allow the first dose to exhaust its action before giving the second; while in the chronic form the remedy, chosen for its adaptability to the whole case, must be allowed to act for weeks, or even months, undisturbed in its action by a second dose so long as improvement can be traced. If no improvement appears, the dose may be repeated or a new prescription made, according to the circumstances of the case. The proper treatment of the gradual, chronic form will result not only in the restoration of the menstrual flow itself, but also in the removal of the constitutional disorder of which the suppression was but the forerunner, and in the radical cure of the local, organic affections of the sexual organs by which, in other instances, the suppression may have been produced. And the same will be found true of the complications, such as leucorrhœa, hæmoptysis, or other severe affections which may arise in connection with the amenorrhœa. Let the diet and hygiene of the patient be properly attended to, and then the less the attention paid to external treatment the sooner will the recovery be complete. Give the proper homœopathic remedies, in the proper manner, in these cases, and all the paraphernalia of hip-baths, foot-baths, tonics, stimulants and misnamed emmenagogues may be dispensed with as worse than useless; the real object being not so much to compel the return of the menstrual flow as to cure the patient of that disordered condition of her system which led to its

suppression. In the words of Dr. William Hunter: "With regard to the management of the menses, my opinion is, that you should pay no regard to them, but endeavor to put her to rights in other respects. If you cure the other disorders, you cure the irregularity of the menses, which is the consequence and not the cause of her complaints."

PARTIAL AMENORRHŒA, in which the menses are wanting perhaps for months in succession, but may appear occasionally and at irregular intervals, constitutes our third form of amenorrhœa. This may also be termed *irregular menstruation*, in which the catamenia are not suppressed, but occur irregularly as to quantity and quality, and especially as to time.

In some cases of this form of amenorrhœa the health appears to suffer very little if any from the exceedingly irregular and uncertain manner in which the menses recur. In other instances the irregularity is complicated with more or less severe dysmenorrhœa.

The irregularity may consist in the shortening of the intervals between the menses, and in such cases the flow may also be too profuse, allied to menorrhagia. Or the irregularity may consist in the lengthening of the intervals, the menses returning with great regularity, and perhaps in normal quantity.

The causes of such partial amenorrhœa must be similar to those constitutional influences which result in gradual suppression of the menses, to which, in fact, many cases of irregular menstruation finally lead. And where the protracted amenorrhœa is complicated with pale, colorless menses, with too profuse menses or with painful menstruation, it will be seen that all the morbid influences which may be brought to bear upon the constitution of the young or elderly woman may tend to produce a more or less complete cessation of the catamenia.

Treatment.—The treatment of such cases requires a careful examination of the patient, an elaborate collection of all her symptoms, and a faithful comparison of them with the pathogenetic effects of our remedies. In this manner, and in this manner only, the physician may make such prescriptions as shall result in cures alike honorable to homœopathy and profitable to himself. The partial amenorrhœa is but a single one among other indications of the poor health of the patient; this and other indications being met by the corresponding remedy, there will result in time such complete restoration to health as will at once surprise and delight the patient and her friends.

Remedies for Amenorrhœa.

Delay of First Menses.—1. Calc. carb., Caust., Graph., Kali carb., Puls., Sulph. 2. Con., Magn. carb., Natr. mur., Petrol., Sab. 3. Agnus, Amm. carb., Bry., Chel., Cocc., Dig., Dulc., Lyc., Sil., Valer.

Amenorrhœa in general.—Cimicif., Con., Dulc., Gelsem., Graph., Kali carb., Lyc., Nux mos., Puls., Sil., Sulph. 2. Acon., Aletris, Amm. carb., Apis, Bar. c., Bell., Calc. carb., Caust., Cham., Chin., Cupr., Ferr., Lilium tig., Natr. mur., Phos., Podoph., Sabad., Senecio, Sep., Staph., Valer. 3. Æscul. hip., Agnus, Alum., Apocyn. can., Ars., Asclep. syr., Aur., Borax, Bry., Carb. veg., Coloc., Croc., Hedeoma, Hell., Hyos., Ignat., Iod., Lach., Phos. ac., Phytolac., Magn. carb., Magn. mur., Merc. sol., Nux v., Rhod., Ruta, Sang., Sassap., Stram., Verat. alb., Xanthox., Zinc.

Aconite. Amenorrhœa in young girls of sanguine temperament who lead a sedentary life. Tendency of blood to the head or chest. Vertigo or fainting on rising from a recumbent position. Amenorrhœa from taking cold by getting the feet wet, or from fright or chagrin.

Æsculus hip. Amenorrhœa, with great general prostration and malaise. Great weakness or giving out of the back when standing or walking, especially across the hips; constipation, with ineffectual urging to stool; hæmorrhoids, of purple color and accompanied with much burning.

Agnus castus. Amenorrhœa, with drawing pain in the abdomen.

Aletris far. Amenorrhœa, or delayed menses, in consequence of atony of the womb or ovaries. Weariness of both body and mind; fullness and distension of the abdomen, with bearing-down sensation; general want of vigorous muscular action, with lassitude.

Alumina. Amenorrhœa, with abundant leucorrhœa, which flows only in the day-time, with weakness. Much straining is necessary to evacuate even a soft stool. Restless sleep, always awaking with palpitation of the heart.

Ammonium carb. Colic, and pain between the scapulæ. Violent pain in the small of the back, with great coldness.

Apocynum cann. Amenorrhœa in young girls, attended with bloating of the abdomen and extremities.

Apis mel. Amenorrhœa, with general anasarca; irritability and pain of the ovaries, especially if the pain be stinging; cardiac distress.

Arsenicum. White, waxy paleness of the face and great debility, the least exertion causing fatigue. Painful lienteria. Cold water lies

like a load in the stomach. Sleep full of tiresome dreams. She is very chilly; wants more clothing on her or to be near the fire. Thirstless, or she wants little drink, but often.

Aurum. Amenorrhœa, with great depression of spirits and disposition to commit suicide. Inclines to jump out of windows.

Belladonna. Throbbing headache, and throbbing of the carotid arteries. Red face and eyes. She cannot bear light or noise. Much heat in the head. Weight and pressure in the abdomen, especially in the uterine region.

Borax v. She cannot bear a downward motion, as in a swing, in a rocking-chair or in running down stairs. Pain in the right pectoral region. She is very nervous; she does not sleep well.

Bryonia. Frequent bleeding of the nose, dry lips, thirsty and wants large quantities of drink; hard, dry stools, as if burnt. She wishes to keep quiet, as motion is painful and disagreeable to her.

Calc. carb. Leucophlegmatic temperament. Vertigo on going up stairs. Her feet feel cold and damp. Swelling at the pit of the stomach. Spasmodic affections. Worse on ascending.

Carbo veg. At the time the menses should appear violent itching of old tettery eruptions.

Causticum. A yellowish complexion, weakly, scrofulous. Melancholy; she looks on the dark side of everything. Hysterical spasms and pinching pain in the sacrum. Leucorrhœa only at night, or worse then. Involuntary urination on walking or coughing.

Cham. She suffers on account of a checked perspiration or on account of a fit of anger. She is very irritable and disposed to be quarrelsome; she can hardly keep her temper. One cheek is red, the other pale. Pressing toward the genital organs; passing of large quantities of colorless urine.

Chelidonium. Constant pain under the inner and lower angle of the right shoulder-blade. Biliary derangements as a concomitant.

China. Sensation of fullness and distension of the abdomen, particularly after eating, with desire to eructate, which affords no relief.

Cimicifuga. Amenorrhœa in rheumatic or neuralgic subjects. Nervous excitability, bordering on hysteria or chorea; dullness of the head and vertigo.

Cocculus. Much paralytic pain in the small of the back. Leucorrhœa in place of the menses. Discharge of a few drops of black blood. Whilst the effort is being made to menstruate she is so weak that she is scarcely able to speak. Hysterical symptoms very strongly marked. Headache, with nausea.

Colocynth. In cases where severe chagrin has been the cause of the suppression. Colicky pains, causing her to draw up double, with great anguish and restlessness.

Conium. At every menstrual effort the breasts enlarge, become sore and painful. Much vertigo, particularly when, in a recumbent position, an attempt is made to turn over. The urine intermits in its flow. Complicated with ovarian or uterine diseases and chlorosis.

Crocus. A sensation of motion like that of a child in the abdomen. A similar sensation is sometimes felt in the stomach. Epistaxis of black, stringy blood. Mental depression. Menses in dark strings.

Cuprum. Particularly in cases arising in consequence of suppression of foot-sweat. A strange tingling pain in the crown of the head. Frequent nausea and fearful vomiting. Convulsions, with painful cries. Cramps in fingers or toes.

Dulcamara. Suppression in consequence of exposure to cold and damp. She has urticaria, or some other cutaneous affection, every time she takes cold. Warts on her hands; her breasts are engorged and hard.

Euphrasia. Ophthalmia, the eyes being suffused with tears, and a painful, dry ulcer on the right side of the bridge of the nose, which has been developed since the accession of the amenorrhœa.

Ferrum. In weakly, chlorotic persons, with fiery redness of the face.

Gelseminum. Amenorrhœa, with sharp darting and twitching neuralgic pains in the face and head; headache which causes great dullness of the head and vertigo, and affects vision. White leucorrhœa.

Graphites. Occasional show of the menses, which are very pale and very scanty, with abdominal pains and pains in the limbs. Swelling in the hands and feet. Itching blotches here and there on various parts of the body, from which oozes a gelatinous fluid.

Hedeoma. Amenorrhœa, accompanied with intestinal derangements, nausea and retching to vomit.

Helleborus. In cases accompanied with ascites, the urine being scanty and dark, depositing a sediment looking like coffee-grounds.

Hyoscyamus. Much loud and boisterous laughing at every menstrual effort. Hysterical jerking and twitching; disposed to nakedness.

Ignatia. Much involuntary sighing and sobbing. Full of suppressed grief. The suppression itself may have been caused by some suppressed grief. Weak, empty feeling at the pit of the stomach.

Iodium. Very, very much out of breath on going up stairs. Paleness, alternating with redness of the face. Frequent palpitation of the heart. Food does not strengthen her.

Kali carb. At every menstrual effort sour eructations and swelling of the cheeks; oftentimes there are shooting pains all over the abdomen. Organic disease of the heart. Erysipelatous eruptions. Disposition to phlebitis. Swelling over the eyelids.

Lachesis. At every menstrual effort there are cardialgia, oppression of the chest and eructations. Vertigo, with headache. Discharge of a few drops of blood from the nose. Depression of spirits.

Lilium tigrinum. Amenorrhœa, accompanied with cardiac distress, or with ovarian pains of a burning or stinging character. Amenorrhœa, complicated with prolapsed or anteverted uterus. Thin, acrid leucorrhœa, which leaves a brown stain on the linen. Partial amenorrhœa; the menses returning occasionally, to again remain absent for some time. Sensation as if an abdominal support were necessary.

Lycopodium. A fright may have caused the suppression. Sour taste. Sour eructations and sour vomiting. A constant sense of satiety, so that the least quantity of food causes a sensation of fullness up to the throat. Much borborygmus, particularly in the left hypochondrium. Sense of dryness in the vagina; wind from the vagina.

Magnesia carb. Every effort to menstruate is attended with a sore throat, which only subsides with the other symptoms or on the appearance of the menstrual flow.

Magnesia mur. She becomes very much excited at every menstrual nisus. There is a pressing down in the iliac regions at every menstrual nisus. She is very hysterical; and has constipation, with large, difficult stools, which crumble as they escape from the verge of the anus. A great deal of sleeplessness.

Mercurius. Prolapsus of the vagina at every menstrual nisus. She has dry heat, and rush of blood to the head and congestion to the head at every menstrual nisus. Pain in the mammæ as if they would ulcerate at every menstrual period. Œdematous swelling of the hands, feet and face.

Nat. mur. At every menstrual nisus she feels anxious, melancholy and qualmish early in the morning for a few hours, with sweet risings from the stomach, and spitting of blood with the saliva. She awakens every morning with headache, which lasts a long time. Constipation of large, difficult stools; the anus being contracted, it becomes fissured and discharges a quantity of blood.

Nux mos. At every menstrual nisus the throat, mouth and tongue become intolerably dry, particularly when sleeping. Amenorrhœa from getting wet. In women subject to hysteria or to fainting fits.

Unconquerable drowsiness; is sleepy all the time. Rheumatic pains. Bloating of the abdomen after every meal.

Phosphorus. Particularly in tall, slender, phthisical women. Spitting and vomiting of blood at the menstrual nisus; sometimes the hæmoptysis is profuse, or there is hæmorrhage from the anus or urethra. Stools small, dry and difficult. Great sense of weakness across the abdomen. The feet and legs are cold, and sometimes they are paralyzed.

Phosph. acid. In cases with meteoristic distension of the uterus.

Phytolacca. Amenorrhœa, complicated with ovarian irritation or disease. Rheumatic muscular pains or chronic rheumatism. Constipation. A hot feeling in the throat.

Platina. Particularly in emigrants. Painful pressing down, as if the menses would appear, with desire for stool, and pain in the small of the back. Constipation, with scanty, difficult stool; the stool often adhering to the rectum and anus like soft clay. Horrifying thoughts.

Podophyllum. Suitable for women who have frequent bilious attacks, or who suffer from prolapsus of the rectum at stool, with hæmorrhoids; fatigue and depression; sallow complexion and general sickly and wretched appearance; foul breath; leucorrhœa.

Pulsatilla. Particularly suitable in mild, tearful, yielding dispositions. Pale face; difficulty in breathing after slight emotions. Constant chilliness, even in summer when warmly clad. Leucorrhœa; vertigo; throbbing headache; pressure in the stomach; pain in the uterus, and dysuria. In cases which come on in consequence of wet feet. With ophthalmia. From nervous debility. With morning sickness, and bad taste in the mouth in the morning; no appetite, nothing tastes good.

Rhododendron. Her sufferings are particularly aggravated during rough and windy weather, or at the coming on of a thunder-storm. Every menstrual nisus is attended with fever and headache.

Rhus tox. In consequence of a severe wetting, as in a rain-storm.

Ruta grav. A corrosive leucorrhœa attendant, which is the consequence of the suppression.

Sabadilla. The menses are suppressed immediately on their appearance, when they appear again, sooner or later, but are again suppressed, and so on.

Sabina. The sudden suppression is followed by a thick, fœtid leucorrhœa.

Sanguinaria. Amenorrhœa in consequence of pulmonary disease; hectic flush of the face; noisy escape of flatus from the vagina. In

women who are subject to sick headache, with stiffness of the neck. Pain running up the nape into head.

Secale corn. Suppression of the menses in thin, scrawny married women, who suffer much at the menstrual nisus with a continual, long-lasting, forcing pain in the uterus.

Senecio. Debility of the system, with nervous excitability and sleeplessness; lassitude; gastric derangement and loss of appetite; symptoms as though the menses would appear, but they fail to do so.

Sepia. In feeble constitutions, with delicate skin. Acrid leucorrhœa, with soreness of the vulva. A yellow saddle appears across the bridge of the nose. Sensation as though the vulva were very large. Pressure in the abdomen at the menstrual nisus, then soreness of the perineum and swelling of the vulva. Repeated shuddering the whole day during the menstrual nisus. Coldness of the hands and feet, and frequent flashing of heat to the head and face. Constipation and sense of weight at the anus. Painful sensation of emptiness at the pit of the stomach.

Silicia. Great costiveness at the approach of the menstrual epoch. Smarting, acrid and corrosive leucorrhœa with the suppression. Discharge of a quantity of white water from the uterus, instead of the menses. Frequent attacks of momentary blindness or obscuration of vision.

Staphysagria. When the amenorrhœa is the consequence of chagrin with severe indignation. Much pain in the teeth at the menstrual molimina. She is extremely sensitive to mental and physical impressions.

Stramonium. Extreme loquaciousness at the menstrual molimina; tears and prayers and earnest supplications. Her face is puffed up with blood, and she is very fearful, and shrinks back with fear of objects on awaking from sleep. She desires light and society.

Sulphur. Stitching headache; vivid redness of the face; violent pains in the uterine region and itching pimples on the chest at every menstrual molimina. Hæmorrhoids; flashes of heat; stitches in the side, and heat in the top of the head. Coldness of the feet, or burning in the soles of the feet at night in bed. Weak, fainting spells. Very short naps at night, or very heavy, dead sleep the whole night. She feels unusually hungry from eleven till twelve o'clock; she cannot wait for her dinner.

Valerian. Especially suitable for hysterical women who have taken too much Chamomile tea. Nausea, with desire to vomit, as if a thread

or something were hanging in the throat, coming from low down in the abdomen.

Veratrum alb. Nervous headache at every menstrual nisus, with cold sweat upon the forehead; leaden color of the face, with frequent nausea and vomiting. Also diarrhœa.

Zinc. In those cases of amenorrhœa where alternate paleness and redness of the face is a strongly marked symptom.

Dysmenorrhœa.

Difficult, painful menstruation may be attended with profuse or with scanty flow, the latter in the greater number of cases. This affection is seldom confined to one or two menstrual periods. When it occurs it usually forms the principal characteristic feature of the entire menstrual life. The distress may be moderate and last but a few hours, and in these cases it is usually relieved by a tolerably free flow. Or it may be intensely severe, and continue in the form of a menstrual colic for several days; in such cases the flow is almost always very scanty.

Dysmenorrhœa is capable of being divided into five distinct classes, according to the temperament and constitution of the individual, or to the causes from which it originates. These are the neuralgic, the congestive, the inflammatory, the membranous, and the mechanical or obstructive forms of dysmenorrhœa.

Neuralgic Dysmenorrhœa is usually seen in persons of a nervous temperament, and is considered to be strictly a symptom of irritable uterus. "The sensations of fullness and weight, the bearing-down sensations felt at the vulva, the perineum, the rectum and the coccyx, the frequent inclination to urinate, the fullness at the hypogastric region, the pain in the 'small of the back,' down the limbs, in the hips, around to the iliac and hypogastric regions, are all of the same type. At the period these symptoms of pain and distress become much aggravated and often intense; the irritation extends from the nerves to the muscles, hence the spasmodic pains, violent cramps of the uterus, of the vagina and of the sphincters. These spasmodic pains are often of the most severe character, usually occurring in paroxysms, for hours or even for days; and sometimes, although then more moderately, during the whole period. They simulate the pains and agony of labor, and they are equally if not more agonizing, for they are more protracted and the intervals are less decided; sometimes, indeed, the pain is almost continuous. Usually, after the

first twelve or twenty-four hours, when the secretion of the menses is fully established, the pain and spasms moderate or cease. Frequently, two or three days elapse before the poor woman returns to her usual state; and often the suffering is so severe and so prolonged that the whole interval does not afford her sufficient time for recruiting her prostrate energies. The succeeding catamenial period brings renewed neuralgia and spasms, and so on even for successive years, depriving the sufferer of all social and intellectual happiness."—*Hodge.*

This form of the disease may present itself in persons who may be said to be of the neuralgic diathesis, and who are subject to neuralgias of the other parts and organs; or it may be due to the opposite states of chlorosis and plethora, or to luxurious and enervating habits of living, or accompanying such diseases as gout and rheumatism. It may likewise exist in consequence of excessive sexual indulgence or masturbation.

Congestive Dysmenorrhœa is seen in women of a full habit and of a sanguine temperament; both the unmarried and those who have borne children are very liable to it. Young girls of florid complexion and plethoric habit suffer terribly in many cases before their menstruation is regularly established, and often in such cases the same congestive attacks follow them occasionally in after life. "For some time before and after the catamenia appear the suffering is very great; the patient complains of pain across the back, aching of the limbs, weariness, intolerance of light and sound; the face is flushed, the skin hot, the pulse full, bounding and quick, often upward of one hundred." These sufferings are relieved by the menstrual flow, which, although sometimes scanty, is often very profuse.

This form of dysmenorrhœa may result, as already remarked, from a plethoric condition of the system, or it may follow exposure to cold and wet, or arise in consequence of exciting or depressing mental emotions. Again, it may be due to displacements of the uterus or to a variety of diseases of that viscus, such as subinvolution following labor, areolar hyperplasia and fibrous tumors. "Any one of these causes, without exciting true inflammation, may keep up a state of hyperæmia in the uterine vessels, which, being augmented at menstrual epochs, creates pressure upon the neighboring nerves, and consequently pain."

Inflammatory Dysmenorrhœa.—This form of dysmenorrhœa is usually due to inflammation of the mucous lining of the uterus,

whether of the cervix, of the body, or of both. It may likewise accompany and be caused by inflammation of the ovaries or of the cellular tissue lying around the uterus. The inflammatory condition of these parts may be such as to give rise to but little or no pain, until, when the vascular erethism attendant on the menstrual epoch arrives, the additional vascular turgescence and general local excitement which occur give rise to much pain and suffering. The pains are not generally acute, but rather of a dull, heavy and fixed character; and they may come on a day or two prior to the commencement of the meustrual flux, and continue with but little or no abatement until its cessation, or even for a day or two longer.

Inflammatory dysmenorrhœa may be distinguished from the congestive variety by the fact that the inflammatory disease which gives rise to it will cause pain during the intermenstrual periods, and the detection of the existence of these inflammatory diseases will aid in effecting a correct diagnosis. It may readily be differentiated from the neuralgic, the membranous or the obstructive varieties.

Membranous Dysmenorrhœa may appear in connection with the neuralgic or with the congestive dysmenorrhœa. This appears to be a complication of simple dysmenorrhœa, occurring in persons of some peculiar constitution, and consists in the expulsion at the menstrual period of the hypertrophied mucous lining of the uterus. These cases, not very common, are extremely painful, and especially where, as is sometimes the case, the membrane is discharged whole in the form of a sac, it is liable to be mistaken for the product of conception—a mistake that it might be very unpleasant for the physician to make with reference to an unmarried patient. In some instances this expulsion appears to hold over, passing the regular menstrual period, the menses intermitting, and the female deeming herself *enceinte*. But when thrown off in what was supposed to be an abortion, nothing appears but the exfoliated mucous membrane of the womb.

The peculiarity of constitution which gives rise to such a condition is not definitely known. If the membrane come away entire, it will exhibit the triangular shape of the uterine cavity, and there will be found three openings, corresponding with the entrance to the Fallopian tubes on either side and the os internum. It usually is thrown off in pieces, however. The diagnosis of this rare form of dysmenorrhœa is by no means easy or certain, especially in the case of married women, where it may be apt to be confounded with conception and impending abortion. But an attentive study and comparison of all the

symptoms will lead to a proper prescription: indications for membranous dysmenorrhœa will be found among the remedies at the close of this section.

MECHANICAL or OBSTRUCTIVE DYSMENORRHŒA is the name given to a class of cases in which the difficulty and consequent painfulness of the menstrual discharge arises from some mechanical obstruction, such as the partial closure, from stricture or narrowing, of some portion of the cervical canal. This narrowing of the calibre of the cervical canal is a very frequent cause of obstructive dysmenorrhœa, and is itself often occasioned by the use of nitrate of silver or other caustic in the treatment of diseases of the cervix. Or there may be actual obstructions lodged in the canal, such as coagula, thickened and hardened mucus, the formation of false membrane in the cavity of the body or neck of the uterus, uterine polypus, or cervical fibroid tumor; or finally the obstruction may arise from flexion of the cervix uteri, as in retroversion of the uterus, and this is no doubt the most frequent and efficient cause of mechanical dysmenorrhœa. These various obstructions occasion painful spasmodic efforts to accomplish the evacuation of the menstrual blood.

When the menstrual nisus has continued for some time—hours or days—and a quantity of blood is collected within the cavity of the uterus, in consequence of its ready flow being hindered by the obstruction from whatever cause, violent spasmodic and contracted pains are excited, which pass into violent expulsive efforts, such as occur during the progress of miscarriage; and by this means a greater or less quantity of the catamenial fluid is discharged, with more or less relief from suffering. Such attacks as these are termed "*menstrual colic*," and they constitute the principal feature of membranous dysmenorrhœa. And this phenomenon may repeat itself again and again during a menstrual epoch, as the uterus becomes filled and makes an effort to empty itself.

In the treatment of this form of dysmenorrhœa, as in that of others, we must be governed by the symptoms and conditions; and if the cause can be removed entirely the cure may be complete, as in the case of uterine flexions. The other mechanical causes of dysmenorrhœa, such as thickening and turgescence of the lining membrane of the cervix, may also be removed by the remedies selected in accordance with the indications present. Nor do we believe that even "the cautious introduction of elastic bougies" can ever be necessary or useful in order to remove stricture of the cervix uteri. This stricture,

whether spasmodic or otherwise, is the result of inflammation, nervous irritation or some other morbid condition amenable to medication, and is capable of being completely removed in time by the exhibition of the properly selected and truly homœopathic remedy to the case. Such, at least, has been our own experience, as well as that of others.

Dysmenorrhœa from displacements will be relieved under the proper treatment for Displacements (which see); that from constriction, contraction, etc. of the cervix or os uteri will also be cured by such constitutional treatment as is indicated by the prevailing symptoms and conditions. All topical treatment with bougies, etc. is worse than useless.

In the treatment of dysmenorrhœa it is of great importance that attention be paid to proper diet, exercise, the use of baths, friction and such other means as have a tendency to improve the general health of the patient and add tone and vigor to her system. A cure of the menstrual difficulty will be greatly facilitated by a resort to these proper hygienic and dietetic measures; whereas, on the contrary, the most carefully selected and appropriate homœopathic remedy may fail of producing good results from neglect of these important measures. And these directions do not refer merely to dysmenorrhœa, but to all other forms of menstrual difficulties, and, in fact, to all other forms of disease.

Remedies for Dysmenorrhœa.

Alumina. The menses delay, but finally appear, being too pale and too scanty. Before the menses she has many dreams, awaking from which she has heat in the face, headache and palpitation of the heart. Abundant discharge of mucus before the menses. During an evacuation of the bowels before the menses she has pinching, writhing and pressing like labor-pains. Pressing to stool aggravates her symptoms. During her menses corroding urine is frequently passed, day and night. After the menses she is so much exhausted in body and mind that a little exercise prostrates her.

Ammonium carb. Menses are premature and abundant, preceded by griping, colic and want of appetite; or the discharge is blackish, in clots, and passes off with pain in the abdomen; constipation, tenesmus, paleness of the face, sadness and toothache. Also colic, and pain between the scapulæ.

Ammonium mur. Menses premature, with pain in the abdomen and

small of the back, the flow being more profuse at night. Passing of large quantities of blood at stool during the catamenia.

Apis mel. When the dysmenorrhœa appears to be due to inflammation or irritation of the ovaries, with tenderness of the ovarian region, and severe pain on deep-seated pressure; frequent desire to micturate, with painful passage of only a few drops of urine at a time.

Asarum. Violent pain in the small of the back at the appearance of the menses, which scarcely permits her to breathe.

Asclepias syr. "Labor-like, intermitting pains, accompanied by pale and profuse urination, headache, giddiness and nausea."

Baryta carb. Menses very scanty. Before the menses toothache, with swelling of the gums, or colic, with swelling of the limbs. During the menses a troublesome weight above the pubes in any position.

Belladonna. Pressure downward, as if all the contents of the abdomen would issue through the vulva. Violent pains come on suddenly, and disappear as suddenly as they come. Pains that cause redness of the face and eyes, throbbing of the carotids and in the head.

Berberis v. The menses are scanty and very painful, flowing much like grayish serum. The pain is often in the kidneys or down the thighs and calves of the legs; again in the head, and sometimes all over the body.

Borax. Stitching pain in right pectoral region before the menses. Pain from the stomach to the small of the back before the menses. During the menses lancinating pain in the groin.

Bovista. Before the catamenia diarrhœa and painful bearing down toward the genital organs. Diarrhœa, with burning of anus.

Bromine. Violent contractive spasms during the menses, lasting from six to twelve hours, leaving the parts sore. Emission of large quantities of flatus during the menses, with slight pain in the abdomen. Membranous dysmenorrhœa.

Bryonia. Tearing pains in the limbs during the menses. Epistaxis. All her sufferings are increased by the least motion. Cannot sit up from nausea. Membranous dysmenorrhœa.

Calcarea carb. In leucophlegmatic constitutions. Vertigo on going up stairs. Menses too frequent and profuse. Involuntary emission of urine on taking exercise. She has cold, damp feet, and is very easily affected by the cold air. A variety of pains during the menses, with the above characteristic symptoms. Bad toothache after the menses. Membranous dysmenorrhœa.

Cantharis. Dysmenorrhœa, with the peculiar dysuria of this remedy. Membranous dysmenorrhœa.

Carbo animal. During the menses violent pressing in the small of the back, groins and thighs, with unsuccessful desire to eructate. After the appearance of the menses she feels so tired that she is scarcely able to speak, with stretching and yawning.

Carbo veg. Before the menses much itching about the vulva; itching of old tetters or of the skin about the neck and shoulders. During the menses cutting pain in the abdomen, pain in the back and pain in the bones as if bruised.

Castoreum. During the menses pain commences in the middle of the thighs, extending over the limbs, and in fact more or less over the entire body. Angry exclamations during sleep.

Causticum. During the menses pain in the abdomen as if the parts were torn, with pain in the small of the back as if from a bruise, and discharge of large clots of blood. A sticking pain below the left mamma. Face very yellow. Involuntary urination from cough.

Chamomilla. Violent labor-pains, and tearing in the veins of the legs, with discharge of dark, coagulated blood. Desire to pass water frequently, it being profuse and pale. Out of humor, even quarrelsome. Membranous dysmenorrhœa.

China. Feeling of distension and fullness, which is not relieved by eructations. In weakly persons who have lost much blood. Ringing in the ears and fainting fits; convulsions, with rush of blood to the head and chest, with throbbing of carotids. A good deal of colic, particularly in the P. M., with eructations without relief.

Chininum s. Griping and tearing in the abdomen, extending to the chest, with pressing toward the groin during the menses.

Cicuta v. Tearing and jerking in the os coccygis during the menses.

Cimicifuga. Neuralgic dysmenorrhœa. Great excitability of the nervous system; headache; anxiety; restlessness; gastric disturbances. Spasmodic dysmenorrhœa, with pains like labor-pains and menstrual colic; heaviness, weight and bearing down in the abdomen. Dysmenorrhea occurring in women of rheumatic tendencies.

Cinnabaris. A few days before the appearance of the menses and during their continuance tearing pain in the forehead, sensation of weakness in the eyes, rending in the spine, tearing and cramp in the bowels, with diarrhœa and great prostration.

Cocculus. Dysmenorrhœa, always followed by hæmorrhoids. Abdomen distended, with sharp cuttings, or as if sharp stones were in the abdomen, at every motion. Her sufferings often cause fainting.

Discharge fitful, scanty and irregular. Paralytic pain in the back and weakness in the lower extremities.

Coffea. Exceedingly painful colic—so painful as to drive her to desperation. Continuous pinching pain in the iliac regions. Coldness and stiffness, with profuse flow.

Colocynth. Cramping pain, causing her to draw her lower limbs up to the abdomen, with restlessness, moaning and lamenting. These pains are sometimes increased by eating or drinking.

Conium. Dysmenorrhœa, with shooting pain in the left side of the chest. Pain in the mammæ, which often swell and become hard. Pressure from above downward and drawing in the legs during the menses. Vertigo during menses, particularly whilst lying down. Intermitting urine during micturition. Painful abdominal spasms during the menses.

Creosotum. Difficulty of hearing before and during the menses, with buzzing and humming in the head. The menses are usually too frequent and too profuse; succeeded by an acrid-smelling, bloody ichor, with corrosive itching and biting of the parts; with more or less pain during the flow, but much aggravated after it has ceased.

Crocus sativ. Dysmenorrhœa, with dark, stringy blood; sensation of bounding or rolling in the abdomen, with other symptoms. Sensation of commotion in the stomach upward and downward, hither and thither, during painful menstruation.

Eugenia j. Acné, with pain extending for some distance around the acné; the skin disease is worse during the menstrual epoch.

Euphrasia. Menses last only one hour; time regular.

Ferrum acet. Pale face and lips, or fiery redness, with scanty discharge of pale blood, with violent colic. The menses intermit and then reappear.

Gelseminum. Difficult menstruation, the period being preceded by sick headache, with vomiting, vertigo, and congestion of blood to the head, with a dark-red hue of the face.

Graphites. The menses delay, are scanty, thick and dark, or else serous and pale blood, with griping and abdominal spasms, headache, nausea and pain in the chest. Morning sickness during menses. Constipation previous to and diarrhœa after the menses. Persons most suitable for Graphites are rather corpulent and subject to itching blotches here and there.

Gratiola. Darting in the right mammæ when stooping, worse on rising, during the menses.

Helonias. Is suitable to dysmenorrhœa occurring in delicate women,

of lax fibre, or who are chlorotic. Sharp cutting and drawing pains during the period, passing from the back through the uterus; swelling of the mammæ, with considerable tenderness of the mammæ and nipples; painful soreness over the ovaries.

Hyoscyamus. Violent, almost convulsive, trembling of the hands and feet during the menses. She is almost raging. Enuresis and sweat during the menses. Severe headache, profuse sweat and nausea at the appearance of the menses.

Hypericum. Menses delay, with tension in the region of the uterus as of a tight bandage.

Ignatia. Headache, with heaviness and heat in the head. Photophobia, contractive colic, anguish, palpitation of the heart, languor unto fainting during the menses. Weak, empty feeling at the pit of the stomach, with sobbing and sighing.

Indigo. Burning in the mammæ during the menses.

Ipecacuanha. Pain about the navel, extending toward the uterus. Sharp continued cutting pain from left to right, with constant nausea.

Iodium. Flow at every stool, with cutting in the abdomen; pain in the back and loins. Food does not nourish her.

Kali bichrom. Menstruation too soon, with vertigo, nausea, headache and feverishness. Obstinate suppression of urine, or small quantity of red urine.

Kali carb. A good deal of stitching, cutting colicky pain during the menses. She feels badly for a week previous to the menses. She is costive, and feels a distress an hour or two previous to a passage. The menses have a bad, pungent odor, very acrid, excoriating the thighs and covering them with an eruption. Headache, with great heaviness during the menses only in the morning.

Kali hyd. Great urgency to urinate, which disappears at the eruption of the menses. Sensation as if the thighs were tightly squeezed during the menses. Her abdominal sufferings extend into the groins and thighs. Drinking cold milk aggravates her complaint.

Kali nit. Menstrual blood black as ink, with much suffering.

Kalmia. Pain in the limbs, back and interior part of the thighs during the catamenia. Pulse very slow.

Lachesis. Before the menses vertigo, headache, and the nose bleeds a few drops. The first day of the menses tearing in the abdomen beating in the head, pains in the small of the back and bruised feeling in the hips, all relieved by a full flow.

Laurocerasus. Colicky pains in the afternoon, and tearing pains in

the vertex at night. Suffocating spells about the heart, with a sort of gasping for breath.

Ledum. Great want of vital heat, and dysmenorrhœa.

Lilium tig. The menstrual flow continues only when she is moving about, and ceases when she sits or lies down. Neuralgic pains in the uterus; pains in the ovaries, extending down into the inside of the thighs. Prolapsus or anteversion of the uterus. Cardiac complications. Feels as if the abdomen needed holding up.

Lobelia i. Violent pain, confined to the sacrum; sense of great weight in the genital organs.

Lycopodium. Pain in the temples, as if they were being screwed toward each other, with a sort of stupor and compression during the menses. Much borborygmus, more in the left hypochondrium. Sense of satiety; the least quantity satisfies, or she is insatiably hungry. Shooting pain from right to left across the abdomen.

Magnesia carb. Flow only in the absence of the pain and during sleep. The menstrual blood is dark, acrid and thick; is washed out with much difficulty. Much pain in the head and in the right shoulder. She can hardly raise the arm. The knees are painful in walking, and the feet when lying in bed.

Magnesia mur. Pain in the small of the back and thighs during the menses. More severe in the back when walking, and in the thighs when sitting. Pressing down in the iliac region during the menses.

Magnesia sulph. The menses stop for two days, then flow again. Bruised pain in the small of the back, with pains in the groin when sitting or standing, less when walking. Pain in the thighs when walking.

Manganum. Discharge of blood between the periods, and pressing in the genital organs.

Mercurius sol. Before the menses dry heat and rush of blood to the head. During the menses anxiety, red tongue, with dark spots, saltish taste, scorbutic gums, teeth feel sharp, breath of a mercurial odor and salivation. Teeth sore and loose; some of them are too long.

Moschus. Violent drawing and pressing pain toward the sexual organs till the menses appear.

Murex p. Sore pain as if injured with a cut in the uterus, or violent pain in the right side of the uterus, extending to the chest.

Muriatic acid. Sad and silent during the menses as if she would die. Varices of the anus, so sore as scarcely to bear the least touch.

Natrum carb. Pressing in the hypogastrium toward the genitals, as if everything would issue from the abdomen. Menses preceded by drawing in the nape of the neck and headache. During the menses tearing headache; painful distension of the abdomen in the morning. relieved by diarrhœa. Tearing and bruised pain in right hip.

Natrum mur. Waking in the morning with headache. Terrible sadness during the menses.

Natrum sulph. Scanty menses, with hard, knotty stools, streaked with blood, accompanied and succeeded by smarting in the anus.

Niccolum. Menses too scanty and short, with colic and pain in small of the back.

Nitric acid. Violent cramp pains in the hypogastrium, as if it would burst, with constant eructations during the menses. Violent pressing in the abdomen, as if everything were coming out of the vulva, with pain in the small of the back, through the hips and down the thighs. Often has fissures of the anus.

Nux juglans. Menses preceded by violent pressing and drawing pains in the womb; finally an abundant flow of blackish blood, often in large lumps.

Nux mosch. Menses preceded by pain in the small of the back, as if a piece of wood stretched across there were pressing from within outward, with headache, pressure in the stomach, water-brash, pain in the liver and discharge of thick, black blood.

Nux vomica. Griping and digging in the uterus, with discharge of thick, clotted blood. Nausea in the morning, with chilliness, fainting turns at the appearance of the menses, with spasmodic pains in the abdomen. Much headache; sometimes in the occiput, as if from an ulcer in the brain; sometimes in the sinciput, as if the eye would be forced out. Tearing in the left arm and right hip.

Oleum animale. Menses preceded and accompanied by cutting in the abdomen and small of the back, and sticking in the left side of the head and vertex. Scanty menses, black blood, and languor in the hands and feet.

Petroleum. Menses cause an itching in the genital organs. There is heat in the soles of the feet and palms of the hands; singing and roaring in the ears; tearing in the thigh, and spots on the legs painful to the touch.

Phosphorus. Very sleepy during the menses; she can hardly keep awake. Constipation, with a narrow, stiff stool, difficult to evacuate. Stitches in the mammæ, sour eructations and vomiting of sour substances. Blue margins about the eyes. Cutting in the abdomen,

chilliness and cold hands and feet. More suitable to tall, slim persons.

Phosphoric acid. Meteoristic distension of the uterus. Pain in the liver during the menses.

Phytolacca dec. Very painful menstruation in apparently barren women when occurring in connection with rheumatism. Shreds of membrane are passed with the menstrual flow. Dysmenorrhœa accompanying erosion or ulceration of the cervix.

Platina. Painful sensitiveness of the mons veneris and of the vulva. Much threatening of the menses to come on. Finally, they make their appearance with pinching in the abdomen and pressure in the groins, alternating with pressure in the vulva. Horrifying thoughts.

Plumbum. Cessation of the menses on the invasion of colic, but they reappear after the paroxysm, or not again till the next period. Sensation as of drawing from the abdomen to the back, often with great depression of spirits.

Podophyllum. Bearing down in the abdomen and back during the menses; ovarian pain on both sides of the abdomen, with a numb and aching pain running down into the thighs; prolapsus ani with stool.

Pulsatilla. Particularly in mild, tearful, yielding temperaments. The pain is so violent that she tosses in every direction, with cries and tears. The blood is thick and dark or pale and watery; flows by fits and starts. She feels worse in a close, warm room.

Rhus tox. Membranous dysmenorrhœa, the rheumatic symptoms guiding the choice of this remedy; stiffness of the limbs, relieved by walking; stiffness of the limbs before a storm or in damp weather, relieved by a storm. Restless nights; must turn often to find a few moments' rest.

Sabina. Dysmenorrhœa. Violent pain extending from the back through to the pubis.

Sanguinaria c. Dysmenorrhœa. The pain rises into the head from the nape of the neck, and finally into the forehead, as if the eyes would be pressed out, the menses being scanty.

Sarsaparilla. Itching eruption on the forehead previous to the menses. Soreness in the right groin, with desire to urinate at the appearance of the menses. Griping in the pit of the stomach in the direction of the small of the back during the menses. Painful conclusion in urinating.

Secale corn. Menses are too frequent and last too long, with tearing and cutting colic, cold extremities, cold perspiration, great

weakness and small pulse. Especially useful in thin, scrawny women.

Senecio. Dysmenorrhœa, occurring from want of tone and vigor. The patient is pale and weak, drowsy in day-time; does not wish to do anything or to think; irritable.

Sepia. Before the menses violent colic, shuddering all over the body the whole day, acrid leucorrhœa; sensation as if the vulva were enlarged, with soreness in the perineum. During the menses tearing in the tibia, toothache and obscuration of sight, violent pressure in the forehead, with discharge of plugs from the nose. Constipation, the stool being hard, difficult, knotty, insufficient, and sometimes mingled with mucus. Sensation as of a heavy lump in the anus.

Silicia. Before and during the menses she is costive. Stool composed of hard lumps, remaining long in the rectum, as if it had no power to expel it. Burning soreness of the vulva, and an eruption on the inner side of the thighs during the menses. Repeated paroxysms of icy coldness over the whole body at the appearance of the menses, and icy cold feet during the menses.

Spongia. Violent drawing in the upper and lower extremities during the menses. Burning in the chest, with a dry cough.

Stannum. The malar bone is painful to the touch before the menses, and during their flow it is painful even to move the muscles of the face. Dysmenorrhœa, with terrible headache, the pain gradually increasing to its highest point, and after remaining for a time as gradually declines. Weak, faint feeling in chest when talking.

Stramonium. Excessive loquacity during the menses. Drawing pains in the abdomen, upper and lower extremities.

Sulphur. The menses are thick and black, and so acrid as to make the thighs sore. Every evening, just before the menses, she always has a cough. Pain in the abdomen during the menses, as if the intestines were strung up in knots by threads. She has to take a sitting posture for relief. Worse from eleven to twelve noon.

Sulphuric acid. Distressing nightmare before the menses. Is hurried about everything she does, and cannot go slowly; acid risings and heartburn; feeling of trembling without actual trembling.

Tart. e. Pain in the groins and cold creepings just previous to the menses. Nausea and vomiting of mucus.

Thuya. Terribly distressing pain in the left ovarian and iliac regions, with scanty flow. She has to lie down, the suffering is so great.

Ustilago madis. Acute pain in left ovarian region; menses too soon and too profuse; hæmorrhage with clots; bearing down as if everything would be forced out.

Veratrum. The sufferings during menses are attended with thirst for icy cold drinks; nausea, vomiting and diarrhœa, or simply diarrhœa. Cold sweat on the forehead from the pain. Great exhaustion.

Zincum. During the menses heaviness of the limbs, with violent drawing about the knees, as if they would be twisted off. Sore eyes. Sudden oppression of the stomach, she has to loosen her dress.

MENORRHAGIA.

Menorrhagia is the term now employed to signify an increased or immoderate flow of the menses, or profuse menstruation. Formerly it was understood to embrace uterine hæmorrhage in general, but it is now very properly restricted as above, while by the term Metrorrhagia are designated those hæmorrhages from the uterus which are not connected with the catamenia.

The following very general division of the varieties of menorrhagia will simplify the whole subject, and at the same time render our brief description more clear and comprehensive.

I. Functional Menorrhagia; in which the flow is increased in quantity or in frequency, or in both.

II. Organic Menorrhagia; in which the flow appears in connection with some positive disorder of the sexual apparatus.

III. Sympathetic Menorrhagia; in which the flow appears in connection with severe forms of general disease.

In *Functional Menorrhagia* the flow may be perfectly natural, except in its quantity and in the frequency of its return, or it may be occasionally mixed with clots of blood. In either instance the causes of this affection are to be found in the more or less plethoric condition, habits of life, or even in the various anomalies of the blood itself. These and similar influences, some of them deeply seated and constitutional, may combine to produce such profuse discharge at the monthly periods, or even oftener, without the intervention of any distinct disorder, either of the whole system in general or of the sexual apparatus in particular. Only the earlier or milder forms of menorrhagia can be included in this class—those which have not been preceded by any actual disease, and in consequence of which no organic lesions have as yet arisen. And many cases which in their initial stages would be classified here, subsequently become so complicated as to belong rather to the second class. In this same class of functional menorrhagia must also be included all those cases which arise from general debility without positive disease, as in persons who fall into this "weakly way" from having too many children, or from

over-suckling them to prevent the too rapid increase of the family. And cases arising from excessive coition or any other form of over-exertion, or from some inherent constitutional weakness (especially in this respect), which may be aggravated and developed by various provoking influences, are all to be included in this class.

In *Organic Menorrhagia* the flow appears in connection with some positive disorder of the sexual apparatus. In the order of time this flow may precede or follow the appearance of the organic disease, but in either case there is such an established connection of the menorrhagia itself with other disorders as renders the case very different from what is described under Functional Menorrhagia. Nor is the reality of this connection at all affected by the view we may take as to the question whether, in any given instance, the menorrhagia is due to the disease which may have preceded it, or to the structural change which in another case may have followed it. Thus in some instances the threatened onset of some organic disease is preceded by congestions, which, greatly aggravated at the menstrual period, render the flow abnormally frequent and profuse. So the actual presence of structural disorganization of the uterus or of any of its appendages, even when not very far developed, may produce such menorrhagia. And finally, these forms of profuse menstruation, whether too frequently or more rarely recurring, may sometimes not only be caused by some hitherto undeveloped change in the interior organism, but they may also remain persistent as consequences of former diseased conditions of the various organs of the sexual apparatus. In the first of these three categories might be enumerated a very great variety of the disorders of the female organism, the majority of which are, in many instances at least, preceded by increased catamenia; in the second might also with equal propriety be mentioned almost the entire range of such diseases, from simple uterine congestion up to polypoid and cancerous tumors; while in the third the simple mention of the profuse menstruation which, unattended with any other disorder, sometimes appears after the period of the change of life, may supply all that is needed in the way of illustrative example.

Some forms of uterine disorder are preceded or even caused by amenorrhœa, but it is easy to see that the deep-seated physiological tendencies toward active disease of the uterus and its dependent organs must to a certain extent consist in congestion, which cannot but be greatly aggravated by the menstrual nisus, and which consequently leads to a more profuse menstrual discharge. The same is still more plainly true of the actual presence of structural disease in any of these

organs; the constant congestion must necessarily be seriously enhanced by the added influence of the catamenia, and from this combination of pathological and physiological conditions a more than normal flow results. And in those cases in which structural disorders have existed formerly, but have now subsided to all appearance, the proofs of their former existence still remain, in many instances, in the form of chronic congestion, which is capable of producing menorrhagia, often of the severest form, and even of keeping it up and reviving it after the change of life. Of the various forms of disease affecting the several organs themselves which induce menorrhagia, and which may be termed local causes, we may mention granular ulcerations of the os and cervix; cancer; inflammation of the lining membrane of the uterus; retention of a portion of the secundines after parturition; congested condition of the ovaries and uterus; fibrous tumor or polypus of the uterus; and subinvolution. Any of these may be sufficient of themselves to prolong each menstrual epoch and to render the flow profuse. In regard to the last named of these local causes—subinvolution—menorrhagia in married women occurs from the incomplete involution of the womb after parturition more frequently perhaps than from any other cause.

We make these statements, not from any desire to give undue prominence to pathological views, but to show the importance, the necessity, of most carefully studying all the symptoms, those preceding as well as those attendant, in order to prescribe correctly in such cases. The menorrhagia which we are called upon to treat is by no means such a hæmorrhage as that from an open wound, which may be stopped as soon as convenient; we have, in fact, something to do very different from arresting an active or even a passive hæmorrhage: we have a sick person to cure. And just as fast as by our prescriptions of advice and medicine her general health improves, just so fast will she find her catamenia approaching the normal standard. Nor when we have done for our patient in such cases all that our art admits and science requires, shall we have merely "set her courses right;" we shall have so restored her health that her courses will come right and remain right, since by curing the patient herself we shall have removed the causes of the menorrhagia.

It is not intended to assert that all this can always be accomplished in every case, but nothing less than all this should always be the aim of the physician. And even if he should not succeed in restoring his patient to perfect health, he will have gone to work in the right way to do it; and if his success be but partial and

incomplete in a given case, even if it should disappoint both his own hopes and the expectations of his patient and her friends, how much greater will it not be than if he had gone to work in some other than the best possible method! How great is the difference, in chronic cases especially, between even a small improvement and a positive change for the worse!

In *Sympathetic Menorrhagia* the flow appears in connection with severe forms of general disease. Examples of this variety of profuse menstruation are seen in some cases of variola, scarlatina, erysipelas, typhus, cholera, and during the appearance of certain acute inflammations, especially those of the lungs. "Although experience has demonstrated that during the course of these diseases, especially when they determine a draining of the mass of the blood, the courses are often suppressed, still a great number of observations have proved that when the flow persists, it may become so copious that it completely exhausts the already feeble forces of the patient, and may even hasten a fatal termination. This is especially the case with the exanthemata. We have often observed that the appearance of a very copious menstrual hæmorrhage during the course of these diseases is almost always the precursor of a fatal dissolution of the blood. Sanguineous discharges from the skin, the nose, the rectum, etc. soon supervene, and death occurs sometimes even in a few hours after the startling cerebral symptoms have come to complete the picture represented by the rapid decomposition of the blood."—*Scanzoni.*

This fearful complication of disorders, already very grave, may well appall the allopath, the very largeness of whose experience in such cases serves but to assure him of their utter hopelessness. But the homœopathic practitioner, conscious of the wonderful virtues of such medicines as *Arsenic, Carbo veg., China, Lachesis, Rhus, Secale* and others, to arrest even the rapid decomposition of the vital fluid itself, and mindful of the special and characteristic indications, which will enable him to give the right remedy with unerring exactness, can face even these profound degenerations of the organism with a patient, hopeful heart. It is necessary for the physician to realize the serious gravity of such cases, especially that neither himself nor the friends be taken unawares by the sudden and unexpected fall of the curtain; and then it is no less necessary that he should faithfully and perseveringly study all the symptoms of the case, and *never despair* till satisfied of the actual closure of the scene; since in typhus, and even in cholera, some such patients have been rescued, as it were, from the

very jaws of death, who most certainly would not have received the proper remedies up to the final turning-point of their apparently fatal disorder had not their physicians been inspired by the most patient courage and by the most hopeful and determined perseverance.

The coming on of the climacteric is frequently accompanied with menorrhagia. The periods will be missed for several months, and will then reappear in alarming profuseness, and often accompanied with pains, give rise to the opinion that the menses had ceased on account of pregnancy, and that the flow was the hæmorrhage of abortion. Diseases of the heart likewise give rise to profuseness of the menstrual flow, occasioned, no doubt, by congestion, in consequence of the retardation of the return of the blood to the right side of the heart. In these cases the profuse flow seems to afford relief. Chronic liver disease or congestion may occasion menorrhagia; and so, too, may Bright's disease; in this latter case the blood, having been deprived of its albumen, is in a condition favorable to exudation through the capillary walls.

Remedies for Menorrhagia.

Aconite. In plethoric women particularly. Vertigo on rising from a recumbent position; she has to lie down again. She is alarmed and excited; is sure she will die, although there is no occasion for such an alarm. Is in constant fear lest she gets worse.

Agaricus. Menses too profuse, with titillation in the genital organs. Itching, burning and redness of the toes, with titillation, as if frozen. Menses too profuse. Burning, a strong characteristic of Agar.

Aletris far. Menorrhagia, in consequence of a congested condition of the uterus or ovaries; profuse discharge of dark-colored blood, with coagula; fullness and weight in the uterine region.

Ambra grisea. Discharge of blood between the periods at every little accident; for instance, after a very hard stool or after a walk a little longer than usual. Swelling, soreness and itching of labia.

Ammonium carb. Menorrhagia after a long drive in the cold air.

Ammonium mur. The flow is more abundant at night. A quantity of blood is passed at every stool during the menses.

Antimonium crud. Menorrhagia, with a peculiar pressing in the uterus as if something would come out.

Apis mel. Menorrhagia, with heaviness in the abdomen, faintness, great uneasiness, restlessness and yawning.

Apocynum cann. Very profuse flow of blood, preceded for a day or

two by a moderate discharge; shreds or pieces of membrane come away with the fluid blood.

Argentum nitric. Menorrhagia, with cutting pain in the small of the back and groin. The head feels very much enlarged and the lower extremities very weak. Much belching, with relief.

Arnica. Particularly after cases of concussion, as from a blow, a fall or riding over rough roads. The flow is of a bright-red color, mixed with clots. Heat about the head, extremities cool. Menorrhagia, with pain in the small of the back, extending into the groin and down the inner side of the thigh and leg to the great toe.

Arsenicum. Menorrhagia in feeble women; cachectic; affected with rheumatism, disorganization of the uterus or ovaries; in eruptive fevers, and when aphthæ break out, indicating a low state of the system. The least effort exhausts her.

Belladonna. The flow is bright red, imparting a sense of heat, with a sensation of pressing outward. Sometimes it has a bad odor, with lumps. Sometimes there is a congestion to the head, with throbbing of the carotids.

Borax. The menses are too soon, too profuse, and attended with colic, nausea and pain, extending from the stomach to the small of the back. Too profuse menses, and she is very nervous; starts at the least noise, and dreads a downward motion, like going down stairs or the downward motion of a swing or rocking-chair.

Bovista. Menses too often and too profuse, flowing more in the morning and less at night, with discharge of blood between the periods. Sometimes flows more at night when lying down.

Bromine. Menses too often and too profuse, of bright-red blood, particularly in women with affections of the chest, heart or eyes. The flow is quite passive, and she only suffers from exhaustion.

Bryonia. Menses too early and too profuse, of dark-red blood, with pain in the back and aching in the head, as if it would split; worse on the least motion. Nausea on sitting up and after eating.

Cactus grand. Menses are premature, as well as too copious; the flow ceases on lying down; cardiac complications; the menses are dark-colored or black, and thick.

Calcarea carb. Menses too frequent, too profuse and last too long. She has vertigo on stooping, worse on rising or going up stairs. Damp, cold feet. Particularly applicable to leucophlegmatic temperaments. Profuse menstruation during lactation.

Cannabis s. Too profuse menses, when dysuria attends, with sensation of soreness in the whole track of the urethra.

Cantharis. Menses too early and too profuse, of black blood. Dysuria, with burning, cutting pain. Frequent desire to urinate. More suitable to women who are sterile.

Carbo animal. Menses too early, not too profuse, but last too long. Great weakness of the thighs. After the appearance of the menses she feels so tired that she is scarcely able to speak.

Carbo veget. Menses too early and too profuse, preceded by itching of old tetters, or by an itching eruption on the nape of the neck and between the shoulders; also by a dragging pain from the abdomen to the small of the back. Wishes to be fanned hard.

Caulophyllum. The uterus is soft and relaxed, and the blood flows profusely. Suitable for women who have moth-patches on the forehead and face. Sensation of weakness.

Causticum. She has a very yellow face; menses too early and too abundant, and after their cessation a little blood is passed from time to time for many days. The menses smell badly, and excite an itching in the vulva. She feels melancholy, and looks at everything upon the dark side. Discharge only during the day; ceases on lying down.

Chamomilla. Menorrhagia of dark coagulated blood, flowing more in paroxysms. There is great irritability of temper, so that she can hardly control herself. Frequent desire to urinate. Urine pale and profuse.

Chelidonium. Menses retarded, but continue too long, with pain under the inner and lower angle of the right shoulder-blade.

China. Menses too profuse, with a sensation of great distension of the abdomen, not relieved by eructations or dejections. Ringing in the ears and fainting spells. Losing of senses and sight. Also after the abuse of Chamomile tea; with flow of dark clots and frequent desire to urinate; pale urine; and in weakly persons from the loss of blood. Pulse almost extinct.

Cimicifuga. The discharge is profuse, dark and coagulated; great nervousness; pains like those of rheumatism in the back and limbs; bearing down in the abdomen during the flow.

Cinchoninum sulph. Menses too early and too profuse.

Cina. Menses too early and too profuse, particularly in women troubled with itchings of the nose or nightly restlessness. She is constantly tossing, even during sleep. Diarrhœa, always worse after drinking.

Cocculus. Discharge of blood from the uterus in pregnant women. Profuse menses, with a sensation as of sharp stones in the abdomen at every movement.

Coccus cacti. Menses too early and too abundant, of dark, thick blood, with a sensation of tension and constriction about the abdomen, and of something ascending toward the stomach, which makes her think she will vomit water.

Coffea. Profuse menstruation, with excessive sensitiveness of the organs, and voluptuous itching.

Collinsonia. Congested condition of the cervix uteri, with painful hæmorrhoids and aggravated constipation.

Creosotum. Menses too early, too profuse and lasting too long, but inclined to be intermittent; she thinks she is almost well, when the discharge returns afresh.

Crocus s. Menorrhagia of dark, stringy blood; as it discharges it forms itself into long strings. A sensation as if something alive were rolling or turning about in the abdomen. In the stomach a similar sensation is sometimes perceptible. Violent cephalic throbbings.

Cyclamen. Menorrhagia, with stupefaction of the whole head, and obscuration of vision as if a fog were before the eyes.

Erigeron. The flow is so profuse as to be alarming, and consists mostly of bright-red blood; every movement of the patient increases the flow. Pallor and weakness in consequence of the profuse discharge.

Ferrum. Menorrhagia in weakly persons, with a fiery red face. It occurs too frequently, is too profuse and lasts too long.

Fluoric acid. Menses too early and too profuse, thick and coagulated. With an uncommon buoyancy of mind she fears nothing, and is well satisfied with herself.

Hamamelis. Profuse discharge of dark-colored blood; the discharge ceases at night, occurring only in the day-time.

Helonias. Very profuse flow at every period, so that her strength is exhausted, and she suffers from debility. Complexion pale, sallow, earthy-looking. Menorrhagia from ulcerated os or cervix, the blood being dark and bad smelling, and continuing a long while; the flow is increased by the least exertion.

Hepar s. c. Menorrhagia in women with chapped skin and rhagades of the hands and feet. A slight injury causes ulceration.

Hyoscyamus. Menorrhagia, with delirium. She has uncommon foolish manners. Silly laughing, and inclines to uncover or undress herself.

Ignatia. Menorrhagia, with sighing and sobbing, faint feeling at the pit of the stomach, she seems full of suppressed grief.

Jodium. Premature and too copious menses, with great weakness; particularly indicated if she has goitre, or dwindling of the breasts, or if she has acute pain in the breasts. Food does not nourish.

Ipecacuanha. Profuse menstruation, with a constant nausea; not a moment's relief even after vomiting.

Lachesis. Menorrhagia, with chills at night and flushes of heat during the day. Feels much depressed in early morning.

Laurocerasus. Menses too early and too profuse, with nightly tearing in the vertex. Peculiar suffocating spells about the heart.

Ledum p. Menses too early and too profuse, with a great want of vital warmth; she can hardly keep warm.

Lycopodium. Menses too long and too profuse, with borborygmus, especially in the left hypochondrium; or a sense of satiety and fullness up to the throat on the least quantity of food being taken; or an aggravation at four o'clock P. M.

Magnesia carb. Menses too early and too profuse, flowing decidedly more at night, and never during uterine pains.

Mercurius sol. Menses too profuse, with scorbutic gums. Salivation; teeth feel sore and as if loose. Mucous stools, with tenesmus and oppression; strong urine.

Moschus. The menses are too early and too profuse, with intolerable titillation in the genital organs.

Muriatic acid. Menses too early and too profuse, with extremely sore hæmorrhoids, which sometimes itch terribly.

Natrum carb. Menses too early and last too long, aggravated by a thunder-storm, and may even be reproduced by one.

Natrum mur. Menses too soon and too profuse, with great heaviness in the eyes, or intolerable sadness. Craves salt. Has an aversion to bread. Dreams that robbers are in the house.

Nitric acid. Menses too early and too profuse, with urine emitting an intolerably strong smell. The blood is very dark-colored and thick.

Nux juglans. Menses too early and abundant, in large, blackish lumps.

Nux mosch. Menses too early and profuse, with an intolerable dryness of the mouth, tongue and throat. Excessive disposition to laugh, particularly in the open air.

Nux vomica. Menses too early and too profuse, particularly as a forerunner of the change of life; or attended with weak, faint spells, often as a consequence of high living or a sedentary life. Constipation of large and difficult stools, or with frequent urging and dis-

charge of small pieces. During her menses she does not sleep after three or four A. M.

Opium. Menorrhagia, with great sleepiness, yet she cannot sleep. The sheets are so hot she has to change to a cooler place every little while. Constipation; stools black, round and hard.

Phosphorus. Menses too often, too copious, and lasting too long. More applicable to tall, slim persons. Constipation; narrow, dry, hard stools, difficult to evacuate. Sense of emptiness in the abdomen. Much heat up the back, and cold feet and legs.

Phosphoric acid. Too early and too long-lasting menses, with pain in the liver; or rising frequently at night to pass large quantities of colorless urine. Meteoristic distension of the uterus.

Phytolacca dec. Menses too often and too profuse, with a corresponding increase of the tears, saliva, bile and urine. Hot throat.

Platina. Too long and profuse menstruation, with pressing from the groins to the genital organs. The blood is dark, and comes away partly fluid and partly in clots. Horrifying thoughts.

Plumbum. Menorrhagia, with the sensation of a string pulling from the abdomen to the back. Constipation, fæces composed of lumps packed together like sheep's manure.

Pulsatilla. Menorrhagia in delicate women of tearful disposition. The least circumstance of joy or sorrow causes weeping. She feels better in the open air, and worse toward evening. Bad taste in the mouth in the morning; no appetite, nothing tastes good.

Rhus tox. Menorrhagia from a strain; if in rheumatic women, worse at night, demanding constant change of position to find relief.

Sabina. Excessive, debilitating menses, with abdominal spasms. The blood is partly fluid and partly clotted, and the pain runs from the back through to the pubis.

Sambucus. Menorrhagia, with stoppage of the nose with thick, tenacious mucus. Can't breathe through the nose.

Secale corn. The menses are too profuse and too long-lasting, with violent spasms. All her symptoms are worse just before the menses. Particularly applicable to thin, cachectic women.

Sepia. Menorrhagia, with a painful sensation of emptiness at the pit of the stomach, or with fœtid urine, or the urine has a sediment like clay burnt down upon the bottom of the vessel. She has yellow spots on her face, a yellow saddle across the ridge of the nose.

Silicia. Menorrhagia, with paroxysms of icy coldness over the whole body. The menses have a very strong smell. Constipation before and during the menses of hard lumps, which remain long in the rec-

tum, as if it had no power to expel them. Sometimes, after long straining, the protruding portion suddenly recedes again into the rectum. Profuse menses occurring during lactation.

Spongia. Menses too early and too profuse, preceded by colic, soreness in the sacrum and craving in the stomach. Chronic hoarseness and cough, the voice frequently giving out when talking or singing.

Stannum. Menorrhagia in women having a weak larynx. They cannot talk much, read aloud or sing before the larynx aches; they become hoarse and cannot proceed. The same sensation is sometimes perceived in the chest.

Stramonium. Menorrhagia, with drawing pain in the abdomen, thighs and limbs. There may be excessive loquaciousness and a multitude of strange and absurd ideas. Afraid of everything.

Sulphur. Menses too early, too profuse and lasting too long. There are flushes of heat, followed by weak spells. Heat on the top of the head. Cold feet. Faintness from 11 to 12 o'clock. She cannot wait for dinner. Bleeding hæmorrhoids. She sleeps lightly and awakens very frequently, or she sleeps a profound sleep the whole night—dead and heavy sleep.

Sulphuric acid. Menses too early and too profuse, always preceded by a most distressing nightmare. Tremulous sensation in the whole body, without trembling. Much general debility.

Trillium. Profuse menses occurring every two weeks, and lasting a week or even longer; yellow and thick leucorrhœa occurring in the intervals between the periods. Menorrhagia occurring at the climacteric, of thick, dark and clotted blood.

Ustilago maidis. Menorrhagia occurring at the climacteric period, with much pain in the top and side of the head. Menses occur too frequently, are too profuse and last too long, one period reaching almost to the commencement of another; flow lasts for two or three weeks; dark-colored blood, with many clots; vertigo, especially accompanying menorrhagia at the climacteric.

Veratrum. Menorrhagia, with diarrhœa or with nausea, vomiting and cold sweat on the forehead. Weak pulse.

Zinc. Menses too early and too profuse. Lumps of coagulated blood, passing away mostly when walking. Fidgety feet and lower extremities.

METRORRHAGIA.

The term Metrorrhagia is meant to signify hæmorrhage from the uterus unconnected with the menstrual flow, whether profuse or otherwise.

This hæmorrhage may be active—that is, composed of bright, arterial blood—or it may be passive, consisting of the darker colored, venous blood. It may arise from the general influence of predisposing causes; from accidents; from violence; from excessive exertions of body; from sudden shocks and violent emotions of mind; from the presence of worms in the intestines; from the presence of polypi or other tumors within the pelvis; from cancer or ulceration of the uterus; from any of the causes which may produce abortion or miscarriage, and from the abortion or miscarriage itself; from retention of the placenta after parturition, or, otherwise, in consequence of parturition itself; from the cessation of the menses after the change of life; and from any of the causes mentioned in the preceding section, whether local or general, as capable of producing menorrhagia.

Those hæmorrhages mentioned in the preceding section under the head of Sympathetic Menorrhagia which appear during the course of severe diseases, even if not developed at the usual catamenial period, are still considered as resulting, in persons who have not passed the menstrual age, from the profound disturbance of the sexual organism, and are therefore regarded as menorrhagic rather than as metrorrhagic. And the same characteristic will be considered as belonging to all hæmorrhages occurring between the ages of puberty and of the change of life, unless some strongly marked cause, such as one or the other of those above enumerated, can be discovered to operate independent of the catamenial function. And while every individual case of metrorrhagia must be treated with exclusive reference to the symptoms and conditions found in connection with itself, a careful study of the causes of each case of such disorder must be absolutely essential to its successful treatment. This will be made sufficiently obvious by recalling for a moment the fact that the most violent and dangerous forms of uterine hæmorrhage may result from the most opposite conditions of body and of mind—from plethoric congestion, or from exhaustion and debility; from the highest emotional excitement, or from the most sudden and profound nervous and mental prostration.

The *Causes of Metrorrhagia* require to be considered a little more in detail.

And first, that most vague and common one of general predisposition should never be lost sight of. Even as we sometimes see in children and others a remarkable disposition to hæmorrhage from the slightest wounds or other causes, so in some women it must always

be remembered there exists a corresponding predisposition to uterine hæmorrhage. And this constitutional peculiarity should be carefully studied with reference to its connection with a psoric diathesis. In such cases the characteristic of the difficulty, and of course the key-note of the only homœopathic remedy, may really consist in some far-off and apparently unimportant symptom. Our meaning here will be well illustrated by the instance of the picking of the nose as an indication for Cina in metrorrhagia arising from the presence of worms in the intestines, which has sometimes been known to have kept up for many months a constant stillicidium of blood from the uterus. Here we can readily see the relation between the comparatively trifling symptom of picking of the nose and the irritation of the bowel caused by the ascarides, and the consequent uterine irritation and hæmorrhage. The fact that in many cases it is entirely impossible to trace any such physiological connection between remote symptoms, which still seem to be characteristic, and the disorders themselves, should not therefore induce us to conclude that such connection does not exist.

The manner in which violence, accidents, physical and mental excitement, and debilitating mental and bodily causes act in producing metrorrhagia is very similar to that in which in other instances the same influences result in menorrhagia. But it is well to bear in mind that violence and excessive bodily and mental excitement tend to establish arterial hæmorrhage, while exhausting and debilitating influences upon the physical organism, and depressing mental emotions, tend to produce passive or venous hæmorrhage. Mental and bodily excitement go together, and equally stimulate the arterial action, while all depressing influences, whether physical or moral, tend to paralyze the peripheral nerves, and thus arrest the capillary circulation. In the former case we may find violent and dangerous metrorrhagia of bright-red blood; in the latter, a passive flow of dark, stringy or perhaps clotted blood, which from its intractable persistence is no less alarming, since the greater the debility which results from the flow, the more difficult it becomes to arrest the flow itself.

In certain chronic diseases or disordered conditions of the blood—such as are found in anæmic and in scorbutic patients; such as are seen to result from the excessive use of salt food, as in scurvy; and such as follow the long-continued use of potash, as in bread largely prepared with salæratus—the blood is thin and watery, loses its rich color, its fibrine is dissolved, especially by the action of the potash,

and passive hæmorrhages readily make their appearance. This state of the system, resulting in many instances from easily discernible causes, is analogous to the hereditary condition just referred to under the names of constitutional peculiarity and psoric diathesis. In either class of these affections the abnormal liquidity of the blood favors the extravasation; and it is easily understood that the losses of blood, although replaced as to quantity by the absorption of water called for by the intense thirst so commonly seen after severe hæmorrhages, do but still further aggravate the disposition to metrorrhagia.

In certain constitutions there is seen in connection with the catamenia a remarkable disposition toward violent hæmorrhage. And the same thing is equally true in other cases unconnected with the menses. This disposition may be termed a constitutional *metrorrhagic molimen*, in which, under the influence of appropriate exciting causes, the blood rushes to the uterus and flows from it, just as sanguineous congestion and hæmoptysis result from corresponding excitement of the pulmonary organs. Cases of metrorrhagia of this class are mostly to be seen in persons of a plethoric habit, who are thus almost exactly the opposite of those above mentioned as anæmic, scorbutic and scrofulous.

The alarming, frightful, and sometimes even fatal metrorrhagias which may arise from even very small polypi will be referred to in the description of these forms of uterine tumor. In cancer of the uterus the metrorrhagia is often periodical, even in those who have long passed the critical age; it is alarming both from its quantity and from the frequency of its recurrence; it may be very sudden and severe from the destruction of some important blood-vessel; it may alternate with a limpid, serous or extremely fœtid discharge; it may form from time to time a sort of crisis in the cancerous disease and congestion; it often augments during the whole course of the case, but may sometimes suddenly cease, leaving the patients entirely free during the latter part of their existence.

The metrorrhagias which arise from *placenta prævia*, from retained placenta, and from other causes in connection with parturition, have been already particularly considered in the description of the difficulties of parturition itself.

Those which arise from abortion may be due either to the violence or other causes of the abortion itself, or to the prolonged retention of the ovum and placenta. The latter has been known to have remained for weeks, keeping up a more or less constant hæmorrhage during the

whole time. This subject, however, has already been fully referred to when treating of Abortion and Premature Delivery.

Still another most important class of metrorrhagias is found in those which appear after the change of life. These may arise in some instances from disorganization of the tissues of the womb itself; but in most cases the hæmorrhage is believed to be due to the real *metrorrhagic molimen* already referred to, or to the continuance of the same scorbutic or psoric influences in the system which have been described as producing metrorrhagia in the earlier periods of the female life. In these cases the hæmorrhage may be more or less constant, or it may alternate in various ways with a watery or a leucorrhœal discharge. For even in those persons who have long passed the critical age a certain amount of periodicity is observable. But the subject will be again considered in the subjoined article on the Change of Life.

The attendant symptoms, although always to be taken into consideration in prescribing for a case of metrorrhagia, need not here be recited. They are mostly symptoms of debility and prostration in various degrees and forms; it should be borne in mind, however, that some patients bear very severe losses of blood with comparative impunity, while others suffer very greatly from every slight hæmorrhage.

Treatment.—The treatment of metrorrhagia requires the utmost quiet on the part of the patient, and the strictest attention to all the circumstances and conditions on the part of the physician.

For the remedies suitable to the treatment of metrorrhagia the reader is referred to those given in connection with the chapter on Puerperal Hæmorrhage, on p. 406. The indications given for the use of remedies in the chapter on Abortion and the preceding article on Menorrhagia may likewise be consulted with advantage. Metrorrhagia in connection with polypus will be hereafter treated of in connection with the treatment of these growths.

The Change of Life.

The Change of Life, or *ménopause*—by which is meant the cessation of the double function of ovulation and menstruation—does not usually occur all at once or at any definite time. The critical age—another of the phrases employed in this connection—may embrace a period of several months or extend over two years or more. During the whole of this period the menses will occasionally make their appearance, being in many cases as disorderly in other respects as they are irregular in their periodical return. It occasionally happens, however, almost suddenly.

Some women cease to menstruate, and consequently to be capable of fecundation, as early as their thirty-second year, while others are regularly "unwell," and even bear children, when they are already fifty or even sixty years of age. But while such extreme cases are rare on either side, the possibility of their occurrence in any given instance should always be borne in mind. There is no rule absolute, and nowhere do circumstances more remarkably alter cases than in these affairs of the change of life. It is observed, however, that, other things being equal, the average duration of the period of ovulation and menstruation, and consequently of the susceptibility to fecundation, is about thirty-two years. Still, those who commence to menstruate early in life do not lose the function at exactly the corresponding period, since in these it continues two years longer. So those who commence to menstruate quite late in life are found to continue this function but little over twenty years.* The average period at which menstruation first makes its appearance being at about the age of fourteen, the general average of the period of the change of life will be found to correspond to the above statement, and to be therefore about the forty-fifth or forty-sixth year.

But there are many influences, as well in health as in disease, which accelerate or retard the change of life in individual cases. There are persons who seem to have a sort of hereditary idiosyncrasy in this respect—to experience the change of life at a very early period, or to menstruate to an unusually advanced age. Others, who have borne several children in rapid succession, seem to have exhausted their vital powers in this respect, and to have fallen into a sort of premature marasmus, and consequently arrive at the change of life much sooner than is common to those in health. And very many forms of disease, especially such as induce an anæmic condition, and all that large class of functional disorders and structural diseases of the organs of generation and of those connected with them, exert a remarkable influence in determining the change of life at an early age.

On the other hand, those who commence to menstruate late in life, as well as those who are naturally endowed with an unusual degree of vitality and longevity, may be expected to retain the function of menstruation to a much later period. Those who—otherwise in perfect health—menstruate for the first time at twenty, may be expected to continue this function till they are fifty, or even older. And even where we are unable to discern any such particular reason to suppose a patient is about experiencing the change of life at an earlier or later

* E. J. Tilt, M. D.: *Change of Life in Health and Disease*, London, 1867, p. 47.

period than is usual, we ought always to be on our guard; for many cases of apparent change of life are in reality nothing more than *irregular menstruation* which we may cure, and which we ought to cure, therefore, without first subjecting our patient unnecessarily to the imputation that she is "an old woman"—for which we should receive but little thanks—and without subjecting ourself to the odium of being lacking in judgment. For the physician who tells a patient she is having the change of life—she afterward entirely recovering and becoming regular, and even bearing children, and such things have occurred—commits a blunder no less palpable than that of the dentist who pulls the wrong tooth.

In proportion as women enjoy good health, and especially in proportion as the menses are normal in quantity and regular in their recurrence, may we expect them to pass through the trying season of the change of life at about the usual age or a little later, and with comparatively little suffering; while in proportion as their health has been poor, and their menses imperfect and irregular, shall we have reason to apprehend that for them the change of life will prove indeed a critical age, and that it will require all our care and skill to bring them out of it in safety and with health improved, instead of being rendered much worse. For the change of life once well passed, the woman settles down with a new form of life, and it may be with a new lease of life, and has a right to look forward to a happy old age; while on the other hand, if this critical period is not thus successfully passed, our patient may experience a long train of sufferings, which will either render her whole life wretched and miserable in the extreme, or presently develop some rapidly fatal organic disease.

"Another peculiarity worthy of note is, that many diseases are cured or disappear in consequence of the climacteric. The ovarian atrophy and paralysis remove a constantly recurring source of disease. The monthly cycle, with its attendant excitement of the nervous, vascular and glandular systems, is withdrawn. A season of continued quiet and comparative tranquillity supplies a favorable condition for the restoration of health. And when the critical period has passed it is found to have been the scape-goat of a thousand ills. Slender women may become corpulent, and even obese, bed-ridden invalids get up and walk, and an entire and radical change of physical condition is the consequence in those who escape the perils of this period. They enter upon a new phase of life, with new hopes and relations toward the present and the future."—*Ludlam.*

In many cases the change of life comes on so gradually that the system accommodates itself to the new order of things with no shock to the nervous system, and without disturbing the accustomed harmony of the general circulation. In such cases the intervals between the menstrual periods become more and more prolonged, and even the menstrual discharge itself may gradually diminish in quantity. "The most frequent and least dangerous symptom is an irregular return of the menstrual flow every week, or every two or three weeks, or every two, three or four or six months, and being more or less irregular as regards the quantity or quality of the menstrual blood. Serious and alarming hæmorrhages frequently set in, especially among plethoric and nervous women, or such as have indulged in sexual excesses. Sometimes these hæmorrhages alternate with whitish or yellowish leucorrhœa, which often has a fœtid smell, is acrid and extremely copious. This leucorrhœa may continue long after the menstrual discharge has entirely ceased to appear. At this period we likewise meet not unfrequently with colic, uterine cramps, pains in the sides, weight in the loins or distressing itching of the parts. In some cases the abdomen swells as during pregnancy, with sympathetic development of the breasts, until the swelling suddenly disappears after the expulsion of a mole, or after the emission of a quantity of gas, or after a hæmorrhage or a profuse discharge of serum."—*Jahr.*

Symptoms of Change of Life.—These vary in different individuals, according to their respective temperaments; for in the change of life, as well as in other conditions, women present the plethoric, the chlorotic or the nervous type. Thus, in those of the plethoric type the symptoms will resemble those of congestion; there may be flushes of heat, rush of blood to face and head, uterine and other hæmorrhages, leucorrhœa, and even diarrhœa. In those of the chlorotic type the symptoms which at or near the proper age would indicate the approach of the change of life are the sallow complexion, semi-chlorotic skin, weak pulse, and various other indications of debility. In those of a nervous type there is, as the change of life approaches, an evident disturbance of the nervous equilibrium, not unlike that which in similar cases precedes the original accession of the menstrual function. Hence the over-anxious look, the brimful eye, the terror-struck expression as if apprehensive of seeing some frightful objects, the face bedewed with perspiration, and the remarkable tendency to hysteria, which are sometimes to be met with.

The unusual development of hair on the chin and upper lip generally coincides with final cessation of the menses; so does an unusual

power of generating heat, indicated by the habit of throwing off the clothing and opening doors and windows. There are a large number of more or less distressing symptoms or forms of disease which in fact result from the change of life, and which thus certainly indicate that the system is either actually undergoing that change, or under the influence of causes which if not arrested will finally bring it about, and that too in a manner by no means safe for the patient. Among these may be mentioned the long list so admirably summed up by Jahr: "Hæmoptysis, bloody urine, piles, nose-bleed and other hæmorrhages; pulmonary phthisis likewise takes a fresh development, and frequently terminates fatally. In other cases we meet with diarrhœa, weakness of the stomach, flatulence, vomiting and other derangements of the digestive canal, which are sometimes accompanied by consumption and profuse sweats. Some women complain at this period of attacks of rheumatism of the shoulder or thigh, or a considerable swelling of the joints; others experience attacks of hysteria, hypochondria, and even nymphomania; others again are attacked with various eruptions, such as tetter of the genital organs, acné rosacea or erysipelas. The most distressing maladies which break out at this period, and often terminate fatally, are ulcers and polypi of the uterus, and carcinoma of this organ and of the breasts."

Temporary cessation or irregularity of the menses, when such symptoms arise in connection with chlorosis, inflammation of the neck of the womb, uterine polypi, uterine fibrous tumors, uterine hydatids, uterine cancer, and even pregnancy, have all been mistaken for the change of life.

Puberty, "pregnancy, parturition, lactation, are all critical periods, curing some complaints and giving greater activity to others; and when, after having lasted thirty-two years, the action of the reproductive organs is withdrawn from the system, prolonged ill-health is the frequent result. Then arises a series of beautiful critical movements, the object of which is to endow the woman with a greater degree of strength than she had previously enjoyed." Thus, the floodings, leucorrhœa, diarrhœa and perspirations which occur in the great majority of cases of the change of life are eminently critical, and restore to health a large proportion of those who are judiciously treated. And there are many women who have suffered in various ways for years with general poor health, who, upon the occurrence of the change of life, may either spontaneously recover, or will oftener be entirely cured by means of the appropriate medication.

What is called by some authors the *dodging time* covers the period which extends from the first beginning of declining and irregular menstruation till the final cessation of this function. This period may vary from a few months to six or seven years; and while it affords a most important season for the application of homœopathic remedies, it will be very much abbreviated by their skillful employment.

But in addition to those forms of disease which, as purely critical, may be regarded as the salutary results of vital action, such as the occasional hæmorrhages, leucorrhœas and diarrhœas already referred to, there are other and more positive disorders, developed under the general influence of the profound disturbance of the nervous and sanguineous systems which, in many instances, is inseparable from the abrogation of the long-accustomed nervo-sanguineous function of ovulation and menstruation. All these require to be treated in the usual manner by remedies carefully selected to meet the existing conditions, and with strong hope of success, even in the severest cases—a hope all the greater from the fact of the temporary nature of the influence which stimulates and sustains these forms of disease. And this remark applies even to those malignant and cancerous forms of disease which are so frequently developed at the critical age. Unless the system has been previously exhausted by the hardships and sufferings imposed upon a constitution originally feeble, there is always hope for success in the early application of homœopathic medicines in these cases.

Treatment.—In this place it will be sufficient to refer to the different disorders already described, such as Hæmorrhage, Flooding, Diarrhœa, Cancer, etc., and to their corresponding medicines, for the treatment of the various forms of disease that arise at the change of life. Let the *similar remedy* be always found for the existing symptoms and conditions of the individual case; let it be given in the best form (not too low); and let its full action be patiently awaited, and the physician will have the unspeakable satisfaction of seeing permanent health take the place of the most complicated, distressing and protracted forms of disease at the critical age. The remedies most frequently useful in disorders of the critical age will be found indicated under the head of Menstrual Disorders and other affections, which may be the most prominent of those which attend the change of life. The remedies which are remarkably adapted to relieve the disorders incident to change of life, and which therefore are found to be most frequently called for, are *Lachesis, Cocculus, Pulsatilla, Sulphur, Crocus, Conium, Sepia,*

Ignatia and *Sanguinaria*. But whatever remedy includes the symptoms of the patient in the most characteristic manner—*i. e.* has as its own characteristics the characteristics of the patient—will prove curative. And in the more severe forms of tumors, cancers or other organic disease which may be developed subsequent to or in connection with the change of life, endeavor always to find the remedy which has all the constitutional and characteristic symptoms and conditions of the patient, as well as those relating to the particular form of structural disease which presents.

CHAPTER XXVII.

NYMPHOMANIA AND HYSTERIA.

Nymphomania.

THIS formidable disease may be properly reckoned as one of the disorders of the external genital organs, since its principal seat is in the vulva, nymphæ and clitoris, although these organs may only be thus affected in consequence of some morbid condition of those more interior. Nymphomania consists in an uncontrollable passion for sexual intercourse, which sometimes overcomes all the restraints of modesty, propriety and decency, and amounts to an actual insanity or monomania on this single subject. Taking its rise in functional disorders of the sexual system, or in more general constitutional influences, which are thus ultimated upon the external generative organs, this disease changes the entire moral character from the most attractive modesty to the most shameless and repulsive profligacy; and it may lead to paroxysms whose violence rapidly exhausts the vital energies, and which terminate only in death.

Nymphomania is to be distinguished from erotomania. The former is a purely sensual passion, alike physical in its origin, in its local influence, in its development and in its much-desired forms of gratification. The latter, although still to be considered sensual in a strictly moral point of view, from a physical point of view would seem rather spiritual, as neither requiring sensual means of gratification nor dependent upon physical ability. Erotomania is a psychical state, which may find its highest if not its only gratification in the reveries

and dreams of amorous imagination and fancy by day or by night. Nymphomania is a physical disease, whose progress may be traced through a period of internal incubation, of external, reluctant and partially restrained development, to a final condition of open, unrestrained manifestation, characterized by a most intense, all-controlling sexual desire, and by an equal unconsciousness of shame and of decency.

This disease has repeatedly appeared in strongly marked cases, where there was one constant characteristic of the temperament or constitution, and that was "an unusual susceptibility of the skin to tettery affections." In these cases the disorder is so profoundly connected with the entire system that it induces paroxysms of convulsions, which indicate that the entire cerebro-spinal nervous centre is involved. The actual monomania, with entire obliteration of all feeling of modesty and unconsciousness of all the duties and proprieties arising from the domestic relation, indicates also an equally complete subjection of the purely cerebral functions and moral feelings to the same morbid influence; while the spasmodic closure of the œsophagus and impossibility of deglutition, and consequent destruction of organic life, show also that the same disease has possessed itself of the organic nervous centre, and so completely invested the whole of the organism.

True nymphomania may be considered as a most remarkable illustration of the psoric diathesis, as a most astonishing proof of the truth of the psoric principle; for if we observe this malady to arise from the more immediate influence of ascarides or onanism, these latter are but intermediate steps in the chain of causation, being themselves the results of the same psoric influence in the system. The same may be said of the enlarged, hypertrophic condition of the clitoris so often seen in connection with this disease. The nymphomania is more apt to make its appearance at either one or the other of those two epochs of the female life in which the constitution is stirred up as it were in its profoundest depths—that is, at the accession of puberty or on the cessation of the menses, but more particularly at the former of these two periods. And in addition to the influences already mentioned as constitutional or provoking causes, and which will thus exert an important influence in determining the choice of the remedy, we may mention suppression or great disturbance of the menstrual function and organic diseases of the uterus.

But in prescribing for this truly distressing complaint the various attendant symptoms, as well as the peculiar constitutional indications,

must be carefully considered. It will not be necessary to enumerate here all the varied symptoms, and morbid moral, mental and physical conditions, which may accompany a case of nymphomania. As in hysteria—and in fact what is this disease itself but a most violently aggravated hysterical affection or morbid excitement of the entire sexual system of the female?—so in nymphomania, an endless succession and variety of symptoms may present. There may be leucorrhœa of more or less peculiar kind; pruritus of the external organs; intense lasciviousness; inflammation and excitation of the sexual parts; fever, with fœtid breath; nocturnal restlessness; sleep with dreams which renew the sexual excitement; paroxysms of spasmodic closure of the œsophagus; general and exhaustive convulsions; diarrhœa, etc. And these attacks and symptoms of the disease may appear in consequence of onanism, or be attended with irresistible disposition to it; they may accompany menstruation or appear in its absence; and finally may be relieved or brought on by pregnancy. We have devoted considerable space to this not very frequent form of disease, because the homœopathic remedies—as in the somewhat analogous case of delirium tremens—have been found capable of producing the most salutary results, and thus of saving from destruction and of restoring to society some of its most valuable and important members. And the indications given for the remedies may be useful also in the milder and more common forms of amorousness and erotomania, for the relief of which the physician is often consulted.

Remedies for Nymphomania.

1. Bell., Canth., China, Mosch., Nux v., Phos., Plat., Puls., Verat. 2. Ant. cr., Calc. carb., Carbo veg., Coff., Graph., Lach., Merc., Natr. carb., Natr. mur., Op., Sabina, Sil., Stram., Zinc. 3. Agar., Ars., Aur., Bov., Cann., Cocc., Coloc., Con., Dig., Dulc., Hyosc., Ignat., Iod., Lyc., Meny., Plumb., Ruta, Staph., Sulph., Thuy.

Agaricus. Itching and irritation of the genital organs, with strong desire for an embrace. Great selfishness. The patient is subject to chilblains, which are red and itch greatly.

Antimonium c. Tenderness over the ovarian region, with nausea, vomiting and white tongue. Excited sexual desire.

Arsen. a. Sexual desire, with an involuntary discharge of mucus as a particular symptom. Restlessness. Thirst for cold water; a very little satisfies her. Unhappy, fatiguing dreams; nothing comes out

right in her dreams. She wishes to be in a warm room or to be covered up warmly, and cannot bear the cold air. Symptoms become worse after midnight.

Aurum. Feeling of desperation; hysterical mood, laughing one minute and crying the next. Inclines to jump out of windows.

Bovista. Burning and voluptuous feeling in the sexual organs. Lewd dreams. Leucorrhœa, like white of egg.

Calc. carb. Pale, leucophlegmatic. Much headache. Swelling over the pit of the stomach, like a saucer turned bottom up. Menses too often and too profuse. Vertigo or a pressing headache, as if something were pressing up into the head, on ascending. Sleeplessness in the early part of the night; she lies awake for hours.

Cannabis s. Great excitation of the sexual instinct, the female being sterile. Aggravation of the symptoms after midnight, which become still worse in the forenoon. Vivid lascivious dreams after midnight.

Cantharis. Pruritus of the vagina, with strong sexual desire. She *must urinate* very frequently, with cutting, burning pain.

Carbo veget. She is troubled much with varicose veins in the vulva. Itching at the same time of both the vulva and the anus. Much belching of wind, which affords relief for a short time only.

China. Sensation as if the abdomen were too full after eating, with desire to eructate, which, however, affords no relief. Troublesome itching and spasmodic contraction in the inner parts. Nymphomania of lying-in women.

Cocculus. Particularly in chlorotic females. Shivering over the mammæ. Lower extremities very weak. Bloody leucorrhœa.

Coffea. Voluptuous itching in the genital organs. She is in a state of ecstasy. Sleeplessness.

Conium. Shriveling of the mammæ, with increasing sexual desire. She is much troubled with vertigo, particularly when lying down and when turning over in bed. The urine flows and stops, and flows again, at each intermission.

Digitalis. Lascivious state of the fancy day and night. Remarkably slow pulse. Stools of a very light color.

Dulcamara. Heat and itching in the genitals, with desire for an embrace. All her symptoms are aggravated by a cool change in the weather. Her sexual desires are also increased by this change.

Graphites. Inclination to obesity. Enlarged ovaries, which become more tender and more enlarged every time she takes cold or gets her feet damp. Menses delay. Itching blotches here and there over the

surface of the body, from which oozes out a colorless, glutinous fluid. Much troubled with violent headache.

Gratiola. Gnawing about the umbilicus, as if of worms. Tingling in the hypogastrium and around the umbilicus. Gnawing at the pit of the stomach after eating, as if of hunger. Irresistible drowsiness and involuntary closing of the eyes as the other symptoms abate.

Hyoscyamus. Excited sexual desire without excitement of the fancy. Lascivious furor without modesty. She inclines to uncover and expose herself. Convulsive trembling. Immoderate loud laughter.

Ignatia. Strongly inclined to solitude, and to be very secretive, and to be passive. Sadness and sighing, with an empty feeling in the pit of the stomach.

Jodium. Dwindling and falling away of the mammæ; they hang down heavily and lose their fatness. Heaviness of the mammæ, as if they would fall off. All her symptoms are relieved by eating.

Lachesis. Tickling and jerking, extending from the thighs to the genital organs, with sexual excitement. Her symptoms are usually worse after sleeping. She feels extremely sad, unhappy and distressed in mind on waking in the morning.

Lycopodium. Much borborygmus in the abdomen, or gurgling in the left hypochondrium. Discharge of wind from the vagina. Sense of dryness in the vagina. Red sand in the urine. Delay, and severe pain in the back before the emission of the urine. Sense of fullness up to the throat on eating a small portion. Worse after four P. M.

Mercurius. The symptoms are more constitutional than local. Hence this remedy must be given rather from its general characteristic indications. The symptoms are usually aggravated at night, and are still worse when in bed.

Moschus. Violent sexual desire, with intolerable titillation in the genital organs.

Nat. carb. Motion as from a fœtus in the uterus. She has a variety of sufferings, all of which are aggravated during a thunder-storm.

Nat. mur. Falling off of the hair from the mons veneris and from the labia majora. Much itching of the vulva. She awakens every morning with a bad headache. Great aversion to bread, of which she was once very fond. Longing for salt things.

Nux vom. Burning in the vulva, with desire for an embrace. She wakens at three or four in the morning with sexual desire; does not sleep much afterward. Constipation of large and difficult fæces.

Opium. Very sleepy, but cannot go to sleep. Constipation; the evacuations are composed of round, hard black balls. The sex-

ual excitement and other troubles all disappear from a few doses of opium.

Phosphorus. In a pregnant women at the seventh month nymphomania appeared, with spasms; the symptoms were a weak, empty feeling in the abdomen, cutting pains in the abdomen, a narrow, dry, long and difficult stool, like a dog's stool. One dose of Phosph. 19 m. completely cured the nymphomania: she went her full time, and was happily delivered.

Platina. Excessive sexual desire, particularly in virgin women. Voluptuous tingling in the vulva and abdomen. Stool difficult, because it adheres to the rectum and anus like soft clay. Hysterical cough from stifling beneath the upper fourth of the sternum.

Plumbum. Sensation of drawing from the abdomen to the spine. Constipation; stool like sheep's manure. Severe stretching, proceeding from the abdomen.

Pulsatilla. In women with blue eyes, very affectionate, easily excited to tears, and of a very yielding disposition. She cannot sleep in the early part of the night; sleeps late in the morning. No thirst. All her symptoms are worse toward evening; they are relieved in the open air, and worse on returning to a close and warm room.

Sabina. An almost insatiable desire for an embrace. Sensation of drawing or dragging from sacrum to pubes. Intolerance of music.

Silicia. She feels nauseated during an embrace. Spinal affections and constipation, with increased sexual desire as a consequence.

Staphysagria. Extreme sensitiveness to mental and physical impressions. She feels mentally and physically, very acutely, every little circumstance. The teeth turn black.

Stramonium. Excessive loquacity during the menses. This was always the case. Stramonium removes also abnormal sexual excitement. During the menses the smell of semen is very apparent. Her face is bloated with blood. A great many strange fancies come into her mind. Afraid of everything, and of solitude.

Sulphur. A weak feeling in the genital organs. Sore feeling in the vagina during an embrace. Sterility. Also in cases which present the general characteristic indications for sulphur; which see under head of *Hysteria*. Worse from eleven to twelve noon.

Tarantula. Itching of vulva; worse at night, with dryness and heat in the genitals; must move lower limbs frequently.

Thuya. Fig-warts, condylomata, or other excrescences of a similar nature on or about the genital organs. Her symptoms are worse after three P. M., and at night, preventing her from falling asleep.

Veratrum. Nymphomania, particularly of lying-in women. Mania,

with lewdness and lascivious speeches. Thirst, with craving for the coldest drinks. Menses preceded or accompanied by vomiting and diarrhœa, or by diarrhœa alone. The bed aggravates all the symptoms.

Zinc. Sexual desire several times at night. Irresistible desire for onanism. She always feels best during the menstrual flow. Boring pain in the left ovary, requiring pressure for partial relief, excepting when the menses are flowing; then there is complete relief.

Such diet should be prescribed in cases of this nature as is perfectly plain and unstimulating; all stimulants, including tea and coffee, being positively prohibited. Exercise in the open air will be of benefit, and every effort should be made to divert the mind of the patient from the consideration of subjects of a sexual nature.

Hysteria.

Hysteria is a purely nervous affection, which may arise and continue without any functional or organic derangement of the female sexual system on which it is based, and which does not necessarily produce such derangement or disorganization. Hysteria bears the same general relation to the nervous apparatus of the reproductive system that chlorosis does to that of nutrition, and has no more exclusive connection with the uterus or other particular sexual organ than chlorosis has with the stomach or other particular digestive organ.

As a purely nervous affection, not necessarily painful, hysteria must be distinguished from irritable uterus on the one side and from hysteralgia on the other. In irritable uterus, although there is neither disorganization nor structural change—except perhaps that of displacement, which is the most frequent cause of the irritability itself—the uterus is excessively sensitive to pressure, or even to the touch, which is not necessarily the case in hysteria. In hysteralgia the pain, sometimes mild, lingering, worrying, and sometimes violent, severe and acute, is always positive and decided.

But in the location of the disease itself may be found another important distinction between hysteria and the somewhat analogous forms of uterine disease with which it is so apt to be confounded. In irritable uterus and in hysteralgia, from whatever cause these disorders arise, their actual location, principal seat and ultimate development appear to be in the uterus itself. This, however, is not the case with hysteria. The uterus indeed has usually been considered the seat of hysteria (hence the name), but the *ovaries, as the centre of the sexual*

system, must now be regarded as the real *fons et origo* of a majority of cases of hysterical affections.* Thus pressure upon the ovaries will invariably bring on hysterical attacks in persons predisposed or subject to the disorder. Hysteria extends its influence over the entire sexual apparatus; from its profound connection with the sympathetic system it may extend its influence to all the involuntary organs, and by its final extension to the cerebro-spinal nervous system it may involve also all the voluntary muscles.

Hysteria, again, has been found to co-exist with the most perfect performance of all the functions of the uterus and its dependent organs, such as menstruation, conception, utero-gestation, parturition and lactation, although this is perhaps true rather of the milder than of the severer forms of this disorder. Still, as not necessarily disturbing the functions, still less involving the structure of the sexual organs, and as not being invariably painful, hysteria establishes its claim to be regarded as a purely nervous affection, capable of being distinguished from irritable uterus and from hysteralgia, both of which are also nervous affections, although of quite another sort. This distinction will appear more strongly marked when we come to notice the differences in the nervous systems principally involved. And this definition of hysteria is still further strengthened by the well-known influence of imagination and sympathy in extending this disorder from one person to others, as in the hospitals, where many are simultaneously and sympathetically affected from seeing a single one attacked by hysterical convulsions. And it is still more fully confirmed by the powerful influence of fear in preventing and allaying such convulsions. In this respect, as well as in some others, hysteria bears a very remarkable resemblance to epilepsy.

The *neuralgic* and the *convulsive* forms constitute two distinct varieties of hysteria, but this distinction, although sufficiently well marked, is one of degree rather than of kind. In what is termed the neuralgic form of hysteria the symptoms "are merely manifestations of nervous susceptibility," while in the convulsive form they are more intense, permanent, regular and periodic. And the principal apparent distinction between this latter condition of periodic menstrual convulsions and that which presents in uterine epilepsy is to be found in the loss

* It must not be forgotten that a corresponding irritation of the nervous system belonging to the sexual apparatus of the male may sometimes occasion a similar hysterical condition in men.

of consciousness, which manifests itself in the latter form of disease, but not in the former.

A corresponding distinction may be seen in the nervous centres involved in hysteria. For in the milder, so-called neuralgic form of the disease, *which yet may be of hereditary origin*, the ganglionic or sympathetic nervous system seems principally concerned; while in the severer or convulsive forms of hysteria the original, predisposing, hereditary influence is by provoking causes extended to a full development in the cerebro-spinal nervous centre. In this case, then, we find the discordant influence extending itself to the muscular apparatus, and in consequence we have occasional spasms or regular and periodically recurring convulsions. And it will be observed that these spasms first appear in those parts of the body and muscular tissues which are in immediate relation with the abdominal, the cœliac and the thoracic ganglia.

From these remarks it may be concluded that hysteria is a purely nervous affection, which, being to a great extent hereditary in its origin, finds its primary seat in the ganglionic or sympathetic nervous centre; which finds its secondary and ultimate development in the cerebro-spinal nervous system; which in this extended development occupies the *motor* rather than the *sensory* nerve-filaments; and which thus finally results in spasmodic contractions rather than in poignant sensations. And here is to be found perhaps the last, most important and reliable distinction between hysteria and hysteralgia. In their constitutional origin, in their primary ganglionic seat of development, and in the provoking causes of their extension to the cerebro-spinal sphere, they may show but little difference; but here they diverge, for where hysteria seizes upon the *motor filaments* of the nerves, and so leads to convulsions, hysteralgia involves the *sensory filaments*, and occasions the intense pain which characterizes this affection. This distinction is exactly the same as that between asthma and angina pectoris, the former affecting the motor nerves, and the latter the sensory nerves of the chest, so that in asthma we have severe constriction, with little if any other pain, while in angina pectoris we find the most poignant distress, but no constriction.

Hysteria thus becomes an affection principally (although not exclusively) of the female system, which, constitutional in its origin, and so underlying the organic nervous system, is also capable of extending itself over the entire nervous organization, and of simulating almost every form of disease, with the single exception, perhaps, of acceleration of the circulation; for some of these states of hysterical excite-

ment can hardly be distinguished from inflammatory fever, except by ascertaining that the rapidity of the pulse does not correspond with the other apparently febrile symptoms.

Symptoms.—To attempt to enumerate all the legions of symptoms which may appear in hysterical cases would be a hopeless task. Hence our description of this multiform affection must be confined to the statement of the more prominent symptoms only, and to a general division and classification of those which make up the principal forms of the disease.

And the first and most general division of the symptoms of hysteria will be into those which belong to the *mental* and *moral sphere*, and into those which are purely *physical sensations*. And in each of these two divisions there will be found the same variety and even diversity of conditions. Thus among the moral symptoms there may be great depression of spirits with involuntary tears, or equally great exaltation of spirits and meaningless laughter; in these cases the exaltation and the depression being alike incapable of being attributed to any apparent cause. There may be sudden changes, and even frequent alternations from one extreme to the other, and always an uncertainty and want of fixedness, and even positive mobility of character. And these revulsions are not confined to the individual states of joy and sorrow in the persons affected; they extend also to their affections toward the members of their families and toward others. And in addition to those changes which arise from no perceptible cause, there is a remarkable susceptibility to impressions, many of which, although in reality of the most trifling nature, appear to exert a fixed and powerful influence. Other and no less remarkable changes in feeling and in affection arise from purely imaginary causes. Thus, in hysterical persons it is not uncommon to see personal dislike unaccountably take the place of previous affection, and the most violent and furious paroxysms of jealousy arise from the influence of imaginary and baseless suppositions. As in the personal condition of an hysterical woman there may be alternations of gayety and of gloom, of frolicsome levity and of melancholy seriousness, so in her relations to others, and, if married, to her husband especially, she will at one time be full of affection and devotion, while at others sentiments of aversion and positive dislike obtain the entire sway. One day she will express herself as the happiest of wives, and assure her friends that her husband is as good as he can be; the next she pours into the gaping ears of all the gossips her peculiar condition gathers around her long

tales of suffering, neglect and abuse, and represents the man who has the misfortune to be her husband as the most detestable monster. This form of hysteria is a real monomania with lucid intervals, but which may become a fixed insanity in relation to the married state, and so not only destroy domestic peace, harmony and affection, but even break up the family.

But hysteria, in all its most aggravated moral forms, is distinguished from insanity by the fact that the personal consciousness is never lost sight of. There is always a sort of alienation of the personality in cases of insanity, a forgetfulness of self, which never appears in hysterical cases. In these latter, on the contrary, there is the most remarkable and persistent prominence of the *self-love*. Egotism, especially in married women as opposed to their husbands, is the most prominent and the only constant moral symptom of hysteria. Such persons entertain their hearers with marvelous tales of the greatness and exploits of their past lives, and of the richness and abundance of their possessions, of the number of their friends and of the distinguished consideration they have always received in society in their former places of residence. These accounts are uttered with an air of sincerity well calculated to deceive the honest listener; and such unbridled license of the imagination and total obliviousness in regard to the truth, which are vulgarly attributed to entire want of principle and the most inordinate vanity, are in reality due to that morbid condition of the female organism which is designated by the comprehensive term hysteria—a condition which, if it were properly understood, would prove far less mischievous in society and less frequently destroy the family tie.

The second part of our division of the symptoms of hysteria includes all those which have relation to the physical system. These physical symptoms may be again divided into the *sensational* and the *convulsive*. Among the former may be ranked all those various uneasy sensations which appear at different times in different parts of the body, as in the abdomen, in the pit of the stomach and in the throat—sensations which are not very positively painful, but which are for that reason perhaps all the more distressingly annoying, and which in the most aggravated forms become developed into actual spasmodic contractions in those parts. These sensations do not appear to exert any direct influence upon the organic functions; still, they are attended with disturbances of the appetite, indigestion and general languor and debility, which are no doubt the consequences of the nervous derangement. These sensations are innumerable, variable or fixed, and either

constant or excited by the slightest influence, and even by the least touch.

As there is a constant indecision, want of fixedness or persistence in the mental sphere, rendering the mind liable to be swayed by the slightest breath of external influence, so in the physical system there is a corresponding want of permanency in the animal spirits. The same mobility that appears in the mental and moral states, and in the affectional relations toward others, appears in a corresponding degree in all the bodily conditions. And as the merest fancy will often bring on a paroxysm of jealousy in hysterical women, so the slightest direct touch, or the reflex influence from ordinary functional action, may give rise to a long train of hysterical sensations, or even occasion the most determined convulsions. This remarkable sensitiveness of the physical system to external impressions, and no less remarkably *increased reflex excitability*, form the chief characteristics of the first or sensational variety of the physical symptoms of hysteria.

The *convulsive* symptoms of hysteria begin in the hypogastric region, and gradually pass up the abdomen like the ripple of a wave, through the chest to the larynx and pharynx. First comes on a strange sensation, as of pain, in the hypogastric and ovarian regions, followed by suffocative feelings in the pit of the stomach, and then by the *globus hystericus*, which is characteristic of the complete hysterical passion. These form the precursory symptoms of the true hysterical convulsions, and are analogous to the *aura* which precedes the accession of an epileptic attack. And from appearing at the first in this mild form of semi-spasmodic contractions these attacks may momentarily or hourly increase in severity till trismus or lockjaw supervenes. And as the hysterical attack in its successive forms of development involves the different nervous branches and ganglionic centres, corresponding symptoms appear. Thus, from the disturbance of the nerves of the pharynx there results dysphagia, globus hystericus; from the larynx, an affection, with the most imminent danger of suffocation, not to be distinguished from croup, except that there is no false membrane, and that *Nux vomica*, rather than *Aconite* or *Spongia*, may prove curative; from the bronchia, dyspnœa and cough; from the heart, attacks of palpitation, irregular beating and sense of anxiety; from the stomach, hiccough, retching and vomiting; from the bladder, ischuria or dysuria. And finally, as the paroxysms extend through the voluntary and involuntary muscles, there are developed tonic and clonic spasms of every kind and degree of violence, from mere tremor or nervous quivering to the most convulsive move-

ments and contortions. "The masticatory and histrionic muscles of the face take part; trismus, chattering of the teeth as in the rigor of fever, the sardonic laugh and a rolling of the eyeballs upward, occur. After a duration varying from ten minutes to several hours, the paroxysm often terminates suddenly with a flow of tears or a copious discharge of urine, but not unfrequently it passes off gradually." *

The globus hystericus, which has already been mentioned, merits a fuller description, since it forms one of the most characteristic symptoms of the invasion of the hysterical paroxysm. It consists in an obscure sensation as of a globular body, which gradually ascends from the pelvic cavity, or at least from the hypogastrium, to the throat, where it seems to be arrested, and to produce a most painful sense of constriction and suffocation. This causes a peculiar choking sensation, which may be attended with sobbing. It is not confined to women, but may sometimes appear in those of the opposite sex, especially in young persons about the age of puberty, whose naturally delicate and sensitive temperament is agitated in a particular manner. Globus hystericus may arise from mentally or morally caused interruption of the delicate currents of the nervous fluids; and may, particularly in males, be at once removed by such relief and revulsion of these feelings as will again permit the free and unrestrained flow of these most interior and subtle fluids, of which we know but little more as yet than their hypothetical existence.

Causes.—The causes of hysteria are as various as they are numerous. No doubt very many cases of this disorder, especially of the convulsive form and most obstinate kind, are originated and maintained by functional derangements, displacements or structural disorganizations of the uterus or other parts of the sexual system. But since in these instances the hysterical affections are but the consequences or attendant symptoms of other and primary disorders, we do not consider them in this place. They require to be studied in connection with all the accompanying and causative conditions. But in all cases in which hysterical symptoms appear as part of the *tout ensemble* of the disease, the remedies advised in the present chapter for hysteria itself should be carefully compared, since these various nervous, mental and moral states should always be covered by the medicine to be administered.

To *hereditary predisposition* we may assign, then, the first place among the causes of idiopathic hysteria. This may exist in the form of (otherwise) latent psora, which thus irritates the organic or

* Romberg: *Diseases of the Nervous System.*

sympathetic nervous system in its relation to the sexual system. And the connection of the hysterical affection with such constitutional psora may be traced in the eruptions known to have appeared in the parents, or which may have been temporarily manifested in the hysterical patient herself. "A predisposition to hysteria is no doubt to be ascribed in many cases to congenital inheritance of physical conformation and temperament. The greater number of sufferers from this disease, observes M. Georget, have deseended from parents, or have been members of families, remarkable for their liability to nervous diseases in the several forms of hysteria, epilepsy, maniacal affections, hypochondriasis, nervous headaches, deafness, blindness, palsies," etc.* This hereditary constitutional predisposition to hysteria is very greatly aggravated by the personal influence of the mother if she still remains subject to similar affections. And just in proportion as such predisposition exists in greater or less degree, will the patient be more or less liable to have it developed by the ordinary provoking influences.

The *sexual organization* itself, in its various conditions and crises, exerts a powerful influence in producing or developing the hysterical affection. As long as the sexual organs remain undeveloped, hysteria does not appear, except perhaps in persons whose constitutional inclination to this form of disease is so great as to retard the sexual development. In like manner, after the cessation of the menses, when the sexual organs return to a second-childhood state of abeyance, hysteria does not appear, except as the result of some organic disease of the uterus or ovaries. But after the accession of puberty, the retention or tardy appearance of the menses and all the various derangements of the catamenial function — the excitement incident to coition, conception, abortion, miscarriage, utero-gestation and parturition — may become capable of developing the constitutional predisposition to hysteria, or perhaps of originating the disease itself where such predisposition did not exist. So sensitive and delicately organized are some constitutions in respect to the sexual system that the enforced continence of protracted virginity, the imperfect, incomplete performance of sexual intercourse in the married, and the deprivation of such intercourse in those who suddenly become widowed, are alike capable of giving rise to hysterical affections; and even the moral sufferings of disappointed love, unrequited affection and inconsolable grief have in many instances been known to lead to the same result.

* Davis's *Obstetrics.*

The influence exerted in the production of hysteria by the uterine life of the female is as unquestionable as it is unlimited. And this includes all the organs of the sexual system, but more especially the ovaries, of which mention has already been made in this connection. And even as inflammation will extend from one serous or cellular tissue to another with great rapidity, even where the tissues themselves are not adjacent, so where the ovaries are in this chronic state of irritability they exert by sympathy such an influence upon other nervous centres that the slightest irritation of their peripheral extremities may induce hysterical paroxysms. Thus in persons subject to hysteria the reflex action from irritation of the gastric, the intestinal or the uterine mucous surfaces, or even of the external cutaneous surface, is often sufficient to throw them into the most violent hysterical convulsions.

Treatment.—Both moral and remedial measures are necessary to the successful treatment of hysteria. Scarcely any disease that the physician meets taxes in a greater degree the energy and the resources of the practitioner; and if he be not equal to the exigencies of the case in the moral view of it, his remedies may fail of producing any effect. The disease being chiefly of an emotional nature, it is of great importance to obtain a controlling influence over the mind of the sufferer and to secure her confidence, while she assures herself of her physician's sympathy. "I am so confident," writes Dr. Ludlam,* "that a lack of sympathy, a dearth of feeling, a real incompatibility of temper and taste between the physician and his hysterical patient, may cause his treatment to result in more of harm than of good, that, in case this obstacle cannot be otherwise removed, I think it better to withdraw and to let another physician be called. . . . . Under similar circumstances we would not hesitate to discharge the nurse whose every movement was annoying to the patient and antagonistic to her comfort and welfare."

During the occurrence of a "fit of hysterics" all tight clothing about the patient should be loosened, and she had better be laid upon her back on a bed, a sofa or the floor. Cold water has been recommended to be dashed into the face, as by the shock the paroxysm will be broken up; but it will be better to bathe the face and forehead with cold water, and allow her to have a plentiful supply of fresh air.

The remedies which may be used in cases of hysteria are very numerous. Indeed, there are but few in the Materia Medica which have not in their pathogenesis some reference to this varied and ever-

* *Lectures, Clinical and Didactic, etc.*, page 308.

varying form of disease. Great care should therefore be exercised to prescribe the proper remedy at the commencement of the treatment; then very great caution should be observed in regard to repeating the dose, and still greater in changing to another remedy. The habit of changing the remedy to suit the different phases of the disease is a most pernicious one, and this is still more especially true in cases of hysteria, where a single disorder of the system assumes at different times such an infinite variety of forms. Some one or more of those grand characteristic symptoms that are nearly always present, and that are observable by the patient herself or by her attendants, should govern the choice of the remedy. And when once thus carefully selected, the medicine must be allowed to act for days or weeks—or perhaps even months in cases where the improvement continues so long—without repetition of the dose, and still more especially without changing the prescription.

And in cases of hysteria, as also in epilepsy or other chronic spasmodic affections, never prescribe for the convulsive stage *per se;* rather let it pass off by itself without medication. But observe closely all the symptoms, for it may be that here, in the very last ultimation of the disorder, we may detect the symptom which shall conclusively indicate the remedy for the entire case. The characteristic symptom of a case—that which corresponds to the key-note of the appropriate homœopathically indicated remedy—may appear in the course of the convulsive attacks or at their close; it may be the precursory herald of their approach, like the *aura epileptica;* it may appear only in the interval of comparative quiet; or, as in those cases which have no positive spasms, it may be a more or less constantly attendant symptom; or, finally, it may even be merely a condition of aggravation or amelioration of time, place or circumstance.

Only a few of the leading and more frequently indicated remedies for hysterical affections can be mentioned here. The entire Materia Medica has sometimes to be ransacked to find the true similimum for some of the forms of this disease—a disease whose forms are as numerous as the individual constitutions and temperaments of its subjects, *multiplied* by the innumerable physical, mental and moral influences which become the means of provoking, exciting or developing the original constitutional delicacy or hereditary predisposition.

Remedies for Hysteria.

1. Aurum, Cocc., Con., Natr. carb., Nux vom., Mag. mur., Plat., Valer. 2. Anac., Asaf., Bell., Caust., Ignat., Jod., Lyc., Mosch.,

Natr. mur., Nux mosch., Phos., Puls., Sab., Sep., Stann., Staph., Sulph., Verat. alb. 3. Agnus c., Arn., Ars., Calc. carb., Cann., Cham., China, Coff., Cycl., Euphr., Graph., Hell., Hyos., Ipec., Lach., Merc., Mezer., Palad., Rheum., Solan., Sil., Stram., Viol. od., Zinc.

Aconite. She has much fear—fear of going into places of business, into crowds, or anywhere where many persons are actively passing and repassing. Vertigo on rising from a recumbent position. She dreads too much activity about her; she complains much of her head; she is possessed with a great and distressing fear of death. Predicts the day of her death. Aconite will remove all these symptoms, and with them, probably, the whole train of morbid sensations, if allowed to act a long time, with occasional repetitions when the improvement seems to have ceased.

Anacardium. Where great forgetfulness seems to characterize the case. Loss of memory. Uses profane language. Malicious.

Arsenicum. Where a real *hysterical asthma* seems to be developed at every little excitement. Worse at night, particularly the latter part of the night. She cannot lie down for fear of suffocation. She wants a little water every few minutes. Great fear of death. She has many other troubles, but these seem to predominate.

Asafœtida. There is much trouble about the œsophagus; every excitement that brings on hysterical symptoms points thither. Dryness and burning in the œsophagus. Sensation of pressure, or as if a body or lump were ascending in the œsophagus, obliging frequent deglutition to keep it down. This feeling in the œsophagus often causes great difficulty in breathing. Soreness in the œsophagus, preceded by burning. Dartings upward toward the œsophagus from the chest. When the hysterical symptoms develop themselves in this direction Asafœtida will cure the case. Globus hystericus. Pulsations in stomach.

Aurum. The more her hysterical troubles are developed the more her thoughts run on the act of committing suicide. This act is more or less constantly and forcibly in all her thoughts. In such cases, under the influence of Aurum, the patient will cease thinking of suicide, and she will get well. This remedy is also indicated by a fine eruption on the lips or face and forehead, and by thoughts of suicide, with palpitation of the heart. Afraid of open windows.

Belladonna. There is a general tendency of blood to the head, with redness of the eyes and face, which is still more developed in the spasmodic attacks. She moans very much, even at night, without much

sleep. She is very despondent. She will sit and break pins into pieces half a day at a time. She is very much troubled with throbbing headache, particularly over the eyes. She has a wild look. Sleepiness, but cannot go to sleep.

Calc. carb. This important remedy will be particularly indicated in hysterical as in other affections, where the symptoms correspond, in persons of a leucophlegmatic treatment. She has a swelling at the pit of the stomach, like a saucer turned bottom upward. She has many spasms per day. She is easily chilled. She suffers from cold, damp feet. Vertigo on going up stairs. Her menses are too frequent and too abundant. She is often unable to sleep after three o'clock in the morning. Cold feet at night in bed. She cannot go to sleep, her mind turning on the same thought all the time.

Causticum. One of her chief troubles is, she cannot keep her upper eyelids up; they are paralyzed or nearly so, and will fall down over the eyes. She is very apt to have piles, which are made almost intolerable by walking. Involuntary urination on coughing.

Chamomilla. Great tendency to quarrel, to speak in an obstreperous manner. She has to restrain herself much in order to give civil answers to questions.

China may be useful in cases which are usually worse every other day, and in such as are attended with unusual strong appetite. Sensation of distension in the abdomen.

Cocculus. In the fullest development of this disease this remedy points to a choking constriction in the upper part of the fauces, with difficulty in breathing and an irritable cough or disposition to cough. Retarded menses, which finally appear, with great weakness, so much so that she can hardly talk, or she feels nausea even to faintness. A sensation of roaring in the ears, as though there were shells before the ears.

Coffea. Great sensitiveness, with general excitability; she is in a state of ecstasy. Headache, as if a nail were driven into the brain, or as if the brain were torn or dashed to pieces, or contracted.

Conium will be particularly indicated where much vertigo is developed, especially when in a recumbent position; she cannot turn in bed without occasioning distressing vertigo. During micturition her urine alternately flows and stops. The breasts swell, become hard and painful before the menses, when her hysterical symptoms increase very much; the vertigo often becomes very severe at these times, and she may also have constipation, with constant and ineffectual urging to stool. Globus hystericus.

Euphrasia. In cases where there is dimness of vision as a result of the hysterical condition, with great suffering from profuse lachrymation. Tears acrid.

Hyoscyamus. There is some resemblance to epilepsy in the remarkable jerking and twitching of her spasms; still, they are less regular in their form. She is disposed to uncover herself and to be naked; she indulges in much silly laughter and many foolish actions.

Ignatia. When a state of anguish is developed in which she shrieks for help, with suffocating constriction of the throat; difficult deglutition, and she finally comes out of the spasm with deep sighing. She frequently complains of an emptiness at the pit of the stomach, with frequent sighing and much despondency, simulating grief. Mental symptoms change very often—cheerfulness with great despondence. Silent grief. Inclination to start.

Ipecac. Every fresh development of the hysterical symptoms brings on a sensation of continual nausea; there are many other symptoms, but the nausea is constant—she feels it every moment.

Jodium. There is a remarkable and unaccountable sense of weakness and loss of breath in going up stairs. Leucorrhœa, corroding the linen. Food does not nourish and strengthen her.

Lachesis. Sensation as if a lump were rising in the throat, which does not particularly incommode her, but merely feels unpleasant. But she cannot bear the least pressure externally about her throat—she would suffocate—or even about the chest, stomach or abdomen. She is almost constantly relieving herself of the pressure. She awakes from sleep distressed and unhappy, as if from loss of breath.

Lycopodium. She has a constant sensation of satiety; she takes no food, and if asked why, replies she wants nothing because she is so full, and that the least morsel causes a sensation of fullness up to the throat. Cutting pains across the abdomen from right to left. Much borborygmus, particularly in the left hypochondrium. She becomes worse at four in the afternoon. Red sand in the urine. Frequent and abundant micturition; urine pale, especially during the night.

Magnes. mur. This is one of the most important remedies in hysterical conditions. She has many spasms day and night, with great sleeplessness. Constipation of large, difficult stools, crumbling as they pass the verge of the anus. Fainting fits at the table, nausea and trembling, relieved by eructations.

Merc. sol. She has a profuse flow of saliva, and her breath has a mercurial odor. The gums bleed, and are inclined to ulcerate about the teeth. She is disposed to perspire much; the perspiration does

not relieve; it is cold and clammy, particularly about the lower extremities. She is very sensitive about the epigastrium or pit of the stomach. Tongue too large and thickly coated.

Moschus. Violent, long-continued, inveterate scolding, until she falls down in a swoon. Great anguish, as if she had to die; she talks of nothing else except that she will die. She exclaims, It is my death, and then falls down in a swoon. Frequent swooning. Great desire for beer or brandy. Constriction of the chest.

Nat. mur. This remedy is indicated in all women whose menses delay and decrease more and more. She awakes in the morning with a bad headache, vivid, painful dreams during a light sleep. Dreams at night of robbers being in the house, so vividly that she will not be satisfied till the house has been searched. Somnambulistic rising and sitting about in the room. Aversion to bread. All symptoms relieved as soon as she gets into a perspiration. Debility, excessive thirst, great inclination to weep. Much mucus in the urine. Haunted with thoughts that something unpleasant will happen; this causes sadness, weeping and solitude.

Nux mosch. Sudden change from grave to gay, from lively to serene; excessive tendency to laughter. Enormous distension after meals. Vicarious leucorrhœa in place of the menses. Excessive dryness of the tongue and mouth after sleeping.

Nux vom. She seldom sleeps after three A. M., but after five A. M. and late in the morning; she feels worse in the morning. Constipation of large, difficult stools. Very dyspeptic. She is much excited by coffee, spirituous liquors or highly-seasoned food. She feels much better on plain and simple food. Menses irregular, never at the right time. Sensation of constriction about hypochondrium.

Palladium. She imagines herself neglected; wounded pride.

Phosphorus. Particularly indicated in tall, slender females. The stools are long, narrow, dry, hard and voided with much difficulty. She feels a great sense of weakness in the abdomen; this distresses and aggravates all her other symptoms. She eructates vast quantities of wind after eating. She is sleepy, particularly after dinner. Sexual desire very much increased.

Platina. Self-exaltation, and contempt for others. Violent crampy pain at the root of the nose. A strange titillating sensation extending from the genital organs upward into the abdomen. Stools difficult, adhering like soft clay to the rectum and anus. Spasms with wild shrieks. Menses in excess, dark and thick. Chilliness predominates. Thirstless. Amelioration in the open air. Horrifying thoughts.

Pulsatilla. The forms of her symptoms are very changeable. She is easily moved to laughter or to tears. She is very well one hour or half hour, and very miserable the next. She is timid and fearful, and yet extremely mild, gentle and yielding. She is sometimes silent and melancholy. She has a bad taste in her mouth, especially in the morning. Nothing tastes good to her, or she has no taste.

Sabina. She is very nervous and hysterical, and if she becomes pregnant she is almost sure to abort about the third month. Now if Sabina is administered she will not abort any more, and if kept a long time under the influence of this remedy she will eventually and entirely recover.

Sepia. Paroxysms of something twisting about in her stomach and rising toward the throat; her tongue becomes stiff; she becomes speechless and rigid like a statue. Painful sensation of emptiness in the pit of the stomach. Urine very putrid; it deposits a clay-like sediment, which adheres with great tenacity to the vessel. Icy cold hands and feet. Sudden fainting, with profuse sweats and undisturbed consciousness, without being able to speak or stir. Involuntary fits of weeping and laughter. Sensation of coldness between the shoulders, followed by general coldness and convulsive twitchings of the right side and difficulty of breathing.

Stannum. Great sensation of faintness after going down stairs, although she could go up stairs well enough. She can hardly sit down; she must drop down suddenly; she can get up very well. Very much exhausted from talking or reading aloud. All her pains increase gradually to their highest point, and then as gradually disappear.

Staphysagria. She is very sensitive to the least impression; the least word that seems wrong hurts her very much. She throws everything given her in her hands away indignantly; pushes things away from her. The sound teeth, as well as those decayed, are very painful to the touch of food or drink. Teeth with black streaks.

Stramonium. She is full of strange and absurd fancies. She is fearful, so that she starts back and stares wildly at the first sight even of familiar objects. Very great loquacity. She desires light and society. Her face is puffed up with blood. Praying and imploring.

Sulphur. She comes out of her spasms feeling very happy, and everything seems very beautiful to her. She discharges large quantities of colorless urine at the termination of the spasms. Her attendants have learned to recognize this as a sign that her spasms are at an end. She has flushes of heat, coldness of the feet, heat on the top of

her head, and cannot wait for her dinner as usual, she is so faint and hungry.

Valeriana. A sensation as if something warm were rising from her stomach, arresting her breathing, with tickling deep in the throat, and cough. She feels a sensation as if a thread were hanging down the œsophagus from the pharynx. Fearfulness, tremulousness and palpitation of the heart. The intellect predominates over the mind.

Veratrum. In addition to other symptoms she has cold sweat on the forehead. Cold sweat all over her, and a very weak pulse—so weak that it can scarcely be counted.

Viola odor. Much weeping, without knowing why; distress in the chest; difficulty in breathing; anxiety and palpitation of the heart.

Zinc. Incessant and powerful fidgety feeling in the feet or lower extremities. She must move them constantly.

Among the new remedies the following may be mentioned as likely to prove useful in hysteria, according to their indications: GELSEMINUM, CIMICIFUGA, CYPRIPEDIUM, CAULOPHYLLUM, SENECIO.*

CHAPTER XXVIII.

DISEASES OF THE EXTERNAL GENITAL ORGANS.

INFLAMMATION OF THE VULVA—VULVITIS.

ALL the external parts are liable to attacks of acute inflammation. This inflammation may be developed principally in the labia, may be confined to these or some other particular parts, as the nymphæ, clitoris, etc., or it may extend more or less generally over all the connecting tissues. This acute inflammation may arise from sudden and severe exposure to cold air; it may be the result of accidents or mechanical injuries, of violence; or it may result from the extension, downward and outward, of disorders primarily developed in the internal genitals, or from irritation caused by morbid secretions or by acrid and excoriating urine.

From the very delicate, sensitive and vascular nature of the tissues composing these external organs, they are remarkably disposed to such forms of disease, although very much protected by their situa-

* For additional remedies, see APPENDIX, Note 2.

tion; and the same vascularity and delicacy of their structure renders this acute inflammation very apt to terminate in the formation of an abscess or in more diffused suppuration. The abscess or more general suppurative process may in all cases be cured by the appropriate remedies.

Acute inflammation of the external genitals, from whatever cause it arises, runs a very rapid course; may be attended by remarkable excitement of the sexual passion, especially where the clitoris is involved; the swelling, heat and redness in the parts may be very great, and the pain severe in proportion.

The most favorable termination of such inflammation is, of course, in resolution and subsidence of the local fever. Next to this may be regarded an abscess in one or the other of the labia. But where the disorder is the result of violence, such as contusions, the parts may presently assume a dark color; or if the violence have been very severe, or where the constitution of the patient, the plethoric and vascular nature and generally full development of the parts, and perhaps other attendant and depressing circumstances, combine to produce such a result, *gangrene* may make its appearance.

It should be remembered that in the greater prominence given to some symptoms by the inflammatory action we may obtain a clue to the true homœopathic remedy for the whole case, at least for the remedy most completely indicated at that time, and which, being given, must be waited upon till its action is entirely exhausted before another prescription is made. The proper remedy for each particular case of acute inflammation, and also for the consequences of it, may be found among the following, and should be selected in accordance with the indications here given:

1. Ambra, Sepia, Thuya. 2. Calc. carb., Carbo veg., Con., Creos., Ferr., Kali carb., Merc. sol., Nitr. ac., Staph., Sulph. 3. Arn., Ars., Bell., Canth., Graph., Lyc., Natr. mur., Nux vom., Petrol., Rhus., Sec. corn., Sil., Calend., Lædum.

Arnica. For inflammation from mechanical injuries which are contusions merely.

Ambra grisea. Pain as of soreness and violent itching of the vulva, with swelling.

Belladonna. The parts have a hot, dry sensation; there is much throbbing; they get worse at three in the afternoon.

Calc. carb. Inflammation, redness and swelling of the vulva, with purulent discharge. Stinging, burning tubercles on the margin of the

labia. Much moisture between the labia and the thighs, with biting pain.

Calendula. For those inflammations which result from cutting or tearing the parts.

Cantharis. Very frequent desire to urinate, with cutting, burning pain on passing a few drops of urine, or with complete strangury. Burning in the vulva, with frequent desire to urinate, and burning cutting in the urethra.

Carbo veget. Simultaneous itching of the vulva and anus. Heat and redness of the vulva. Much soreness in the vulva in the evening. Aphthæ of the vulva. Sore places about the vulva, itching without pain.

Conium m. In all cases of indurations from injuries. Large pimple on the mons veneris, painful to the touch. Cutting pain between the labia on micturition. Severe stitches in the vulva. Violent itching of the vulva.

Creosote. Corrosive itching within the vulva. Violent itching, with biting, between the labia and the thighs, with soreness and burning after urinating.

Ferrum. In weakly females with fiery-red face. Erythism.

Graphites. Itching, smarting; painful vesicles on the labia. Painful soreness between the vulva and thighs, the part being covered with pimples, vesicles and ulcers. Much headache.

Kali carb. Tearing in the left labium, extending through the abdomen to the chest. Pinching pain in the labia. Stitches through the vulva. Soreness, gnawing, burning and itching in the vulva.

Lycopodium. Darting in the labia on lying down, often extending around each labium. A great deal of itching of the parts after the menses. Much restlessness at night.

Mercurius. Sensation of rawness. Long-lasting itching of the labia. Terrible itching, which is made worse by the presence of urine remaining on the parts after urinating; it has to be washed off. Worse at night. Perspiration affords no relief. She may even be worse during perspiration. Salivation. Soreness of the gums, teeth, etc.

Nat mur. Pimples on the mons veneris. Itching of the vulva and falling off of the hair.

Nitric acid. Violent itching of the entire vulva toward evening; dry burning heat of the vulva.

Nux vom. Inflammation of the labia, with frequent calls to go to stool or to pass urine, often with little or no discharge.

Petroleum. The labiæ perspire and itch excessively.

Phosphorus. Dull tearing pain in the labiæ during and after a walk in the open air. Heat extending up the back. Feeling of weakness across the abdomen.

Rhus tox. Inflammation of the external genitals, with itching, burning and great restlessness. Relief from change of posture.

Secale. Suitable for women who are scrawny and thin.

Sepia. Violent stitches, sometimes extending as far as the umbilicus. Severe itching of the vulva. Swelling and humid itching eruption of the inner labia. Fœtid urine, depositing a clay-colored sediment, which adheres to the chamber with great tenacity. Troublesome itching of the vulva, with pimples all around. Painless vesicles in the outer parts of the vulva. Also compare the indications given for Sepia in other diseases peculiar to the external generative organs, such as varices, burning of the vulva, etc.

Staphysagria. The inflammation produces a stinging, itching or smarting sensation, or causes the formation of vesicles on the internal surface of the labia, which are very tender to the touch.

Sulphur. Where the predominant symptoms of the inflammation are those well-known characteristics of this remedy—flashes of heat, hot soles of the feet, weak, faint spells, heat on top of the head, etc.

Sulphuric acid. Great exhaustion. Tremulous sensation in the whole body, without trembling.

Thuya. Swelling of both labiæ. All the itching, burning and pains are excited and aggravated either during or after a walk or from touching the parts. Cramp pain in the vulva and perineum on rising from a seat.

ERYSIPELATOUS INFLAMMATION OF THE VULVA may result in certain constitutions from causes which in other persons would produce only the simple form of inflammation above described. In phlegmonous inflammation the deeper tissues appear involved; or where suppuration sets in—as it may very suddenly—instead of being confined to a single abscess, it may assume the diffused form common to erysipelas. This variety of inflammation is in reality a general erysipelatous affection, which is constitutional to the woman herself, but which some provoking cause has sufficed to develop locally in these parts.

Both the skin and the subcutaneous cellular tissue are involved; and in whatever particular organ of the external genitals the disease first makes its appearance, it presently includes them all, and even

extends to the inguinal glands. The parts immediately affected become hot, swollen and red, with severe throbbing pain, especially as the suppurative process extends through the tissues. All the neighboring organs sympathize more or less; and the pain is so great that it is almost impossible for the patient to remain quiet, and yet the distress is severely aggravated by movement. In the more rapid forms of this variety of inflammation the suppurative process may be established in from twenty-four to forty-eight hours, and it is usually ushered in and attended by chills, which, if not very strongly marked, still afford a reliable indication of the progress of the disease.

Remedies for Erysipelatous Inflammation.

1. Acon., Apis, Bell., Croton tig., Graph., Merc. sol., Rhus tox. 2. Amm. carb., Arn., Ars., Bry., Calc. carb., Camph., Carb. an., Hep., Jod., Lyc., Nitr. ac., Phos., Sulph., Thuy. 3. Ant. cr., Baryta c., Borax, Canth., Carbo veg., Hyos., Lach., Magn. mur., Natr. c., Petrol., Plumb., Puls., Ran. bulb., Samb., Sil., Spong., Stram.

Aconite. When real synochal fever accompanies the affection; restlessness, anxiety and fear; tingling and shooting pains, and great heat in the parts affected.

Ammonium c. When there is an evident tendency toward gangrenous degeneration of the parts.

Apis mel. Stinging pains through the parts. Absence of thirst; scantiness of urine; great restlessness and sleeplessness.

Belladonna. Great redness of the parts; redness extending in radii. Heat and throbbing.

Calcarea carb. Hard and inflamed swellings in the affected parts, separate from each other, which are very sore and painful.

Camphora. Coldness, paleness and sinking, with aversion to being covered.

Carbo an. Much burning, with induration of the affected parts.

Croton t. Vesicles—very small—itching terribly. The itching is partially relieved by slightly tickling the vesicles. These minute vesicles may extend far around on the inflamed parts and those adjacent.

Graphites. A vesicular eruption which is very painful, with itching and oozing.

Hepar s. c. Tendency to the formation of abscesses.

Lachesis. Tickling and jerking in the affected parts. Worse after sleeping. Bluish color of the affected parts.

Mercurius. The parts are much swollen, with raw, sore feeling, and the sufferings are much worse at night.

Pulsatilla. The erysipelatous affection changes from one part to another, and inclines to spread far around on the buttocks and thighs.

Rhus tox. The mons veneris is most affected, the inflammation extending downward; intense itching and burning; large vesicles, which are not particularly troublesome.

CATARRHAL INFLAMMATION may attack the mucous lining membrane of the external organs of generation. This form of disease is more apt to appear in children, and may be attributed in most instances to exposure to cold and wet, and perhaps to want of cleanliness. The inflammation itself is of a mild form, although, from the well-known disposition of disease in the mucous tissues to spread, it may extend to the vagina, and thus a catarrhal discharge may be established in the vagina as well as from the vulva. The treatment for this affection will not be different from that for catarrhal leucorrhœa.

CUTANEOUS AFFECTIONS OF THE EXTERNAL GENITALS.

ECZEMA—PRURITUS.—Many and distressing forms of skin diseases develop themselves on the external organs of generation in the female. These are either the local manifestations of constitutional taint, which the extreme tenderness of the parts and the acrimonious discharges and other irritating influences to which they are subject cause to make their appearance in this vicinity, or they are the external manifestations of some severe, perhaps obscure, irritation which infests the internal organs. The former come under the general head of *eczema*, and, like some forms of leucorrhœa, may immediately result from too free indulgence in stimulating and highly-seasoned food. The latter are commonly known as *prurigo* or *pruritus*, and may consist in a most intolerable itching, with little or no exanthematous appearance, except what is developed by the scratching itself. In addition to the intense itching, there is usually present an equally intolerable burning, stinging and pricking. It is impossible to resist rubbing the affected parts, although all the sensations are rather aggravated than relieved by such friction. The prurigo is always the result of some deep-seated affection, usually in the internal generative organs, and in many instances it is one of the first indications of the invasion of cancer of the womb. Thus, a careful atten-

tion to this severe irritation, and its cure by remedies suited to its special symptons and to those which are attendant and constitutional, may be the means of arresting and preventing the most painful, distressing and, in its advanced stages, incurable malady which can attack the female organism. Pruritus is also said to be the precursor, as it may likewise prove the developing cause, of nymphomania.

From the constitutional nature of the *eczema* or other actual eruptions which appear on the external genitals, it must be evident that all attempts to remove them by external applications must be injurious just in proportion as they are successful; while as regards the *pruritus*, in so far as that may be due to irritation caused by actual disease in the interior genitals, it must be apparent that all attempts to remedy it which do not embrace the cure of its provoking cause must be futile. And in fact so it is found, in the allopathic treatment directed against the prurigo itself, that it is exceedingly intractable, if not absolutely incurable, by such means; while in the homœopathic treatment, guided by these external forms and by the attendant constitutional symptoms, we may often prevent or remove important disorders, of whose threatened onset or actual presence we were not positively aware.

These two forms are the most frequent and the most severe of the eruptions which attack the labia, vulva and adjacent external organs. But besides these may be more particularly mentioned—

1. *Erythema*, which consists merely in diffused redness, more superficial than that of erysipelas, but still connected with constitutional disturbance, either directly or indirectly, as the consequence of some peculiarly acrid and irritating secretion, such as leucorrhœa.

2. *Herpes*, in which the "vesicles leave behind them superficial excoriations, which soon become covered with crusts," and underneath which fresh vesicles appear.

3. *Lichen*, "characterized by papulæ occupying an erythematous base; they cause an intolerable itching, which increases toward evening or at night, and which, after scratching, is followed by excoriations that secrete a bloody serum and then become covered with crusts." Lichen differs from prurigo principally in its papillæ being somewhat smaller, and in the voluptuous itching being less intense.

Apis m. Eruptions, stinging, like bee-stings.

Bryonia a. Hard, black pustule on a swollen portion of the labia.

Calc. carb. Itching and stitches either in the internal or external

vulva, or both at the same time. Also in cases which present the usual constitutional symptom of this remedy.

Cantharis. Burning and violent itching, particularly if there be the *cantharis dysuria;* frequent micturition, with burning and cutting.

Carbo veget. Itching at the vulva and anus at the same time. Red and sore places about the vulva, with itching and leucorrhœa.

Coffea. Excessive sensitiveness about the vulva, with voluptuous itching. Would like to scratch or rub the part, but it is too sensitive.

Conium m. Violent itching of the vulva, followed by pressing down of the uterus. Violent itching, the urine flowing and stopping alternately at every emission. Violent itching after the menses.

Creasote. Corrosive itching of the vulva, with soreness and burning after scratching.

Croton tig. Intense itching, relieved by very gentle scratching.

Dulcamara. Herpetic eruptions on the vulva, aggravated by every cold change of the weather or by exposure in cold, damp situations.

Ferrum. Much itching of the vulva in delicate, weakly women, with very red faces.

Graphites. Itching vesicles and pimples on the labia, which smart and are painful. Painless pimples on the inside of the labia. Itching, smarting, painful vesicle on the vulva. Itching pimples on the vulva. Itching on the vulva, always before the menses.

Kali carb. Soreness, gnawing, itching and burning of the vulva.

Lycopodium. Great sense of dryness of the parts, and much itching. Itching of the parts during or after the menses.

Mercurius. Long-lasting itching of the vulva shortly before the menses. Itching of the vulva aggravated by a single drop even of urine; it has to be washed off. Pimples or tubercles on the labia, which are more troublesome at night.

Nat. mur. Itching of the vulva, particularly if there be much falling off of the hair. Itching of the vulva, with pimples on the mons veneris.

Nitric acid. Violent itching of the vulva, always worse toward evening. Itching of the vulva when walking, with soreness. Swelling and burning itching of one side of the vagina and of the nymphæ.

Nux vom. Corrosive itching eruption on the vulva.

Petroleum. Itching in the meatus urinarius during micturition, preceded by an urgent desire to urinate.

Platina. Voluptuous tingling in the vulva and abdomen, with oppression, anxiety and palpitation of the heart.

Sepia. Swelling and humid itching eruption on the inner labia. Very much itching of the vulva. Weight in the anus.

Silicia. Itching of the vulva, particularly if there be acrid leucorrhœa. Constipation, stool slipping back when partly evacuated.

Staphysagria. Stinging itching of the vulva.

Sulphur. Troublesome itching of the vulva, with pimples all around. Violent itching of the clitoris.

Tart. em. Pustules from a variety of causes, mostly the result of translations from other parts.

Thuya. Itching of the vulva when walking.

Zinc. Itching of the vulva during the menses.

BAPTISIA, CAULOPHYLLUM, COLLINSONIA, CORNUS CIR, CALADIUM, HAMAMELIS and HYDRASTIS may likewise prove useful in eczema, pruritus or other similar affections of the external genitals.

CHANCRES, SYPHILITIC ULCERS.

We give no special description of this form of disease, preferring to refer to other works on the subject. The constitutional and attendant symptoms will prove the best guides in prescribing for such cases; which, however, are always very amenable to homœopathic treatment.

The chief remedies to be employed in this class of affections are the various preparations of mercury, such as CINNABAR, MERCURIUS SOL., JODAT. or VIV. CORRALIA RUB., HEPAR., NITRIC ACID, JACARANDA, KALI BICH., KALI HYD., NUX JUGLANS, THUYA, PHOSPHORUS, SILICIA, SULPHUR, etc.

CONDYLOMATA.

These may be regarded as local manifestations of a constitutional dyscrasia, and as such require constitutional rather than local treatment. They are frequently of syphilitic origin, but the practitioner should not fall into the error of regarding all such excrescences of the genitals as resulting from this poison. The following are the principal medicaments required for their treatment, but others not here mentioned may be required:

Euphrasia. Stitches and itching of the condylomata, especially when walking.

Phosphoric acid. Heat and burning in the condylomata.

Sabina. Soreness and burning of the condylomata.

Thuya. Moist, suppurating, itching, stinging, bleeding, painful condylomata.

Consult also CALC. C., CINNABAR, LYCOP., NITRIC ACID, PHYTOLAC. DEC., CHROMIC ACID and STAPH.

EXCORIATIONS. Consult the remedies mentioned under *Prurigo* and *Leucorrhœa.*

ŒDEMA OF THE VULVA. Consult the remedies under *Inflammation.*

ABSCESS OF THE VULVA. Abscess of the vulva is to be treated in the same manner as abscess occurring elsewhere. See the remedies designated under *Inflammation.*

TUMORS OF THE VULVA.

ENCYSTED TUMORS.—These tumors are painless, and not very common. They are circumscribed, semi-transparent, and from being scarcely perceptible may grow to the size of a fist. They contain a glairy, colorless or thick yellowish fluid, or, in some instances, an unhealthy sanies or dark-colored purulent matter. Unless from the inconvenience which may result from their larger growth, they are not of so much importance of themselves as from the fact that they indicate some more serious disorder in the interior organs of generation.

From hernia encysted tumors may be distinguished by being incapable of reduction, by their not being changed in size by the different states of the bowel, and by their affording no gurgling or rumbling sound. When they break spontaneously they show an indisposition to heal, but may continue to discharge an irritating matter.

Encysted tumors of the external genitals of the female seldom require surgical interference from a homœopathic practitioner, their reabsorption or removal, and at the same time the radical cure of the morbid condition from which they originate, being usually quite practical with homœopathic remedies. Should they give rise to a great deal of pain and inconvenience, however, and prove intractable to medication, they should be carefully dissected out and removed, and proper means taken to secure granulation and cicatrization that will not afterward interfere with the performance of any of the functions of the genital organs.

The following remedies should be consulted:

Baryta carb. Is especially suitable for dwarfish women. Tearing

in the vulva or in the affected parts—so violent at intervals that she would like to scream.

Calc. carb. In leucophlegmatic constitutions. Menses too often and too abundant. A constant aching of the parts, made worse by pressure. A sense of cold air passing over the part.

Graphites. There are itching pimples on the labia, itching blotches on different places of the body. Constipation; stools large, lumpy, difficult, with soreness in the anus.

Hepar s. c. In cases where suppuration has taken place.

Kali carb. Stitching pains pass through the cyst, or through the parts near the cyst.

Nitric acid. In cases where a syphilitic taint is present. Itching of the part when walking or otherwise irritating it, when it feels very sore. A pricking pain prevails.

Sabina. The cyst becomes swollen, red and painful to the touch, or there is tearing pain during rest.

Sepia. Throbbing, burning and itching of the part. The urine deposits a clay-colored or red sediment, which adheres to the vessel very tenaciously. Constipation.

Silicia. The suppuration is increased by motion. The part is very sensitive to the touch. In cases where the general characteristics of Silicia are present. All her symptoms are worse at the new moon.

Sulphur. In cases which present the general characteristics of this remedy. A very sore feeling, and disposition of the affected parts to excoriate. Both the flow of urine and the discharge of fæces are painful to the parts over which they pass.

Erectile Tumors, or *enlargement and hypertrophy* of the vascular tissues of the external genitals, require general and constitutional treatment. Every exciting influence should be removed from such cases as far as possible; then perfect rest; and the remedies must be selected with especial reference to all the symptoms of the patient and to the whole history of her case, for these delicate, sensitive and exceedingly irritable and exposed parts may be made the outlet of the constitutional dyscrasia. Thus difficulties of this kind and other structural diseases of the external genitals sometimes appear insignificant, and yet absolutely incurable by all ordinary treatment. To the homœopathic practitioner the method is plain, and in many instances the means are at hand. He will give the remedy appropriate to the dyscrasia which infests his patient, and all these minor, but vexatious and sometimes painfully distressing, local affections will vanish

gradually, instead of developing with advancing years into malignant and incurable forms of disease.

Arsenicum. The constitutional symptoms of this remedy will point out its use, if the local symptoms do not. The tumor may be painful, with burning or lancinating pains, or it may be painless.

Carbo animal. The tumor has a tendency to become indurated, with a burning sensation. Also in cases which present the constitutional characteristics of this remedy.

Carbo veget. The tumor has a bluish look; is very hard, with shooting pricking pain.

Creasote. The tumor has a corrosive itching and burning. Spasmodic pains extending from above downward.

Lycopodium. Tearing stitches in the affected parts. Sensation of dryness. Inclined to grow worse at four P. M., and to be better at eight P. M. Borborygmus in the left hypochondrium.

Nitric acid. Much itching of the tumor, with sticking pain.

Phosphorus. Stinging and burning of the tumor. Worse during or after a walk. Suitable especially for tall and slender persons.

Platina. Painful sensitiveness, with inward coldness of the vulva.

Sepia. Burning, itching, throbbing or jerking in the tumor. Reddish sediment in urine, which adheres to the vessel with great tenacity.

Silicia. Violent burning and soreness of the part, with an eruption on the inner side of the thigh.

Sulphur. Troublesome itching of the part, with pimples all around. General symptoms of sulphur.

Thuya. The sufferings are increased during motion and immediately afterward. The pain during motion is at times so severe that she is compelled to lie down.

HÆMORRHAGE from these erectile tumors may require—

Arnica. If the bleeding be the result of coition or of a blow or other injury. And the remedy that will cure the hæmorrhage may also cure the tumor itself if allowed to act a long time.

Carbo veg. If the blood be of a venous appearance or very pale.

Coccus cacti. Pain in the vulva, so severe on going to bed that she is obliged to sit up in bed and go to sleep in that position. The tumor of the vulva increases, gets hard and is sensitive to the touch. Throbbing and burning in the tumor of the vulva, and excoriated feeling on walking.

Creosote. If the bleeding be continuous, with marked intermissions;

at times becoming pale and almost entirely ceasing, and then recommencing afresh.

Lachesis. The hæmorrhage seems to be vicarious; the pain increases in intensity until relieved by the flow of blood, then as the hæmorrhage subsides the pain returns.

Phosphorus. The blood flows profusely for a while, and then ceases for a time, when it flows again, and so on.

Pulsatilla. The blood is very changeable in its appearance. It is more apt to flow in the day-time, when walking. It is intermittent.

Sulphur. Flushes of heat; weak, fainting spells; hot feet; heat on the top of the head; very hungry from eleven till twelve in the forenoon—cannot wait for her dinner.

For Inflammation of these Erectile Tumors study the remedies under Inflammation of the Vulva.

Bloody or Oozing Tumors.—These are most apt to occur in persons who have passed the middle period of life, and who may have received constitutional and even local injuries from too frequent childbirth or from similar causes. These tumors are not so well defined and circumscribed in size as are the encysted tumors; they seem rather enlargements of some dependent portion of the labia or vulva; and they may arise even in virgins from accidental violence to the parts. From their size and situation they may occasion no small suffering, and be made to exude a watery or even bloody discharge, which is much increased by walking. For the treatment of these study the remedies given in the preceding sections, and also those under Vaginal and Uterine Tumors in subsequent chapters.

Varices of the Vulva (see page 352).

Hernia of the External Genitals.

Hernia of the Vulva, Perineal Hernia or *Cystocele* are generally associated with pregnancy, although they may occur in women who are not pregnant. Vulvar or perineal hernia consists in the descent of a portion of intestine, forcing its way downward through the areolar tissue of these parts; in cystocele it is the bladder that is involved in the descent and protrusion.

In *Cystocele* the protrusion will be found in the vagina or vulva. The finger may be passed beyond and above it, and the cervix uteri made out, but it cannot be passed in front of the tumor, for it seems

to be attached to the inner surface of the symphysis pubis. There will likewise be considerable irritability of the bladder and frequent desire to urinate. Cystocele complicating labor has already been treated of, and the method to be resorted to for its relief already laid down. (See page 235.) Where pregnancy does not exist the bladder must be evacuated by means of the catheter — the male catheter may have to be used — and the protrusion reduced and kept in place by means of a proper bandage or other support. The patient should retain the recumbent position for a long time, and the urine should not be allowed to accumulate in such a quantity as to cause vesical distension. In true *hernial protrusion*, by placing the patient in the horizontal position the hernia may easily be reduced; and the gurgling sound which accompanies the reduction, as well as the reduction itself, sufficiently indicates the nature of the difficulty. Perineal hernia is to be distinguished from an encysted tumor by this facility of reduction.

For the strictly medical treatment required in these cases study such remedies as are mentioned under *Prolapse of the Vagina and Uterus.*

Neuralgia of the Vulva.

Neuralgia in the external genitals usually appears in connection with a similar affection in the vagina. Under this latter head we shall speak more particularly of the causes and treatment of this painful disorder.

Ascarides of the Vulva.

The Parasites which infest the external genitals of the female are of two kinds—*ascarides* and *lice*. The former may escape from the rectum, and, lodging in the folds of the vulva, cause there an intense pruritus, or even nymphomania. And even where it is impossible to detect their actual presence in the external genitals, so strong is the sympathy between the mucous membrane of the rectum and vulva that the irritation in the latter is equally intense with that in the former organ, and no less distressing than that which results from their presence in the vulva itself. The presence of ascarides within the vulva in little girls often gives rise to a distressing leucorrhœa. The intense itching may lead to masturbation. Lice mostly infest the roots of the hair upon the mons veneris and labia majora.

Calc. carb. In leucophlegmatic constitutions. Terrible itching of the parts toward evening or after going to bed.

Ferrum. Much itching, and a red, fiery face.

Ignatia. A great deal of itching. Much sighing, and empty, faint feeling at the pit of the stomach.

Nux vom. In those whose complaints are attributable to or aggravated by highly seasoned food, wines and liquors. Constipation, with frequent urging. Frequent micturition, with scalding and brick-dust sediment. Worse after three A. M.

Silicia. More or less itching and fever all night. Emaciation and gradual failing of health.

Sulphur. Much itching and crawling. Flashes of heat; coldness of the feet; very short naps all night; feels very weak in the morning. Weak and empty from eleven till twelve; she cannot wait for her dinner—a very unusual circumstance for her.

The free use of lard on the parts around the anus may be found to be a great help in the treatment of these cases.

LICE may be removed from the vulva and adjacent parts by destroying them with essence of bergamot, or with fine snuff made into a paste with pure glycerine

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CHAPTER XXIX.

DISEASES AND DERANGEMENTS OF THE VAGINA.

PROLAPSE OF THE VAGINA.

PROLAPSE of the vagina is an affection resulting in general from a relaxed or weakened state of the vaginal parietes. It may easily be mistaken for prolapsus of the womb, but a careful attention to the history of the case and to the conditions present will conclusively determine the matter. The vagina may be wholly or partially prolapsed. Thus there are three forms of vaginal prolapsus which require to be considered and distinguished: First, *complete prolapse or inversion of the vaginal canal;* second, *prolapse of the anterior wall of the vagina;* and third, *prolapse of the posterior wall of the vagina.* In connection with a brief notice of each of these three forms of vaginal displacement we mention the most active producing causes and mode of distinguishing each from the others.

I. *Complete prolapse* or *total inversion of the vagina* is, perhaps, the least common of these three forms, as it is also the worst, especially where the parietes are actually protruded. This form may appear in connection with parturition; as the result of weakness or looseness in the walls of the vagina; of too great size or too rapid descent of the fœtal head; of mechanical interference, especially turning; or it may come on gradually, from the combined influence of various similar causes, especially in women who have borne many children. It is important to understand clearly the nature of the change which takes place in this displacement, and which is properly called inversion, although the term may fail to convey the full idea. Suppose a long stocking to be suspended with the anterior part of the foot upward; now let a heavy weight be laid upon its apex (the toe of the stocking) and allowed to sink down through the foot and leg of the stocking; this will cause an actual inversion, and by the time the inverted point of the apex has made its appearance at the open extremity of the leg one-half of the stocking will have become inverted. In such a manner the vagina may be prolapsed and inverted where the entire circle of its canal is involved, although the circle of inversion may not begin at the apex of the vagina. The puckered orifice, composed of the folds of the mucous coat of the vagina, which appears in the centre of the projecting tumor, should be distinguished from the regularly formed os uteri, which is narrower in structure, and marked by a fissure which separates the anterior from the posterior lip. In these cases of complete inversion of the vagina the finger pressed upon either side of the tumor will be arrested at the bottom of the *cul-de-sac* formed by the doubling of the wall of the vagina upon itself. In any event, the finger introduced into the orifice of the prolapsed vagina may be made to reach the os uteri above, and thus remove all possible ground of doubt as to the exact nature of the case. This form of prolapse of the vagina is usually connected with some degree of corresponding displacement of the uterus. There is also an increased discharge, which is the result of the displacement itself and of its producing cause.

II. *Prolapse of the anterior portion of the vagina* is usually connected with a similar displacement of the bladder. The same influences which weaken and relax the anterior portion of the vaginal parietes are exerted in a similar manner upon the attachments of the urinary bladder; and the undue accumulation of urine in the bladder, resulting from its too long-continued retention, suffices to cause the parts to yield still more to the constant and increasing pressure.

This form of displacement is evidenced by the sensation of weight in the vagina, followed by an actual fullness and intumescence or swelling in the front of the vagina just within the vulva. At the same time there is a painful dragging sensation in the lower part of the abdomen, frequent and painful micturition, in addition to the difficulty of passing water: it may sometimes be impossible to do so until the parts are in some measure replaced. On attempting to introduce the finger into the vagina immediately beneath the pubes, it reaches the bottom of a *cul-de-sac*, while, if the finger be introduced behind the protuberance, the os and cervix uteri can be found nearly in their natural position. These symptoms can hardly fail to determine the nature of the difficulty. The tumor formed by the anterior or vesical prolapse of the vagina presents a round, elastic, fluctuating appearance at the orifice of the vagina, and may usually be much diminished in size by drawing off the urine with the catheter where there is any considerable dysuria. And as the water again accumulates in the bladder the vaginal tumor becomes at the same time larger and more painful. This last-mentioned circumstance alone, where it appears, will of course conclusively determine the nature of the difficulty.

The prolapse of the anterior parietes of the vagina, attended as it usually is by that of the bladder, may be distinguished from prolapsus uteri by the fluctuating nature of the tumor and by its broader shape at its apex—that of the uterus being hard, firm and pointed. The passage of the finger into the vagina behind to the tumor will distinguish it from prolapsus of the posterior wall of the vagina.

This prolapse of the anterior portion of the vaginal walls, whether caused or merely accompanied by prolapse of the bladder, is sometimes called *cystocele* or *hernia of the bladder*.

III. *Prolapse of the posterior wall of the vagina.* In this form of vaginal displacement the rectum is usually involved, as the bladder is in the anterior form just described. In some rare instances both these forms of prolapse of the vagina appear in the same person and at the same time.

The sensations attending displacement of the posterior parietes of the vagina are similar to those which arise from that of the anterior wall, except that they are rather referable to the rectum and call to stool than to the bladder and desire to pass water; and the tumor diminishes after the evacuation of the bowel.

The finger passed up *anteriorly* to the tumor will reach the os uteri, and this circumstance will distinguish this difficulty from that

involving the anterior wall of the vagina; while the tumor itself, although compressible, has not the fluctuating sensation discernible in that caused by the descent of the urinary bladder. The relative position of the apex of this tumor, as well as its variable size and more yielding character, enables us to distinguish it from prolapse of the womb, and in addition, by introducing the finger in front of the tumor, the os uteri and cervix may be found in their natural position. In this as in the other forms of the vaginal prolapsus the unusual exposure of the delicate mucous surfaces and their irritation from friction against the adjacent parts cause leucorrhœa and more or less inflammation of the organs. This displacement of the vagina is termed *rectocele*.

In the treatment of complete prolapse of the vagina the prolapse should be carefully reduced by manipulation, and the recumbent position strictly adhered to for some time. The general health should be attended to. In prolapse of the anterior wall the treatment elsewhere laid down for cystocele should be resorted to. In displacement of the posterior wall care should be taken to prevent the accumulation of fæces in the rectum.

Arnica m. When it is the result of violent shock or concussion.

Mercurius. When the sufferings, such as pain, itching, smarting, etc., are worse at night, all night.

Sepia. When burning with sharp-shooting pain is experienced in the affected parts. The sensations are worse while sitting quietly, particularly in the forenoon and evening. Sense of weight in the anus. She has to cross her thighs, as if to prevent the escape of the inner parts.

Stannum. Much inconvenience is felt during a hard stool. Great lassitude when walking. Great anguish and melancholy during the week previous to the menses; the distress of mind ceases as soon as the menses begin to flow. Contusive pain in the region of the malar bone during the menses.

Sulphur. Rectocele. Stools flat or thin. Other characteristic symptoms of sulphur are present.

Veratrum alb. The fæcal mass is flattened and thin like a ribbon.

The article on *Prolapsus Uteri* may be consulted for other remedies.

STRANGULATION of the prolapsed portion of the vagina, whether it involve either the bladder or the rectum within the stricture, is a complication worse than the original difficulty. As in cases of

strangulated hernia, the obstruction of the bowel or of the bladder may very suddenly give rise to most distressing and alarming symptoms. These are best relieved by remedies selected in accordance with the constitutional symptoms, which, by removing as it were the spasmodic constriction of the parts, allay the inflammation, and enable the return of the circulation to take place in season to prevent mortification.

Aconite. In highly inflammatory constitutions with hot, dry skin and intense thirst and restlessness. Much mental distress. She thinks she cannot get well, that she will die.

Apis mel. The parts have a stinging like that of bee-stings as their most prominent sensation.

Arsenic. The parts have a black look and burn like fire. She has thirst for cold water, but drinks little at a time and often. Great anguish and restlessness.

Belladonna. A constant sense of weight and pressure, as if the parts were falling out. The parts have a scarlet-red appearance.

Lachesis. The parts are of a deep purple color. The patient wakens often in much distress.

Nux vomica. The patient wishes to urinate and defecate very often, but small quantities, if any, being discharged from the bladder or bowels.

Opium. The patient is very sleepy. She lies in a soporous condition.

Plumbum has been highly commended in the treatment of strangulated hernia. It will be indicated by the intense pain and other symptoms of the remedy.

Sulphur. Frequent flushes of heat and weak, fainty spells. Heat in the soles of the feet.

Sulphuric acid. The parts have a greenish look. They smell badly, and the patient is *very weak*.

Veratrum album. An exhausting diarrhœa attends the other troubles. There is cold perspiration on the forehead.

Spasms, Cramps and Constrictions of the Vagina.

The muscular structure of the vagina may become subject to spasm in consequence of irritation arising in the vagina itself, or in consequence of the extension to the vaginal walls of similar affections in the neighboring organs. And it may be the result of local, vaginal irritation in persons of a general nervous temperament or of an

irritable or hysterical constitution. Or it may be occasioned by displacements or organic diseases of the adjacent structures.

Thus, in persons predisposed to such affections by a nervous irritability of constitution, spasms of the vagina may arise from the local irritation of coitus, from riding on horseback or from walking. In hysterical women these spasms may as readily be induced by violent mental emotions or disturbed moral feelings, and by the periodic excitement of the menstrual nisus; and they are very frequently found among the spasmodic affections common to the hysterical state. A careful study of all the symptoms, causative influences and attendant conditions will be necessary in order to prescribe for this troublesome affection, a thorough cure of which may well imply an entire restoration of the general health. For the real seat of vaginal as well as of uterine spasms, and of all their intermediate causes, such as displacements, ulcerations, irritability and dysmenorrhœa, may often be found in nervous, functional or organic disease of the ovaries. Hence, without an intelligent consideration *of all the symptoms and conditions* which make up the *tout ensemble* of our patient's case, we shall find ourselves entirely unable to relieve her of those which are most distressing, or for which she more particularly seeks relief at our hands. And until the general irritability of the system is remedied by appropriate medication it will be indispensable for the patient carefully to avoid all those local influences, such as coitus, riding, walking, etc., which may tend to bring on the spasms. For while these spasmodic disturbances are the result of nervous debility, either constitutional and general or local, or both, they tend also, by still further weakening the parts, to perpetuate themselves. Besides, habit and the frequent recurrence of such cramps or spasmodic affections no less powerfully combine to perpetuate them in the system, by making them a second, morbid nature, as fungous growths override and overpower the original normal structure.

These strictures of the vagina may be cured without artificial dilatation, by the aid of the homœopathically indicated remedy.

Belladonna. In plethoric individuals, disposed to phlegmonous inflammations. The symptoms often come on suddenly, and disappear with equal suddenness. A sense of heat and dryness is felt in the parts.

Cocculus. Aggravation at every menstrual period, particularly when the periods are attended by such weakness that she can hardly talk.

Ignatia a. She is troubled with a weak, empty, gone feeling at the pit of the stomach, which is not relieved by eating. She is inclined to brood over her troubles. Full of grief.

Mercurius. The parts have a strong tendency to excoriate, to swell and become inflamed. A raw sensation is felt in the parts.

Nux vomica. In women who indulge in high living, wines, etc. Habitual constipation of large and difficult stools, or small stools with frequent urging.

Platina. In very nervous, spasmodic temperaments, and where there is much tenderness of the vulva.

Pulsatilla will often be indicated in persons of a very tearful, mild, yielding disposition.

Neuralgia of the Vagina.

This exceedingly painful affection of the vagina bears exactly the same relation to this organ that irritability, or rather hysteralgia, does to the uterus. As in irritable uterus, so in neuralgia of the vagina, the parts are exceeding sensitive to the touch.

Neuralgia of the vagina may arise from any cause, such as excessive coition or other influences of that kind, which may weaken the nerves of the parts, and so excite in them an irritable and hyper-sensitive condition; or it may result from suppression of external exanthemata or of vaginal discharges; or from injections of cold water for a particular purpose after coition. In whatever manner this affection is directly caused, it is of course necessary for the patient to avoid such influences as the first step toward the cure. So also in those cases which may result indirectly from other morbid conditions of the internal organs of generation, all such primary diseases must be strictly attended to, and this not exclusively or necessarily with reference to the local symptoms alone. All the morbid conditions, all the constitutional affections and attendant circumstances must be carefully taken into consideration when prescribing for this disorder. The neuralgia of the vagina may make its appearance, like many other similar affections, in other parts of the system, whenever the patient becomes fatigued; its pains may be of a peculiar character, lancinating or burning—worse from motion or touch or exposure to cold, or relieved by severe pressure or friction, as in those cases which appear connected with pruritus.

For those persons who are subject to this excessive irritability and hyper-sensitiveness of the nervous system, it is important to inquire if something connected with their diet, habit of living or other

external circumstances may not be instrumental in maintaining this painful condition. The use of coffee will often be found to cause the excessive sensitiveness to pain, the neuralgic condition of the nerves, in which certain peripheral surfaces (very apt to be the external genitals in females) may become as sensitive to pain and as intolerable to the least touch as are the parts affected in cases of gout. Tea, on the other hand, especially if taken too strong, will more often occasion the excessive irritability of the nervous system in general, and so lead the way, as in the case of coffee, for local exciting influences to develop such an affection as neuralgia of the vagina. In short, whatever influences tend to weaken and depress the nervous system may occasion irritability of the peripheral extremities of the motor fibres, and a still more distressing neuralgic condition of the corresponding sensory filaments; such influences, therefore, should be as carefully avoided as possible, in order to obtain a perfect cure by the use of the appropriate medicines.

Merely the local symptoms belonging to each remedy are mentioned here, but as scarcely any two of them are alike, the indication will in most cases be sufficient; in others all the symptoms of the case may have to be compared.

Remedies for Neuralgia of the Vagina.

1. Calc. carb., Kali carb., Sep. 2. Bell., Canth., China, Creas., Ferr., Lyc., Merc. sol., Nux vom., Puls., Rhus., Sulph., Thuy. 3. Ars., Aur., Carbo veg., Caust., Cauloph., Cimicif., Cocc., Coff., Con., Cypriped., Gelsem., Graph., Natr. m., Nitr. ac., Petrol., Phos., Plat., Sab., Sec. corn., Staph.

Alumina. Stitches in the left side of the vulva, extending as far as the chest. Beating, throbbing pain in the vagina.

Arsenicum. Lancinations from the abdomen into the vagina.

Belladonna. Stitches in the vagina, with sensation of great heat and dryness. Pains that come on suddenly, continue violently, and disappear as suddenly as they came.

Berberis. Intensely painful vagina, burning and soreness as if excoriated. Sudden lancinating pain in the vagina, causing her to start, with soreness of the wall of the vagina to the touch.

Bromine. Loud emissions of flatus from the vagina. Pain in the vagina as if sore.

Calc. carb. Aching in the vagina. Leucophlegmatic temperament.

Cantharides. Violent itching in the vagina. Dysuria; sharp cutting, a few drops at a time and almost constant desire to urinate.

Caulophyllum. The vagina is excessively irritable, and the pain and spasm are intense and continued.

Chamomilla. Burning in the vagina as if excoriated. Very impatient; can hardly answer one civilly.

Cimicifuga. Vaginal neuralgia, occurring in women who are subject to rheumatism. The pains are intense, but intermitting, and are attended with cramps in the lower limbs. Complicated with hysteria.

Colocynthis. Swelling of the labia, with dragging pain and heat in the vagina.

Conium. Stitches in the vagina, and pressing from above downward. The urine intermits during its flow.

Creosote. Stitches in the vagina, coming from the abdomen, causing her to start. Voluptuous itching deep in the vagina.

Cypripedium. Irascibility and fitfulness; hysterical symptoms; sleeplessness; agitation. Irritability of the vagina.

Graphites. Smarting in the vagina.

Kali carb. Pinching pains in the vagina during an embrace. Sore pain in the vagina during an embrace.

Lycopodium. Violent burning in the vagina during and after an embrace. Sensation of chronic dryness in the vagina. Itching, burning and gnawing of the vagina.

Mercurius. Inflammatory swelling of the internal surface of the vagina.

Muriatic acid. Pricking pain in the vagina.

Natrum mur. Dryness of the vagina and painful embrace.

Nitric acid. Stitches in the vagina from without inward when walking in the open air.

Nux vom. Internal swelling of the vagina, with burning pain, making contact intolerable.

Rhus tox. Sticking pain in the vagina, not increased by contact. Pain in the vagina, as if sore, shortly after an embrace. Sore pain in the vagina, hindering an embrace.

Sabina. Severe stitches in the vagina, deep, from before backward.

Sepia. One of the most frequently indicated remedies for painful coition. Jerking pain in the vagina from below upward in the morning on waking. Contractive pain in the vagina. Almost continual stitches in the vagina.

Silicia. Labor-like pain in the vagina, which is very tender to the touch.

Sulphur. Burning pain in the vagina; she is scarcely able to sit still. Sore feeling in the vagina during an embrace.

Thuya. Burning and smarting in the vagina when walking and sitting. She is so sensitive in the vagina that she cannot possibly bear an embrace.

Vaginismus.

By this term is meant an extraordinary hyperæsthesia of the nerves supplied to the mucous membrane of the vagina, at or near the site of the hymen, resulting in spasmodic constriction of the sphincter vaginæ muscle. In its most severe form it is doubtless seldom met with, but milder cases are of by no means infrequent occurrence. Owing to the extreme sensitiveness of the parts and the spasmodic closure of the vaginal orifice upon the slightest touch, sexual intercourse becomes excessively painful, and in many cases impossible, and even the attempt to introduce the finger or a small instrument within the vagina arouses the resistance of the sphincter muscle and causes intense suffering. It occasions great distress to its unfortunate victims, who are mostly married women of highly nervous temperament or subject to hysteria. Sterility is frequently a result of this painful affection.

The causes of vaginismus are various. It may arise from a general hyperæsthesia of the nervous system, such as exists in some hysterical women, or it may be produced by some local derangement, itself of insignificant character. The principal causes may be enumerated as follows: hysteria, fissures or excoriations of the anus or vulva, eruptions on the external genitals, chronic endometritis or vaginitis, irritable tumors at the mouth of the urethra, etc. Its diagnosis is easy, inasmuch as it differs from any other affection of the vagina. Dr. Marion Sims writes concerning it, "The super-sensitiveness is diagnostic, the spasm pathognomonic."

The *treatment* should be conducted according to homœopathic principles. The use of the knife, formerly so freely resorted to, is now generally denounced by old-school practitioners, while the very questionable procedure of dilating the canal by graduated dilators, although claimed to be very successful, does not appear to be necessary. Should the vaginismus be dependent upon some local difficulty or disease, that must be removed before we can hope to accomplish a satisfactory and permanent cure. Coition should be strictly prohibited, and all excitation of the parts by motion should be avoided by enjoining perfect rest. Lavements of tepid water will be found very grateful.

For the medicines suitable to this disorder consult the remedies laid down under the foregoing article on *Neuralgia of the Vagina*, page 590, and, as well, those recommended for *Spasms, Cramps and Constrictions of the Vagina*, page 588. The local affections upon which this affection may depend should be treated in accordance with the indications given for each respectively, and their cure will be marked by the abatement and final cessation of the vaginal hyperæsthesia and the spasmodic stricture.

In vaginismus the *diet* should be strictly attended to. All use of coffee, tea, spirituous liquors, stimulants and spices of all kinds should be *positively prohibited*. As much out-of-door exercise should be taken as possible.

Vaginitis—Inflammation of the Vagina.

The vagina is subject to many influences which produce inflammation, especially of its mucous tissue. This inflammation, at first acute, unless promptly treated by the administration of appropriate remedies, almost always assumes the chronic form. Many cases of chronic vaginitis, however, develop themselves so gradually and insidiously from the very first that they can scarcely be stated to have originated in acute inflammation. Married women, particularly those who have borne children, are most frequently the subjects of acute vaginitis, while the unmarried, either in their earlier or in their later years, are more liable to suffer from the chronic variety.

Vaginitis will seldom exist apart from vulvitis, as the inflammatory process originating in the vagina itself is apt to extend sooner or later to the vestibulum, and *vulvo-vaginitis* is the common condition. And, indeed, the cervix uteri may be and often is involved, especially in long-continued cases of chronic inflammation. A variety of forms of vaginitis may exist.

Thus, *erysipelatous* and *erythematous* inflammation may occasion in the vagina intensely red, painful, elevated and more or less extensive patches. True *vesicular* inflammation may result from the extension of the eczema from the vulva to the vagina, and thus herpes phlyctenoides may be developed in the interior of the vagina and upon the cervix uteri. In like manner, *pustulous vaginitis* may result from the appearance of pustules in the vagina of persons affected with impetiginous eruptions, especially when pregnant. *Papulous vaginitis* may be considered present when the vagina and the neck of the womb are covered with papulæ or follicles more or less developed, assuming the shape of small spots of the size of a pin's head, or resembling fleshy

granulations. Finally, *glandular vaginitis* may be diagnosed when the follicles alone seem affected, when the mucous membrane shows no traces of change, and when the secretion appears more copious and of a yellowish-white or grayish color. "It is generally dependent on an inflammatory condition of the blood at this period, and the intense irritation which it excites so often occupies the mind of the patient that it amounts to nymphomania. Its situation is more frequent upon the external parts, but it also exists within the labia and in the neighborhood of the urethral orifice. This pruriginous affection is often symptomatic of serious disease of the uterus or its appendages, in which case its removal can only take place in concert with relief to the graver malady."

An important distinction to be made in cases of vaginitis is, whether the disease be a primary affection, or whether it be secondary to or a consequence of some other disease; thus, for instance, violent vaginitis may result from the pouring out of a virulent secretion from the interior of the uterus. In such a case it is evident that curative means should have in view the treatment and cure of the original lesion.

These specific forms of disease in the vagina seem to be but local developments of constitutional or psoric dyscrasia, and require for their cure such remedies, for the most part, as are applicable to similar forms of disease in other parts of the body; although it should not be forgotten here that those antipsorics should be preferred which, in addition to possessing such specific cutaneous indications, are known to possess also especial relation to the female organs of generation.

Symptoms.—The symptoms arising from acute vaginitis are the following: A feeling of heat and burning in the vagina and vulva, the latter especially if it be involved in the inflammatory process; a feeling of aching and sense of weight in the perineum; frequent desire to urinate; pain and throbbing in the pelvic portion of the abdomen; profuse leucorrhœa, which may be purulent, offensive and acrid; excoriation of the vulva and external parts adjacent. In the chronic variety the same set of symptoms exist in a lower degree, and in very mild cases there may be only a slight burning, more or less itching, and leucorrhœa.

Vaginitis may be confounded with endometritis, ulceration of the cervix and gonorrhœa. From the latter it is wellnigh impossible to distinguish it except by the history of the case; but from endometritis or cervical ulceration differentiation may readily be made by touch or the use of the speculum.

The leucorrhœa is the most marked symptom of vaginitis. Indeed, the disease has been described by numerous authors as *Vaginal Leucorrhœa, Blenorrhœa* and *Blenorrhagia*. Although not a disease *per se*, we shall now proceed to a description of it, in consequence of its importance as an index to the disorder of which it is a consequence, as well as an index to its treatment.

Vaginal Leucorrhœa.

According to the nature, the degree and the intensity of the vaginitis the discharge will differ from the natural mucous secretion of the parts, either in increased quantity only, or in color, consistence and actual character. In color the discharge may be simply what its name implies—a white mucus—or it may be yellowish or greenish, or present a mixture of both these colors. Its consistency may be that of pure mucus; it may be much thicker, of a creamy nature; it may be viscid, tenacious and stringy, or very thin and watery. In its actual character it may be catarrhal, as if simply an excessive flow of the natural secretion of the vagina; it may be either mucus or pus or muco-purulent, presenting all the different forms of variation from simple, healthy mucus, merely increased in quantity, up to the undeniable pus from ulcerated mucous surface. Thus it may also be mild in its influence upon the sensitive external parts, or it may be more or less acrid and irritating, cause pruritus, and even corrode and blister the external surface with which it remains in contact. In this form the leucorrhœa is known to become contagious, and to develop a similar inflammation and consequent discharge in the parts of the male from sexual intercourse. From this cause innocent women have been accused of infidelity to their husbands. The discharge may be and usually is inodorous, or it may be fœtid and exceedingly offensive.

In quantity this discharge may vary from the smallest amount that can escape the absorbents within the vagina and appear externally, perhaps for a few days only at a time, up to a flow so constant and copious as to render cloths indispensable, and seriously weaken the patient.

Symptoms.—At the first appearance of leucorrhœa there are usually the indications of acute inflammation—pain, heat and redness of the parts involved—which may subside as the discharge becomes more fully developed. With this discharge, whether acute or chronic, there will usually be more or less pain in the groins and hypogastrium, and in the sacral region and small of the back. The urethra

will often become implicated, causing painful micturition, or even dysuria, especially in the more severe acute forms and in the most aggravated chronic cases.

The morbid symptoms which appear in connection with chronic vaginal leucorrhœa are innumerable, and present every possible variety in their intensity and in the parts of the system in which they are developed. Very many of these attendant symptoms of chronic leucorrhœa should be regarded as the consequences of the primary disorder and of the original causes of that disorder, which combine to break down in succession the principal organic functions of the system. Thus, the menstrual irregularity which so constantly attends the more severe forms of leucorrhœa, and especially those cases in which the discharge arises from the cervix, and even from the body of the womb, is seen to be the natural and direct result of the leucorrhœa and of the causes which produced this discharge. Or if such menstrual irregularity be not the immediate and direct result of leucorrhœa, it can hardly fail to become a final consequence of the general debility of the entire system which severe forms of this discharge must sooner or later produce. In like manner the appetite fails and the digestive powers become enfeebled, and inveterate constipation follows from such weakness of the digestive apparatus, and from the general nervous debility, and still further complicates the case. The circulation is feeble, the respiration impeded, and the temperature of the whole body reduced, as indicated by constant and general chilliness. The nervous system is impaired, the animal spirits depressed, and the natural buoyancy and cheerfulness of temperament and disposition replaced by irritability, fretfulness and settled melancholy.

All these and other long trains of symptoms, whose name is legion, are the results of the combined influence of the producing causes of the leucorrhœal discharge and of the debilitating effect of the discharge itself. And this important distinction should always be borne in mind, for if we think the leucorrhœa alone causes all these innumerable and various sufferings, we should naturally be disposed to seek principally to remove the discharge, expecting the consequences would then readily disappear; but such expectations would be disappointed even if we could succeed in curing the leucorrhœa by attending to that alone, which is not the case, as will more plainly appear when we come to study the causes and treatment of this discharge.

The *constitutional predisposition* to leucorrhœa is but another name

for psoric diathesis or scrofulous taint in general. This is much more strongly manifested when it has become hereditary, not only as a general predisposing influence, but also by previous local development of this form of scrofulosis in the mother. Thus, a young woman of decided scrofulous constitution may well be considered to possess a constitutional predisposition to leucorrhœa. But this predisposition will easily be understood to be very much intensified if her mother —and still more her grandmother also—had leucorrhœa. This hereditary predisposition to scrofula in general, and to leucorrhœa in particular, will require a greater or less amount of incidental influences to develop it, according as it is thus more or less strongly marked in the constitution itself. And in proportion as the vaginitis and leucorrhœa are the results of such constitutional predisposition they will prove more inveterate and more difficult to cure.

The psoric taint in the system tends to develop and ultimate itself either on the external surface of the skin or in the superficial and other glandular structures, according as its original nature is analogous to pure psora or to scrofula. But in either case, after puberty, and in many strongly marked cases before puberty, this psoric miasm reverts from the cutaneous or glandular system to the mucous surface. And in such as have this constitutional predisposition still more remarkably and specifically developed (as if from such local hereditary influence as has just been mentioned) the psoric and scrofulous taint attacks the mucous surfaces of the female genitals in the first instance. Such are the cases of young girls, and even very young children, in whom the leucorrhœa seems to have developed itself almost spontaneously—that is, without the co-operation of any particular incidental influences that can be discovered.

Among the *incidental influences* which may produce leucorrhœa may be enumerated almost everything which is capable of injuriously affecting the female organism. This remark, however, applies rather to the chronic than to the acute form of the disease.

The causes which principally excite acute vaginitis, and consequently acute leucorrhœa, may all be embraced under a few general heads. Exposure to cold, from which many women suffer more than they are aware or are willing to acknowledge, may occasion a true vaginal catarrh or acute inflammation, followed by a copious catarrhal discharge. Violence of any kind may produce an inflammation, the discharge from which will exhibit more of a muco-purulent appearance. A very similar effect may result from excessive sexual indulgence. As already stated, inflammations from the vulva, and even

from the adjacent tissues, may extend themselves into the vagina. These, however, are less apt to be followed by leucorrhœa.

Among the unpleasant sequelæ of parturition, and especially of miscarriage, acute inflammation of the vaginal membranes and accompanying leucorrhœa are the most frequently observed. This may result from the violence which these delicate tissues have experienced, and also from the impatience of the woman in attempting to get about too soon.

Sudden and violent attacks of vaginitis and leucorrhœa have been observed to arise from causes which may be designated as *metastases*. Such are those which follow sudden suppressions, as of perspiration, of the hæmorrhoidal discharge, of diarrhœa, of the lacteal secretion, of chronic suppurations, of cephalic or bronchial catarrh, of spontaneous vomitings, and retrocessions of arthritic, gouty inflammations, and of recent or long-established cutaneous eruptions. The gonorrhœal virus excites perhaps the most violent acute inflammation and copious discharge of all. But the discussion of this class of disorders is foreign to our present purpose.

The influence of cold, damp weather, or exposure to cold and damp from the location of the residence in a marshy district, from the nature of the house itself (stone, with walls constantly moist on their inner surface), and from water standing in the cellar, especially when long continued, is a powerful promotive of leucorrhœa. And in many cases resulting from such influences the physician will find all his prescriptions vain as long as he fails to explore or remove the cause; for in very many constitutions the susceptibility to such injurious influences is one of the principal features of their case, and such persons must cease taking the poison before the antidote can have the desired effect. But aside from the absolute necessity of guarding against the depraving influence of long-continued exposure to dampness, especially from wet cellars or large open cisterns immediately under the family sitting-rooms, where the leucorrhœa is the direct result of such exposure, the true homœopathic remedy may easily be overlooked so long as the cause of the complaint remains unknown.

An entirely opposite but not less numerous class of causes of this disease may be found in the high living, stimulating spices, condiments and drinks in which many women indulge. As, on the one hand, in cases of exposure to wet and cold, a low form of mucous inflammation may produce a still more constant and debilitating discharge from the vagina, so, on the other hand, in those persons who

over-stimulate. Nature seeks an outlet through the profuse vaginal secretion, attended of course by a higher range of inflammatory action, for the surplus of unhealthy food and drink.

Treatment.—Acute vaginitis will require such remedies as ACONITE, APIS, BELLADONNA, CANTHARIS, RHUS TOX., PULSATILLA, SEPIA, VERATRUM VIRIDE, etc. Study the medicines recommended for the treatment of vulvitis and the various forms of inflammation of the womb. For chronic vaginitis, and especially for vaginal leucorrhœa, study the remedies laid down under the head of *Uterine Catarrh*, where may be found the constitutional and special indications for all the medicines for leucorrhœa, whether arising from the mucous membrane of the vagina alone, from that of the uterus, or from both, as is usually the case in the severer and long-continued forms of the inflammation of which the discharge is merely the consequence.

INDURATIONS OF THE VAGINA.

Inflammation of the cellular tissue of the labia, vagina or other parts of the generative apparatus may lead to *induration*, with or without hypertrophy. These indurations occasion adhesions, and often result in contraction of the vagina, which may interfere with coition. Induration of the vaginal walls sometimes appears in consequence of the extension of the same morbid condition from the os and cervix uteri. The simple thickening of the mucous membrane, which comes on gradually and almost imperceptibly, in some cases may constitute the entire induration. In others it arises in connection with phlegmonous inflammation and infiltration of the deeper tissues. In others still a syphilitic or schirrous taint in the system may be the cause, but in these latter instances the indurated surface is very rough to the finger, sometimes ulcerated. "Almost always the patients complain of pain at the outset, of smarting, itching and increase of heat, and in proportion as the affection develops itself the vagina becomes contracted, and sometimes almost obliterated."

These indurations may be removed entirely by radically curing the disorder from which they result, and without having recourse to dilatation, as sometimes employed. Observe carefully *all* the conditions, circumstances and symptoms of the patient. The true similimum of the entire case may be found under one of the following remedies:

Belladonna. Sense of heaviness and of fullness, and bearing down in the parts. Sense of heat and dryness in the affected parts. Sensation of pressing out of the internal parts. Throbbing sensation.

Calc. carb. Temperament leucophlegmatic. Calcarea complexion. Her feet feel as if she had on cold, damp stockings.

China. The slightest contact causes darting, tearing pain, or tearing with pressure. The system has been debilitated by losses of fluids, especially of blood.

Clematis erecta. Suitable to torpid, cachectic conditions. Swelling and induration of the glandular system. Syphilitic taint.

Conium m. The induration is very hard. The urine intermits, stops and flows again. Particularly suitable to women with tight, rigid fibre, and easily excited, as well as to those in the opposite condition.

Lycopodium. Borborygmus, especially in the left hypochondrium. Much pain before passing water. Great delay in the flow of the urine. Red sand in the urine.

Magnesia mur. Where there are present hysterical symptoms and spasmodic paroxysms. Constipation, with large, hard stools, which crumble as they pass the verge of the anus.

Mercurius. Will be required where we find the well-known indications of the mercurial diathesis; more or less salivation; scorbutic gums; moist skin; soreness of the throat; soreness of the inguinal glands. The indurated tumor may have a raw, sore feeling. All the symptoms are worse at night. Perspiration, which does not relieve.

Petroleum. Tenderness in the swollen parts. The labia majora perspire and itch very much. Unhealthy skin; even small wounds ulcerate and spread.

Pulsatilla. Mild temperament. The patient is moved to tears in giving her symptoms.

Sepia. Small, stitching, burning pains in the parts; great sensitiveness of the parts; fœtid urine; putrid urine. Sediment from the urine adhering to the vessel like reddish clay burnt on.

Sulphur. Flashes of heat; coldness of the extremities, especially of the feet. Burning in the soles of the feet at night. Spells of weakness and faintness. The general, characteristic sulphur symptoms. These, like the other great indications for polychrest remedies, will recur again and again in many forms of disease. Sulphur will always do good where it is indicated, and it is very often indicated in chronic inflammations and other disorders which may be considered as the ultimate developments of internal psoric taint.

EXTREME NARROWNESS OF THE VAGINA from congenital anatomical malformation may be best treated by the cautious use of graduated

dilaters, similar to those recommended by Dr. Marion Sims for the treatment of Vaginismus.

Vaginal Fistula.

Inflammation, abscesses, accidental wounds or the use of instruments may occasion fistulous openings through the walls of the vagina into some one or more of the adjacent organs. Thus there may be an opening from the vagina into the urethra—*urethro-vaginal fistula;* from the vagina directly into the bladder—*vesico-vaginal fistula;* from the vagina into the rectum—*recto-vaginal fistula;* from the vagina into some other portion of the intestines—*intestino-vaginal fistula;* or finally from the vagina into the peritoneal cavity—*perito-neo-vaginal fistula.*

Recto-vaginal fistula is most frequently the result of violence from the use of instruments in labor, or it may arise in connection with rupture of the perineum. This unfortunate condition will be at once recognized if the patient complain of the involuntary escape of half liquid fæcal matter, of intestinal gas, or of both, through the vagina.

In addition to those cases which may arise from mechanical violence, urethro-vaginal and vesico-vaginal fistulas are more frequently the result of the extension of cancerous or other ulceration to the walls of the bladder. The same result may sometimes succeed the strangulation of the parts by the long-continued pressure of the head of the fœtus in labor against the inner border of the arch of the pubes. The involuntary and constant flowing of the urine through the lower part of the vulva, and the consequent urinous odor which is diffused from the person, but too manifestly indicate the existence of one of the most serious and distressing misfortunes that can befall the female.

These distressing lesions are neither very rare nor are they easily or always susceptible of cure by surgical means. The failure here arises in part from considering these ulcers too exclusively as local affections, when in fact they are often in their persistence as much dependent upon a constitutional support as are ulcers in any other portion of the body. Fortunately, these fistulas are more amenable under homœpathic medication, which is capable of reaching the constitutional taint lying at their foundation, and at the same time of including within its influence all the morbid and symptomatic conditions of the system. Thus it happens that some so-called hopeless cases of vaginal fistula have been completely and permanently cured by medication. But to secure this end perfect rest will in many cases be

indispensably necessary, and the proper medicines should be carefully administered before resorting to surgical means, which, however skillfully employed, are often insufficient, and leave the patient in a worse condition than before. The guides in the selection of the remedy must be found principally in the *constitutional* and *accompanying symptoms*, and in their conditions of aggravation and amelioration. These may seem but far-off and indirect guides, but in many instances they have been proved amply sufficient. And when the symptoms are found to be improving under the use of a certain remedy, we should wait patiently, and in a few weeks the fistulous ulcer will be found to have taken on the healing process.

For the strictly surgical treatment of the various forms of vaginal fistula we would refer the reader to the more recent publication on Gynæcological Surgery.

Remedies for Vaginal Fistulas.

1. Calc. carb., Lyc., Puls., Sil. 2. Asaf., Bell., Carbo veg., Con., Nitr. ac., Sulph. 3. Agaric. musc., Ant. cr., Aur., Caust., Creas., Hep., Lach., Petr., Ruta, Sep., Thuy.

Asarum. The patient has a great want of vital heat. She feels cold continually.

Belladonna. Will often be required in the case of women of delicate skin and red complexion. Aggravation of the symptoms at three o'clock in the afternoon.

Calc. carb. Will be found especially indicated in leucophlegmatic temperaments. Feet constantly cold and damp, as though she had on cold, damp stockings. The least cold air chills her through and through. She cannot sleep after three o'clock in the morning.

Carbo veg. Burning in the fistulous ulcer, with much belching of wind, which affords relief for a short time only.

Conium. The urine when being discharged flows and stops, and then flows again.

Ledum. Absence of vital warmth. Still she is made very much worse when warm in bed, or from getting warm by the fire or over the register.

Lycopodium. The ulcer bleeds frequently. *Much borborygmus*, particularly in the left hypochondrium. Red crystals or red sand in the urine. Always feels worse from four till eight o'clock in the evening.

Nitric acid. The urine has an intolerably strong smell, like that of

horses. May be suitable in cases where allopathic doses of mercury have been given.

Pulsatilla. Tearful disposition. Scanty urine and no thirst. She has always a *very bad taste in the mouth* early in the morning. Craves fresh, cool air. No sleep till after twelve at night, and then sleeps late in the morning.

Sepia. The urine is so putrid that it cannot be suffered to remain in the room. The urine deposits a reddish, clay-colored sediment, which adheres to the bottom and sides of the vessel as if it had been burnt on, like burnt clay.

Silicia. General scrofulous diathesis. Much tenderness of the ulcer or of the parts adjacent to it.

Sulphur. Constant heat in the crown of the head. Flushes of heat, passing off with moisture and debility. Burning in the soles of the feet at night. Short naps of sleep all night, and dead, heavy sleep. Sense of hunger and faintness daily from eleven o'clock till noon.

THUYA, CAUSTICUM, ANTIMONIUM CRUDUM and MERCURIUS should likewise be carefully studied, as they may prove valuable where their characteristic symptoms are present.

CONCOMITANT SYMPTOMS OF VAGINAL FISTULAS.—For some of the most distressing of the concomitant symptoms of these afflictions compare the following medicines:

Aurum. Where there is much pain in the bones, day and night. A sensation of internal emptiness and weakness of the whole body.

Lachesis. Where there is much pain of an aching character in the shin-bones only. The patient feels unhappy and distressed after sleeping.

Petroleum. If diarrhœa is apt to occur very frequently and through the day only.

GANGRENE OF THE VAGINA.

Gangrenous degeneration of the vagina may be the result of pressure and contusion produced during difficult or protracted parturition, or from the pressure produced by a neglected pessary, and it may occur in the form of gangrenous eschar and gangrenous fusion of the mucous and submucous layers. The same form of destruction of the tissues of the vagina is liable to occur in consequence of strangulated hernia or prolapse of some portion of the vaginal walls.

As in other forms of tissue degeneration and sloughing, homœo-

pathic remedies are capable of exerting a most astonishing influence in aiding Nature to get rid of the decaying tissue or to arrest the gangrenous process and repair the loss of substance with new growth. The following remedies should be carefully studied, and one or the other of them will be found, without any doubt, sufficient to effect the requisite change:

Arsenicum. The parts burn like fire. The characteristic arsenic thirst is present. Fœtid smell.

Apis mel. Stinging pains about the parts; no thirst.

Belladonna. Throbbing about the parts and sense of weight.

Calc. carb. Leucophlegmatic temperament. The cold air strikes through her. Her feet feel as if she had on cold, damp stockings.

China and **Secale** may be indicated, and should be studied in such cases.

Creosote. An offensive smelling ichor discharges from the part.

Lachesis. Much distress after sleeping.

Sulphuric acid. Much debility, with sensation of tremor all over the body.

These indicating symptoms disappearing under the influence of the corresponding remedy, there is reason to expect complete restoration. The course of the improvement should be most carefully watched: we wait patiently till the improvement has entirely ceased before we repeat the dose or resort to another remedy; and then, the latter course being decided upon, make a new prescription according to the totality of the symptoms and leading indications present.

Morbid Growths of the Vagina.

Morbid growths in the vagina are not very frequent. When present they almost always coexist with similar growths in the uterus, as they spring from an internal dyscrasia which pervades the entire system indeed, but which finds its greatest facility of development on the mucous membrane of the genitals—a dyscrasia which is always of a very suspicious character, and which in many instances appears nearly allied to the cancerous.

These so-called morbid growths are in reality but *hypertrophies* or *overgrowths* as to their structure, and therefore they are truly *homologous* growths. But they are animated by a perverted physiological or vital principle. Thus a purely scrofulous tumor may be looked upon as merely an enlarged gland, which is inspired by what we may term the scrofulous diathesis. So a fibrous tumor, whether hard or

soft, pendulous or adherent, is but the abnormal or unlimited development of fibrous or fibro-cellular tissue, with its accompanying secretion, but inspired by a morbid principle which may be constitutional, and possibly related to that which appears in cancer. In like manner serous cysts appear to be but hypertrophic glands, or follicles even, which in their magnified condition still retain their former power of secreting serous fluid, and whose hypertrophic condition is due to the fact that some morbid principle—it may be the influence of some neighboring tissue affected with cancer—has vitiated, perverted its normal vitality. And even the so-called granular vegetations will thus appear to be but hypertrophic developments of still more minute anatomical structures, influenced by some specific poison, as the sycosic. These formations may be briefly described under the heads of fibro-cellular tumors, including soft polypi; fibrous tumors, including hard polypi; serous cysts, encysted tumors and granular vegetations.

I. "The softer kinds of polypi (or of adherent tumors), growing from (or upon) the mucous membrane, consist of rudimentary or more nearly perfect fibro-cellular or connective tissue, which is made succulent by serous or synovia-like infiltration in its meshes." * These tumors bear some resemblance to the serous cysts to be subsequently described, and also to the soft or colloid cancerous growths ("gelatinous sarcoma") with which they have sometimes been confounded. But they do not appear to originate in the same minute glandular structure with these cysts, nor yet do they present the same positively malignant characteristics with the colloid cancer.

These fibro-cellular tumors take their name from that of the submucous tissue from which they spring, and of which they are principally composed, and they retain their name of tumor exclusively as long as they remain closely adherent to or embedded in the neighboring parts. But when they become outgrowths, pendulous, suspended by narrow pedicles, they are termed polypi. These morbid growths, of which the suspended or polypoid variety is much the more numerous, may appear upon any part covered by mucous membrane. "The peculiar yellow color of the basis-substance of these tumors makes them look at first like fat; it is due, however, not to fat, but to a serous, or synovia-like, or very viscid fluid, which is infiltrated through the substance of the tumor. Among the most frequent seats of these tumors in the female are the labia and vagina." †

* Paget, *Path. Anat.*, Art. "Fibro-cellular Tumors."

† For a full exposition and some examples of these tumors, consult Paget.

II. The fibrous tumors are more exclusively pendulous, or polypi. These are not unfrequent in the uterus, sometimes perhaps in the vagina, and sometimes even in the pelvis external to the vagina. In this latter situation they may consist of cysts, fleshy or fibrous tumors, which grow underneath the mucous membrane of the vagina, in the cellular membrane behind the vagina, or they may be more immediately attached to some part of the osseous framework of the pelvis, whether the product of diseased periosteum or not.* These interpelvic tumors may not attract attention until from their size they impede the free action of the rectum or the bladder, or render parturition difficult by occupying an important portion of the pelvic cavity. In some instances these tumors are of the nature of fungous or cancerous growths.

But ordinarily the tumors of fibrous form which appear in the vagina, and still more especially in the uterus, are attended with serious inflammation in the adjacent tissues. And the inflammatory disease which arises in connection with uterine fibrous tumors or polypi must be the great cause of the local and general painful symptoms and hæmorrhages which arise in such cases. Thus, in the allopathic practice it has been discovered, by the hard experience of the ill-success which has so often attended the removal of these tumors of the vagina and uterus, whether pendulous or still adherent, that the tumor is not the disease, but rather merely the result of it. And high authority cautions against removing these tumors before first curing the disease which causes them, if possible. "In cases in which the polypoid tumor (which is the easiest of extirpation) can be removed the patient is only half cured if extensive inflammatory mischief is allowed to remain."—*Bennett.*

Vaginal Polypi.

Under the head of Fibro-cellular Tumors of the vagina were described those formations, usually vascular, which are principally adherent to the vaginal mucous membrane, but which sometimes become pendulous outgrowths, such as are termed soft polypi. These pendulous growths, or *polypi*, are perhaps more frequently found within the vagina than those which continue adherent, although in most cases *they arise from the uterus;* and in many instances in which they thus originate in and still draw their support from the uterus, they are found occupying the vagina, having been expelled from the interior of the uterus, to which, however, they still remain attached

* Churchill.

by their fibrous pedicle or stem. Under the head of Uterine Polypi these tumors will be more fully treated of in a subsequent section.

We herewith present, at one view, the principal indications for all the remedies which may be most frequently called for in the treatment of these various tumors or growths, whether arising from the vaginal walls, from the peri-uterine cellular tissue, or from the cervix or body of the uterus, for their treatment will depend not so much upon their exact location as upon the local and constitutional symptoms presented in each case that comes under our treatment.

Remedies for Vaginal Growths.

1. Calc. carb., Calc. phos., Conium, Phos., Staph. 2. Aurum, Hepar, Lyc., Merc. sol., Mezer., Sil., Thuya. 3. Bell., Graph., Natr. mur., Nitr. ac., Phos. ac., Sulph., Sulph. ac., Petrol., Puls., Sep.

Aurum. The mind is tending more or less strongly toward self-destruction. She thinks much about it, even if she does not intend it.

Calc. carb. Leucophlegmatic constitution. The patient cannot sleep after three A. M. The pit of her stomach is convex, like a saucer turned up, instead of being concave. Feet feel constantly as though she had on cold, damp stockings. Menses too often and too profuse. Vertigo on walking up stairs.

Conium. Intermission in the flow of urine. Soreness and swelling of the breasts preceding the menses. Vertigo on turning in bed, or on turning the head when lying in a recumbent position, or on going down stairs.

Lycopodium. Urine containing red sand as a constant symptom. Much borborygmus, particularly in the left hypochondrium. Aggravation of symptoms at four P. M.; amelioration at eight P. M. Varices of the lower extremities. Also in cases in which sharp pains are occasionally running round each labia.

Mercurius. In cases where there is evidently a mercurial condition of the whole system. The mouth and teeth show it—the glandular system, the urine and the skin show it. The symptoms are worse at night. They are worse also in damp, cold weather.

Mezereum. (Compare with **Mercurius.**) All the joints feel as if bruised; they feel weary, as if they would give way. She often has violent toothache at night. A fearful burning pain runs along the left malar bone from the right to the left.

Nitric acid. Urine exceedingly strong, like horse urine. Sleeps

badly the latter part of the night. Leucorrhœa of mucus which can be drawn out. Flesh-colored, green leucorrhœa. Pressing in the abdomen, as if everything were coming out at the pudendum, with pain in the back, through the hips, down the thighs.

Petroleum. Much diarrhœa through the day, never at night. Moisture and itching of the hairy surface of the labia. The menstrual blood causes an itching of the genital organs.

Phosphorus. Tall and slim persons. Occasional attacks of violent hæmorrhage. Great sensation of emptiness and weakness in the abdomen. Constipation, the stool being slender, dry and difficult to evacuate. Sour eructations and belching of quantities of wind. Feels very sleepy after meals, particularly after dinner.

Phosphoric acid. A remarkable state of indifference, from which she cannot arouse herself. Great sense of weakness. (Compare also **Phos., Sepia, Pulsatilla.**)

Platina. Constipation. The stool always being difficult, because it inclines to adhere to the parts like clay. Much tenderness of the vulva. Hysterical—spasmodic. The physical symptoms disappear and the mental symptoms appear, and vice versâ.

Pulsatilla. Very tearful; she weeps at everything, whether it is joyful or sorrowful. Menstrual irregularities, which see for further indications characteristic of this remedy.

Silicia. She always gets worse at every new moon. See indications for Silicia, as given under the head of Leucorrhœa and Menstrual Irregularities.

Staphysagria. The patient is very sensitive to the least mental impression. Her teeth turn black, and cannot be kept clean by much brushing. They exhibit black traces and streaks through their middle. She has much trouble with her teeth.

Teucrium marum verum. Irritated, tremulous sensation in the whole body. Frequent biting, as if of insects, in the various parts of the body. Creeping sensation in the vicinity of the polypus.

Thuya. The patient often feels as though she could not exist any longer. "Sensation as if the whole body were very thin and delicate, and could not resist the least attack—as if the continuity of the body would be dissolved."

Serous Cysts of the Vagina.

These are comparatively rare formations in the vagina, or rather they are developed in the cellular tissue external to the vagina. They contain usually a thin or honey-like liquid, of a yellow, brown, green

or other tint, and they are most frequently seated in or near the secreting glands or the vulvo-vaginal glands. But whatever may be the exact appearance of the different fluids, they are all secreted by the membranes which contain them. These membranes may be only enlarged hypertrophic glands, as in the mammary gland, where the cyst appears to be a portion of a lactiferous duct enlarged and degenerated as to its secreted contents. And where these cysts appear in connection with cancerous disease they seem to be the result of the disturbance of the natural growth and function of the minute glands in which they originate. Like other abnormal growths, serous cysts may attain a very great size.

The following remedies may be studied in these cases, and others which may appear to be indicated by the peculiar characteristics of the case: GRAPHITES, LYCOPODIUM, PULSATILLA, RHODODENDRON, SILICIA, SULPHUR. *These cysts are always the result of some internal dyscrasia, which being removed* the cysts themselves will presently disappear.

GRANULAR VEGETATIONS, CONDYLOMATA.

These are new growths of cellular tissue which may occur upon the mucous membrane of the vagina or vulva. Some of them, the true condylomatous excrescences particularly, are the results of some especial taint of a syphilitic nature. Where there is reason to suspect this to be the case, THUYA will be most strongly indicated. NITRIC ACID, STAPHYSAGRIA, CALCAREA, LYCOPODIUM, MERCURIUS and TARTAR EMETIC may also be studied. Consult Condylomata of the Vulva.

CHAPTER XXX.

DISEASES AND DERANGEMENTS OF THE UTERUS.

Displacements of the Uterus.

AMONG the most common of the numerous derangements to which the uterus is liable are displacements of the organ. These displacements, in all their different degrees and varieties, may be included under the five heads of Prolapsus, Retroversion, Anteversion, Lateroversion and Inversion. As falling of the womb is more or less complete, it is denominated prolapsus or procidentia, the latter term signifying the complete settling down of the womb, so that in some cases the whole viscus makes its appearance without the vulva. Again, the term retroversion of the womb is more properly applicable to the turning backward toward the sacrum of the entire womb, the fundus lying in the hollow of the sacrum while the cervix is forced upward behind the pubes, without any bending of the organ; while retroflexion is the term applied to that condition in which there is a bending backward of the fundus alone, the cervix maintaining its normal or nearly its normal position, the flexion taking place at the juncture of the cervix with the body. The same distinction is made between displacements in the forward direction—viz., into anteversion and anteflexion—while displacements of the organ sideways are termed respectively lateroversion and lateroflexion for the same reasons. Thus, we may have the following displacements: *Prolapsus, Procidentia, Retroversion, Retroflexion, Anteversion, Anteflexion, Lateroversion, Lateroflexion, Inversion.* A displacement upward, or ascent of the unimpregnated uterus, is of rare occurrence, and is always dependent upon the presence of morbid growths. The relative frequency of occurrence of some varieties of these displacements, and other circumstances connected with them, are fairly exhibited in a statement made by Dr. Alfred Meadows, who thus writes: "Referring to the cases of uterine displacement of all kinds which have come under my care in hospital and private practice during the last three years, to the end of 1867, and of which I have careful notes, I find that the total number observed was 84. Of these 14 occurred in single women, 70 in married. Of the latter, 15 were sterile, and 55 had been pregnant; of these last, 27 had aborted. The total number of abortions was 63, or an average of $2\frac{1}{3}$ to each person who aborted. The total number of children born

was 171, or an average of $3\frac{1}{9}$ to each mother, and the total number of pregnancies was 234, or an average of $4\frac{1}{4}$ to each of the fertile women. The frequency of the several varieties of displacements was as follows: Retroflexion occurred 34 times; in 8 the patient was single, in 26 married. Retroversion was met with in 18 cases; 3 were single, 15 married. Anteflexion occurred 20 times; only 1 of these was single, the rest were married. Anteversion was noticed in 12 cases; 2 of these were single, and 10 married." *

We shall now proceed to give a description of these forms of displacement, with an account of the symptoms, causes and mode of treatment proper for each variety. At the close of the chapter will be found arranged in alphabetical order the remedies which are principally indicated for their medical treatment.

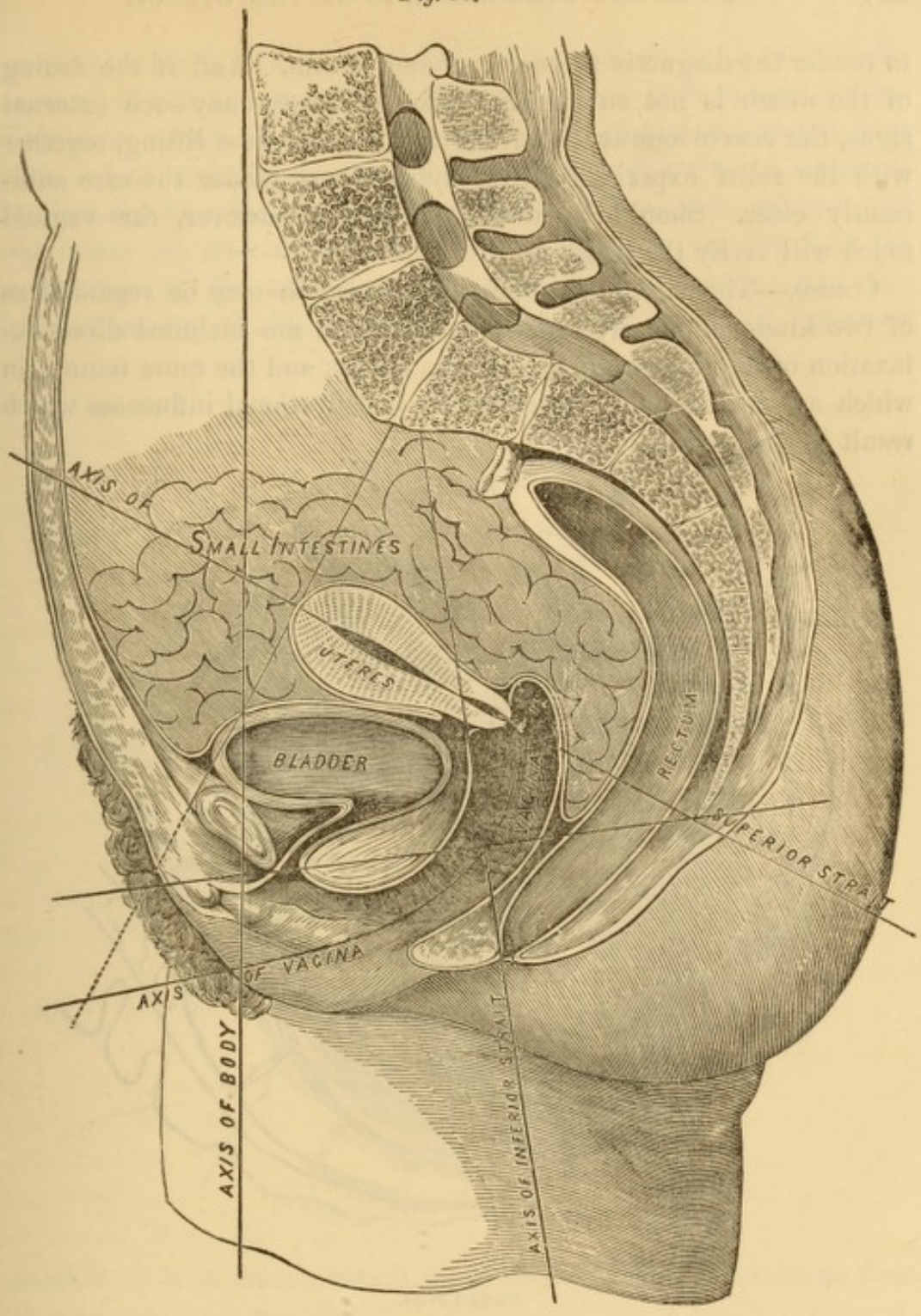
Prolapsus Uteri—"Falling of the Womb."

This is one of the most common forms of uterine displacement. It occurs in three different degrees, to each of which some writers on the subject have affixed a different name. Thus, *relaxation* or *simple descent of the womb* is understood to indicate the first and least displacement downward, and to consist only in a simple bearing-down of the womb upon the upper portion of the vagina. In *prolapsus uteri* the organ comes still lower down, and may present at the orifice of the vagina. In *procidentia uteri* there is actual protrusion of the organ, even the entire body of the womb being in some cases extruded from the vulva. These are but different degrees of descent of the uterus in the line of the vagina. Upon examination of the same displaced uterus at different times of the day, it may be found to be more or less prolapsed, according to the condition of active exercise or quiet in which the parts may have been for some hours previous.

Symptoms.—The principal and primary symptomatic indications of the descent of the womb are: dragging and aching pains in the small of the back; pulling and bearing-down pains in the lower part of the abdomen; sensation as if something would issue from the vagina; sufferings much worse from walking or other exercise; the pains are often remarked to have come on immediately after some exertion of an unusual kind, and after some more than ordinary muscular effort; frequent calls to urinate; dysuria, or even retention of the urine. In the more fully developed forms of prolapsus the history of the case, the attendant circumstances, and the external appearance of the os, cervix, and even of the entire body of the uterus itself, can hardly fail

* *London Lancet.*

Fig. 86.



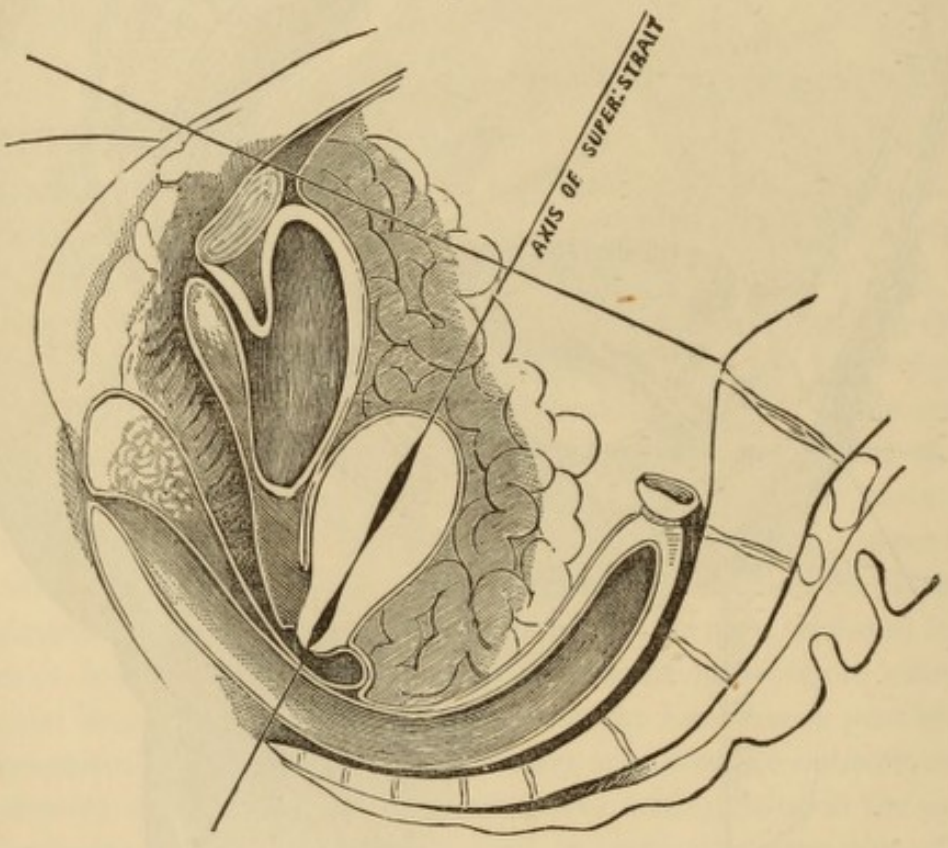
NATURAL POSITION OF THE PELVIC VISCERA.

The above represents the normal relative position of the contents of the pelvis. The plane of the superior strait is represented by a line running from the superior border of the pubes to the promontory of the sacrum. The plane of the inferior strait, by a line from the superior arch of the pubes to the point of the coccyx. The other lines are all defined in the cut. The fundus of the uterus is on a level with the plane of the superior strait, and its axis the same as that of said plane. The peritoneum is seen sustaining the uterus by its anterior superior three-fourths, by its fundus and by the whole of its posterior surface. The succeeding engravings exhibit the uterus in its various displacements, making a striking contrast with its normal position. (See also the cut on page 52.)

to render the diagnosis at once easy and certain. And if the falling of the womb is not so far developed as to give any such external signs, the severe aggravation from walking and from lifting, together with the relief experienced from lying down, render the case sufficiently clear. Should there be any doubt, however, the vaginal touch will verify the diagnosis.

Causes.—The *causes* of prolapse of the womb may be regarded as of two kinds—the more immediate, in which are included direct relaxation of the proper supports of the uterus, and the more remote, in which are included the incidental or constitutional influences which result in such relaxation.

Fig. 87.

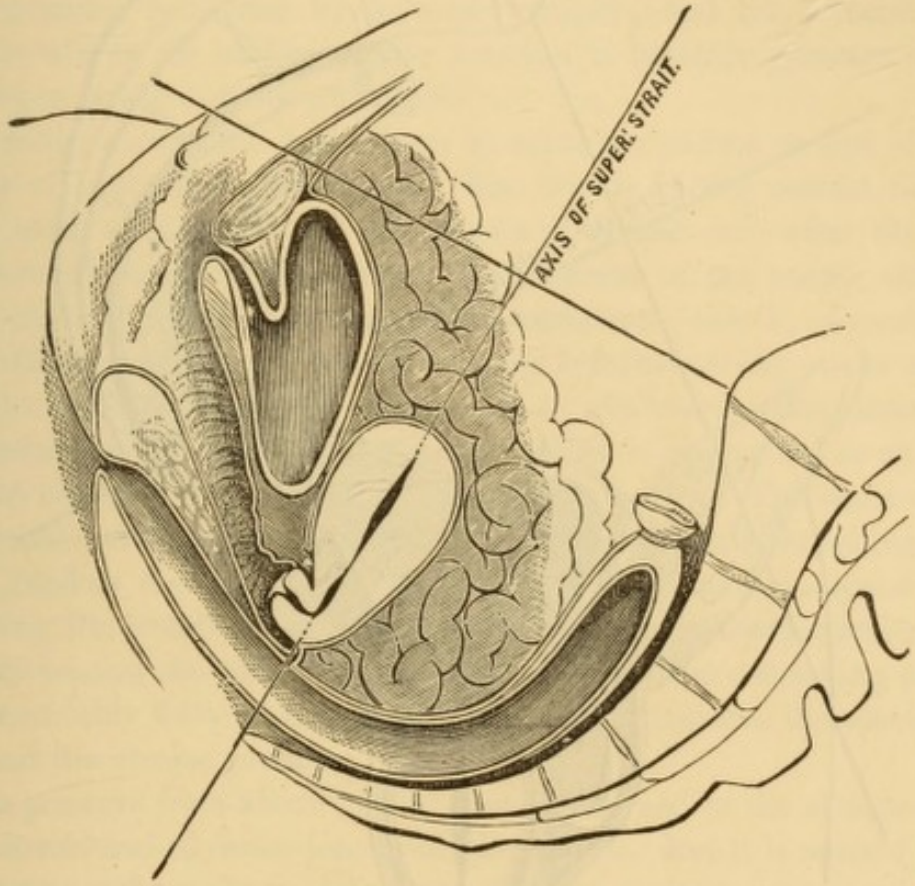


PROLAPSUS.

The peritoneum forms the great suspensory ligament or membrane common to the contents of the abdomen. This is the grand function of the peritoneum, to sustain in their proper places and in their proper relation to each other the various organs which are grouped together above and to some extent within the pelvis. The peritoneum is the true uterine supporter, the other ligaments tending rather to steady the uterus in its upright or inclined position than to prevent it from

sinking down in the pelvic cavity. This membrane, as already described, is reflected from the bladder upon the womb in such a manner as to sustain it in front from its anterior surface; and it is so reflected from the uterus upon the rectum posteriorly as to sustain it in that direction from its posterior surface. Thus it is evident that the uterus can sink in the pelvis only so far as is permitted by the relaxation of the peritoneum, its suspensory ligament. And this relaxation may be due to undue pressure from above, to influences

Fig. 88.



PROLAPSUS WITH FLEXION.

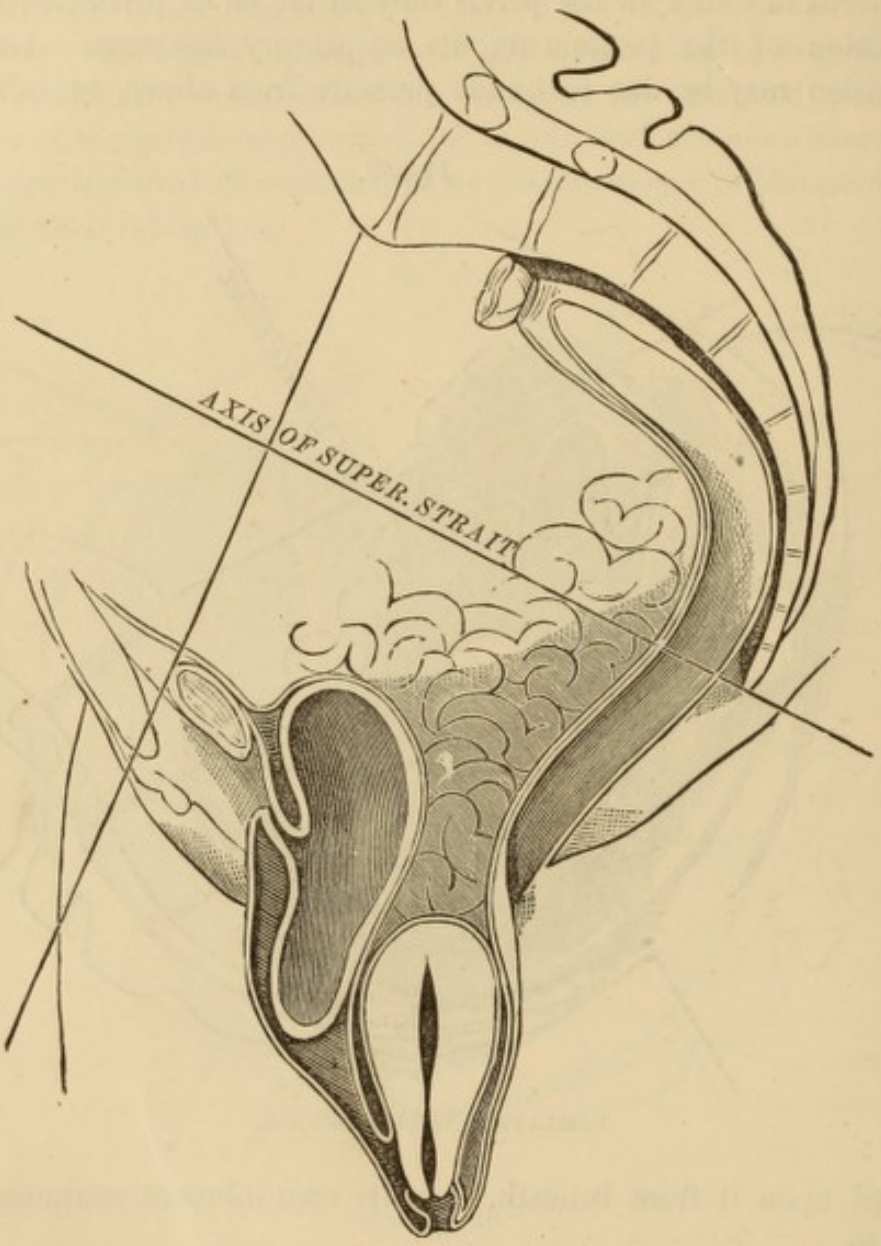
excited upon it from beneath, or to its own inherent weakness from disease.

Next to the peritoneum, the broad ligaments, which in fact are but processes of the peritoneum itself, are influential in supporting the womb; and they will necessarily sympathize therefore with any inherent or constitutional weakness of the parent membrane, and at the same time be subject to the same adverse influences from above and from below. So far as the bladder, the rectum and the muscular parts of the pelvis are engaged in supporting the womb, it is evident

that such support is all derived through the medium of the peritoneum and broad ligaments by which the womb is connected with them.

The inherent weakness of the peritoneum and broad ligaments,

Fig. 89.



PROCIDENTIA.

The above is an illustration of complete falling of the womb, the projection of the organ out of the orifice of the vagina. In these cases the vagina is completely inverted, thus forming a conoid pouch, containing the supra-vaginal portion of the neck of the womb, its entire body, the ovaries, the Fallopian tube, a large portion of the broad and round ligaments, of the small intestines, of the bladder, and perhaps sometimes of the rectum. The os and the infra-vaginal portion of the neck alone are seen, all the rest being covered by the inverted vagina, although protruding beyond the vulva.

which seems one of the most prominent causes of falling of the womb, is usually such weakness only as corresponds to the debilitated tone of the rest of the system; and hence the slightest additional strain brought to bear upon the womb from above by exercise, or unusual exertion, or by dress, once causing these supports to give way, their stretched and strained condition, continually borne upon more and more by the superincumbent organs, allow little opportunity for them to recover themselves. Consequently, prolapsus uteri is rather apt to increase more and more than to recover spontaneously.

Subinvolution of the uterus, or intra-mural or other enlargements, may produce prolapsus by increased weight; and the presence of tumors within the abdomen may occasion it by their pressure upon the organ either directly or indirectly.

Chronic leucorrhœa is set down by some authorities as one of the causes of prolapse of the womb. But this is hardly correct, for in many cases the leucorrhœal discharge will appear only after the occurrence of more or less serious displacement of the womb, and in other cases, of persons of lymphatic temperament—that is, of psoric or scrofulous constitution—the debilitating influence leads at the same time to the leucorrhœal discharge and to the uterine displacement. The same thing is true of constipation, which is recognized as an important and frequent cause of falling of the womb. The same constitutional influence that renders the bowels incapable of expelling the fæces renders the suspensory ligament and membranes incapable of retaining the womb in its proper position; and the violent action of purgatives, and the still greater weakness of all the connecting parts that invariably follows their use, still further aggravates the constipation and the uterine prolapse.

The pressure from above of the organs contained in the abdomen is often considered to cause descent of the womb. But it is against just such pressure from above downward that the peritoneum is intended to sustain the uterus. And except perhaps in cases of great overexertion or undue violence it is not thought that the peritoneum yields to such pressure, unless previously weakened by some morbid influence. This is especially seen in those cases of prolapse which appear in connection with ascites or ovarian dropsy.

Thus it is that the great majority even of the worst and most fully developed forms of prolapsus uteri may be regarded as disorders properly amenable to homœopathic medication, rather than as mere local displacements to be remedied by mechanical appliances. The case of Mrs. O., which came under my care some years since, illus-

trates the principle here inculcated, and at the same time shows what can be accomplished by the use of homœopathic remedies. This lady had been subject to complete procidentia uteri for at least ten years. The organ would protrude entirely without the vulva, and neither pessaries, supporters nor perineal pads could prevent it from thus making its unwelcome appearance externally. I requested her to take to her bed, carefully washed and replaced the uterus, and gave Conium. A frightful leucorrhœa set in, but in the course of a single week this disappeared, and with the help of Platina the induration of the womb and prolapsus were completely cured. The organ came down no more; in fact, she never has since had any trouble of the kind. She has borne three children since and is a well woman at this day. The Conium and the Platina were all the medicines used in this case, and no bandages or mechanical applications whatever were employed in the treatment or subsequently used.

The same principle holds true with reference also to the vagina. So far as the descent of the uterus may be fairly attributable to relaxation of its walls, this relaxation is itself an evidence of morbid weakness, requiring appropriate medication. And even in those cases in which the prolapse of the uterus may seem to be owing to an unusually large pelvis, the natural supporters of the uterus can by proper attention be rendered capable of performing these functions in a far better and more satisfactory manner than we can do it for them by the aid of pessaries or supporters. In like manner, all that large and important class of cases of prolapse which come on after confinement can be prevented by observing suitable directions, or cured by appropriate homœopathic medicines.

Inversion of the Uterus.

This is the rarest as well as the most formidable and dangerous form of uterine displacement. It occurs principally as an accident in connection with delivery. In sudden and unexpected descent of the fœtus through an unusually large pelvis, when the patient is walking or at the water-closet, or from too violently drawing upon the cord, the fundus of the womb has been known to be inverted and brought down with the placenta. This accident and complication of labor has been referred to in its proper place in connection with delivery. Inversion of the uterus is here described, because, although very unusual in the unimpregnated state, it may occur in consequence of the presence of polypus or other tumors of the womb.

Inversion of the womb is analogous in its appearance to simple

prolapsus of the entire circumference of the vagina. In either case the change begins above, and consists in the inversion and depression of the affected part. In the womb the fundus is at first simply depressed, and in this first stage the inversion is comparatively slight, and may be difficult or incapable of detection. But as the change increases, the fundus sinks down more and more within the body of the womb; and in this second stage the inner surface of the fundus may be felt and recognized as a tumor by introducing the finger within the os uteri. In the complete form of inversion the womb, entirely turned inside out, may be protruded without the vulva. In this case the mucous lining membrane of the uterus in its natural position becomes its external covering. Thus, as in the case of prolapsus of the vagina, there are three different degrees of the inversion of the uterus, which may be designated as simple depression of the fundus; partial inversion, in which, however, the tumor formed by the inverted fundus does not reach the os uteri; and complete inversion, in which the womb is entirely turned inside out and protruded externally, constituting at the same time complete inversion and entire procidentia. This is a very serious complication of all the uterine organs, for the vagina must be more or less compromised, and the Fallopian tubes, ovaries and bladder drawn down from their proper positions. Here not only the actual displacement of the womb and its appendages forms a serious difficulty, but the mere dragging upon those appendages on the part of the womb must also cause great distress and derangement in the organs themselves, and profound depression of the nervous system and vital strength.

The presence of a polypus in the inverted womb may render the diagnosis comparatively easy. But it must be borne in mind that the inversion itself is due not so much to the actual weight of the tumor as to its morbid influence upon the womb, and to the efforts which the womb makes to free itself by expelling the foreign body. Complete cases of inversion in connection with polypi constitute a very grave form of disease, partly from the occurrence of hæmorrhages, and from the severe functional and constitutional derangements to which this condition may give rise, and partly from the unhealthy nature of the cause itself. For even if the polypus be not considered a malignant growth, it takes its rise in some depraved state of the system, and it may be the index of more serious forms of disease yet to be developed from the original dyscrasia.

Treatment.—The inverted womb should be carefully reduced and the whole organ replaced in the pelvis, with as little and as gentle

manipulation as possible. The patient should remain in bed in such position as is found most comfortable, receiving such medicines as are best suited to the entire group of symptoms—sensational, functional and structural. So profound is the relation of the law of the similars to the human constitution that even comparatively unimportant sensational symptoms, which, however, are peculiar to and characteristic of the case, may lead directly to the true homœopathic remedy for the entire disease. This simple fact, the stone which the allopathic and the chemical builders, and even those of the so-called physiological school, have rejected, bids fair to become the head of the corner in homœopathic therapeia. And this profound principle, confirmed by the constant experience of many careful observers and experienced physicians, should encourage the young physician to rely upon his Materia Medica, and not to despair even in the presence of serious functional derangements, and even structural changes, for which he can see no direct and sufficient homœopathic analogue. In many forms of disease the sensational symptoms, which occur first, are intended as warning voices, forerunners of the evil to come; and even in the more advanced stages of disease these sensations are still the most unfailing key-notes to the real remedies in the case—indices to the remedies, not for the severe sufferings alone, but for the functional, and even structural disorders, which cause them *and which they represent.*

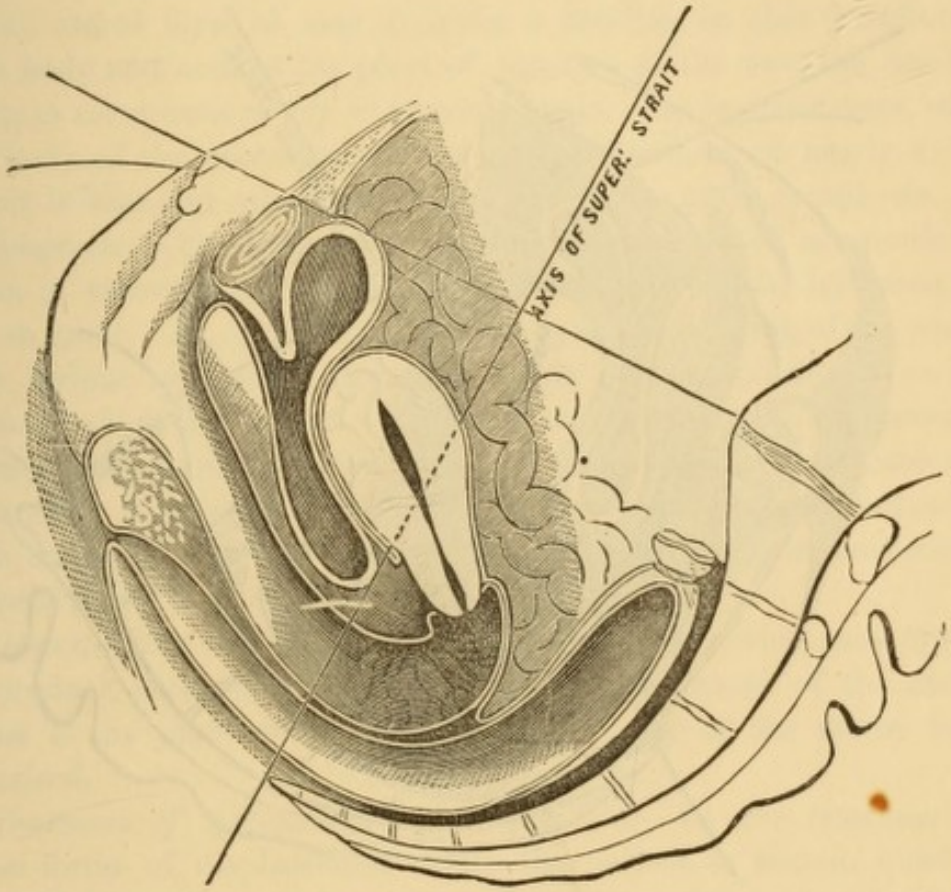
Select the remedy in accordance with all the symptoms present, having reference also to the constitutional history of the patient.

Anteversion and Anteflexion.

Anteversion.—This is a displacement comparatively rare in the unimpregnated uterus, although it does occur, and is even found in nulliparous women. The natural position of the womb is one of slight anteversion, and this is always increased in degree in the early months of pregnancy. But this forward inclination may be so increased as to constitute a morbid condition, and give rise to some very unpleasant and painful symptoms. The uterus may be regarded as in a condition of unnatural anteversion when it lies in its long axis across the pelvis, with the cervix in the hollow of the sacrum, and the fundus near the symphysis pubis and encroaching more or less upon the bladder. Anteversion may be combined with flexion at the junction of the cervix with the body; and in this case the fundus is thrown still more forward and downward, while the cervix is not directed so far backward toward the sacrum.

Symptoms.—This form of displacement may come on gradually; and in this case it can be distinguished from simple prolapse only by the vaginal touch. On passing the finger up to the fornix vaginæ, the cervix will not be found occupying its usual position, but on exploring posteriorly toward the hollow of the sacrum it will be found occupying that position, and higher up than natural. From this point the finger may trace the body of the womb lying almost on a horizontal line across the pelvis, until the fundus is found at the posi-

Fig. 90.

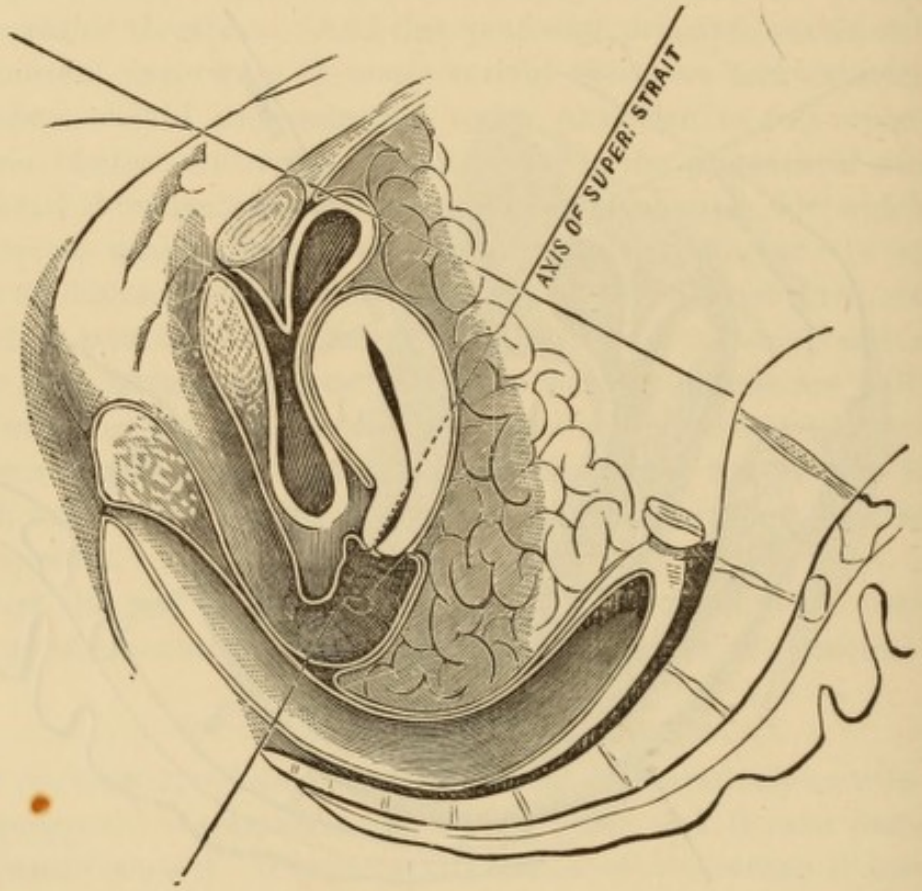


ANTEVERSION.

tion just mentioned, near the symphysis. The uterine probe, very much bent, may be passed into the cavity of the uterus, thus verifying the diagnosis; but this procedure is unnecessary, inasmuch as it is almost impossible to mistake an anterior for any other form of displacement. Anteversion may also occur suddenly; and in this case the symptoms very nearly resemble those occurring from falling of the womb, but the derangement may readily be made out by the vaginal touch. This displacement may exist without giving rise to any symptoms that direct the attention of the woman to her condition, though

such cases are, in the nature of things, rare. Pressure of the os against the posterior wall of the vagina may occasion dysmenorrhœa and sterility. The pressure of the fundus upon the bladder gives rise to a variety of very unpleasant urinary symptoms, which differ greatly in degree in different women, and which, in some cases, are so severe as to simulate those of cystitis. The pressure upward and backward of the cervix occasions more or less rectal irritation, constipation and hæmorrhoids. In some cases locomotion is greatly interfered with,

Fig. 91.



ANTEFLEXION.

and even rendered wellnigh impossible. But the disturbances of the urinary apparatus are the most marked symptoms of anteversion, and are those which generally cause the woman to consult her physician.

Causes.—The causes of anteversion are predisposing and exciting. The predisposing causes are those which occasion a relaxation of the uterine supports, such as parturition, indolent habits, improper dress, etc. The exciting causes are, direct violence or muscular effort; anything which increases the weight of the uterus, such as pregnancy,

subinvolution, tumors, etc.; abdominal tumors, pressing the uterus downward and forward. The enormous accumulation of fæces may sometimes operate as a displacing influence, and the combination of other causes may then easily serve to throw the fundus of the womb still farther down in the pelvis, or even press it beneath the symphysis.

ANTEFLEXION.—This form of displacement is of common occurrence. It differs from anteversion in this, that while the fundus and body of the uterus are abnormally directed downward and forward, the cervix retains its proper position or nearly so, although flexion of the uterus forward may comprise a bending in that direction of both body and neck at the point of junction of the two, the bending being in some cases nearly at an acute angle. Or, in other cases, while the body of the uterus retains its normal position, or nearly so, the cervix is bent and extended forward toward the pubic symphysis.

Symptoms.—The symptoms produced by anteflexion are similar to those of anteversion, though usually rectal and vesical irritation are not so great. In consequence, however, of the bending of the womb, very serious symptoms may arise, which are the results of various diseases which this abnormal position may give rise to. Dysmenorrhœa is an almost necessary attendant; congestion of the womb may occur, and occasion a variety of diseased conditions; endometritis, both corporeal and cervical, may be set up, and by pressure or other cause even peritonitis may result.

Causes.—The same causes which occasion anteversion may operate to produce anteflexion, previously existing weakness of the uterine tissue at the junction of the cervix and body of the uterus being premised.

Treatment of Anteversion and Anteflexion.—In the treatment of these forms of displacement desire the patient to remain quiet, or even, in severe cases, to keep her bed and lie on her back a few days; administer the remedy best indicated by all the symptoms, and a complete cure may be looked for in a very short time.

In those cases only in which the fundus is actually thrown beneath the arch of the pubes will there be any necessity for any manual interference to remedy and cure this displacement.

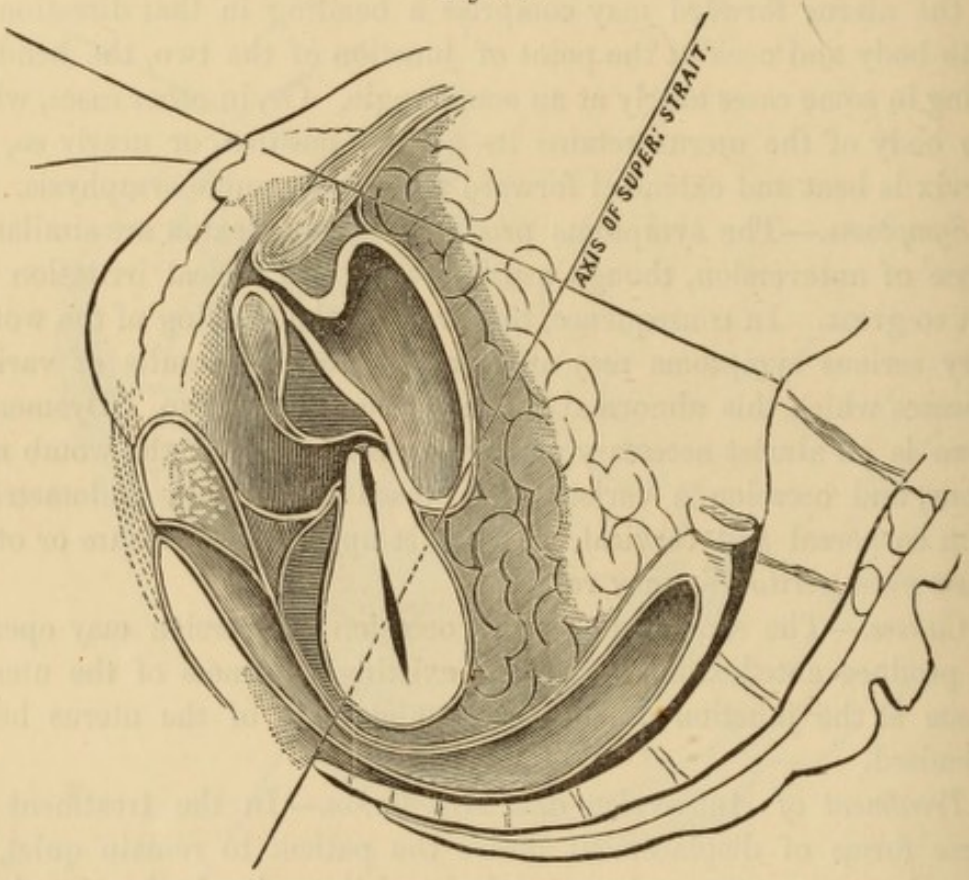
And also observe that the woman suffering with this form of displacement should not urinate too often, since by moderately distending the bladder it will assist in replacing the womb; and when in the recumbent position she should lie upon her back as much as possible, since this position will also aid the reposition. The general

health being restored by the proper internal remedy, there will be no more trouble with the anteversion.

Retroversion and Retroflexion.

Retroversion.—This is a form of displacement which probably occurs next in frequency to prolapsus. As a disease *per se* it is perhaps of rare occurrence, but as an accompaniment of the various forms of inflammatory disease of the uterus or of increase in its size and weight, it is very frequently met with. It may occur, however, as the result of

Fig. 92.

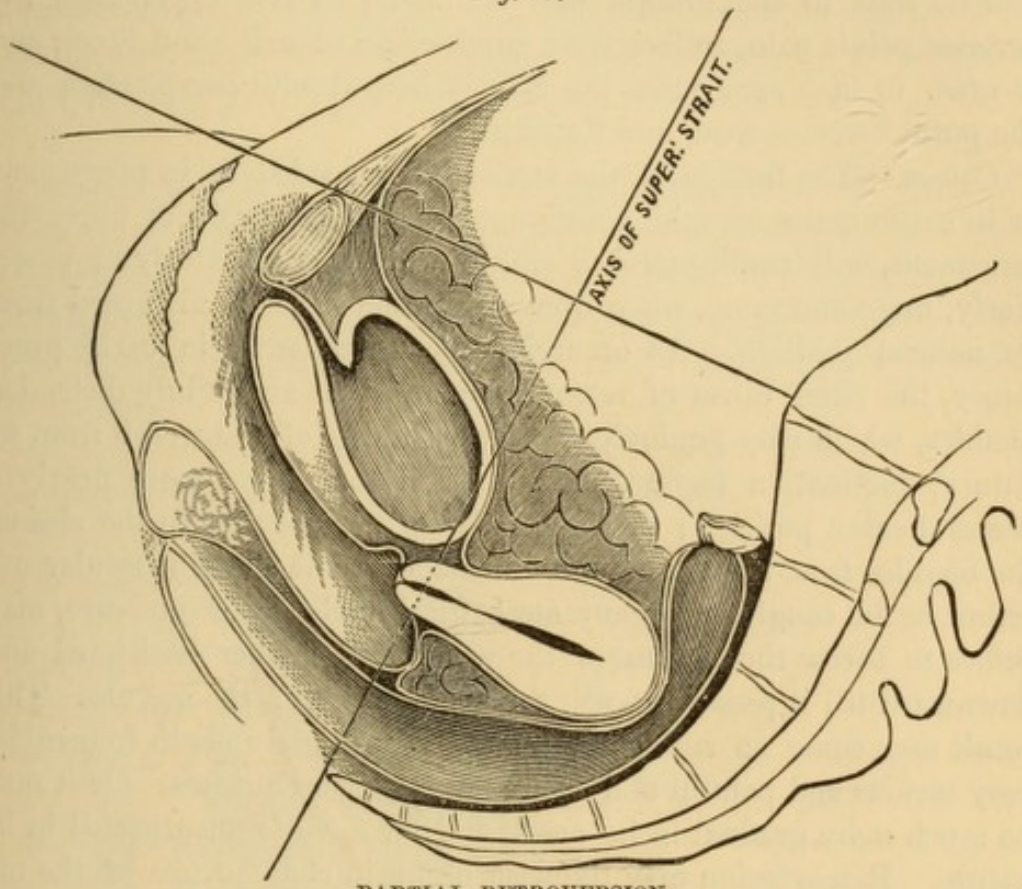


RETROVERSION.

violent succussion, and give rise to very urgent and painful symptoms. The natural position of the uterus being with the fundus inclined over toward the bladder and symphysis pubis, in *retroversion* it assumes directly the opposite direction. By an exact examination by the touch the fundus will be found turned back toward the sacrum, and even pressed down beneath its promontory, and the os uteri will be found turned toward the pubes. As in simple prolapse of the uterus, so also in retroversion, there may be three different degrees or stages of displacement, according as the fundus is directed toward the upper, the

middle or the lower portion of the sacrum. In all cases in which the womb has been so depressed backward that its fundus is thrown down beneath the sacral promontory this forms an insuperable barrier against its return, unless replaced by art. And the best method and the means of replacing it will be pointed out and described, together with the remedies which may be found useful in such cases.

Fig. 93.



PARTIAL RETROVERSION.

Symptoms.—The most strongly marked symptom indicative of retroversion of the uterus is found in the difficulty of emptying the bladder, accompanied with pain and tenesmus, which in greater or less degree is always present in complete cases of this displacement. Next to this is the pressure on the rectum, and consequent more or less frequent call to stool, with great difficulty or impossibility of evacuating the bowels. These two complications, especially the retention of urine, render cases of complete retroversion of the womb dangerous as well as painfully distressing; while the retention and consequent accumulation of fæces serves to make the restoration of the uterus to its natural position a work of much greater difficulty. A fixed gnawing or other variety of pain in the back, backache and difficulty in

walking, with inability to stand for any length of time without suffering, are also common accompaniments. Nausea and vomiting, even stercoraceous vomiting, may set in, and unless the patient is promptly relieved she may sink under the accumulation of her sufferings.

In suddenly occurring retroversion in consequence of a fall or other injury the symptoms are more marked and severe. "The patient falls to the ground and is unable to rise, experiences the severest pelvic pain, suffers from suppression of urine and fæces, and is often in such agony that the face is bathed with perspiration and the pulse becomes weak and fluttering."

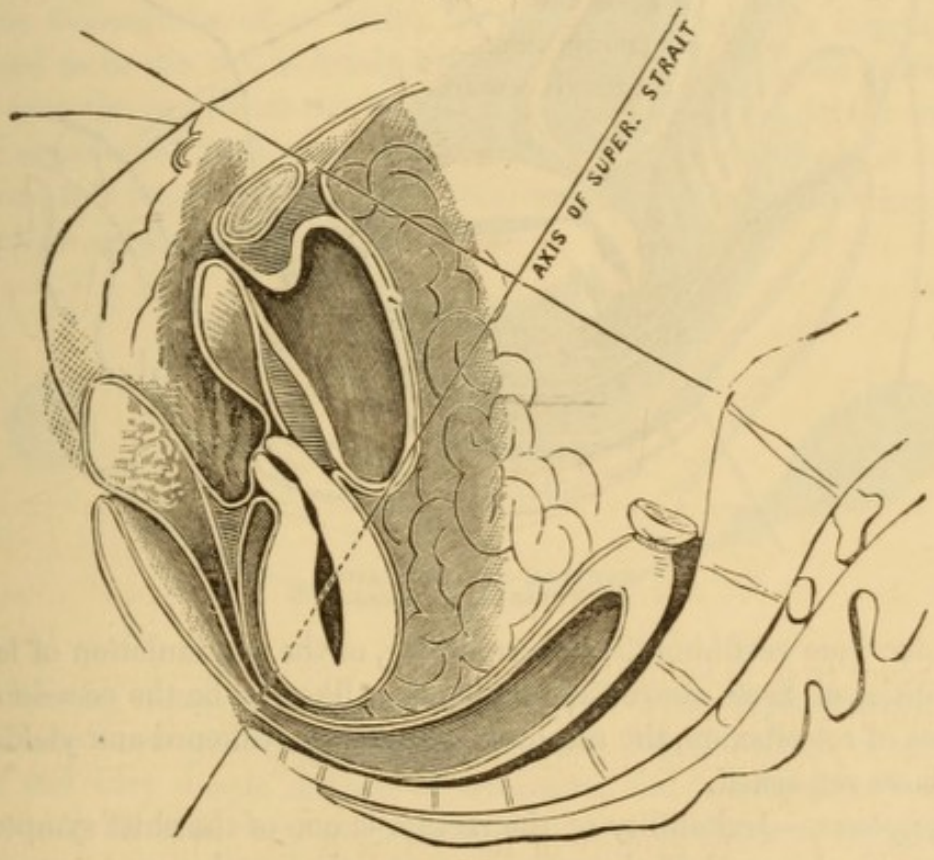
Causes.—The fundus of the uterus being loaded as in pregnancy, or in consequence of subinvolution, areolar hyperplasia or other enlargement, will readily tend to sink down, either anteriorly or posteriorly, more and more, when from any reason it has been turned from its natural position. As occurring most frequently in early pregnancy, the chief cause of retroversion must be an unduly distended bladder, which may gradually raise the fundus of the womb from its natural inclination forward, and cause it to assume more nearly a perpendicular position; then the still further increase in the size of the bladder from accumulation of urine, or some slight muscular exertion as in coughing, or any mechanical violence or pressure, may suffice to throw the fundus of the womb still farther backward and downward till it passes beneath the promontory of the sacrum. This result may come on suddenly, and be immediately made known by very serious and painful and even alarming consequences. Or it may be much more gradual in its onset, and for a while unsuspected in its nature. Retroversion may likewise occur in consequence of the use of the obstetric bandage, which has a tendency to press the womb downward and backward at a time when its muscular and peritoneal supports are weakened and relaxed, and it is enlarged and heavy from uncompleted involution. It may likewise occur from a variety of other causes. It is evident, from the consideration of the inclination forward of the fundus of the womb in its natural position, that it can be made to assume such an inclination as to render it possible for it to be thrown backward and downward only by some mechanical influences, and by such mechanical method it must be replaced; and the more especially since the sacral promontory presents such decided structural hindrances toward its restoration.

The vaginal touch readily discloses this form of displacement. "The finger, being introduced into the vagina, discovers an absence of

the cervix from its usual place, and upon further investigation finds it near the symphysis pubis. Upon passing the finger backward to the sacrum it meets a resisting ridge, which ends in a hard, round mass resting upon the rectum. The size, rotundity and distinctness of this will depend upon the degree of the displacement. In the first degree the resisting line but no tumor will be felt; in the second, a slightly rounded mass; and in the third, the fundus with its characteristic form will be perceived. Should doubt remain as to the nature of the mass thus felt, rectal touch, the uterine probe and conjoined manipulation will remove it."—*Thomas.*

RETROFLEXION.—This form of displacement bears the same relation to retroversion that anteflexion does to anteversion. It consists in a bending backward of the fundus and body of the uterus toward the hollow of the sacrum, the womb being bent upon its own axis at a greater or lesser angle, by which the cervix is not removed from its

Fig. 94.



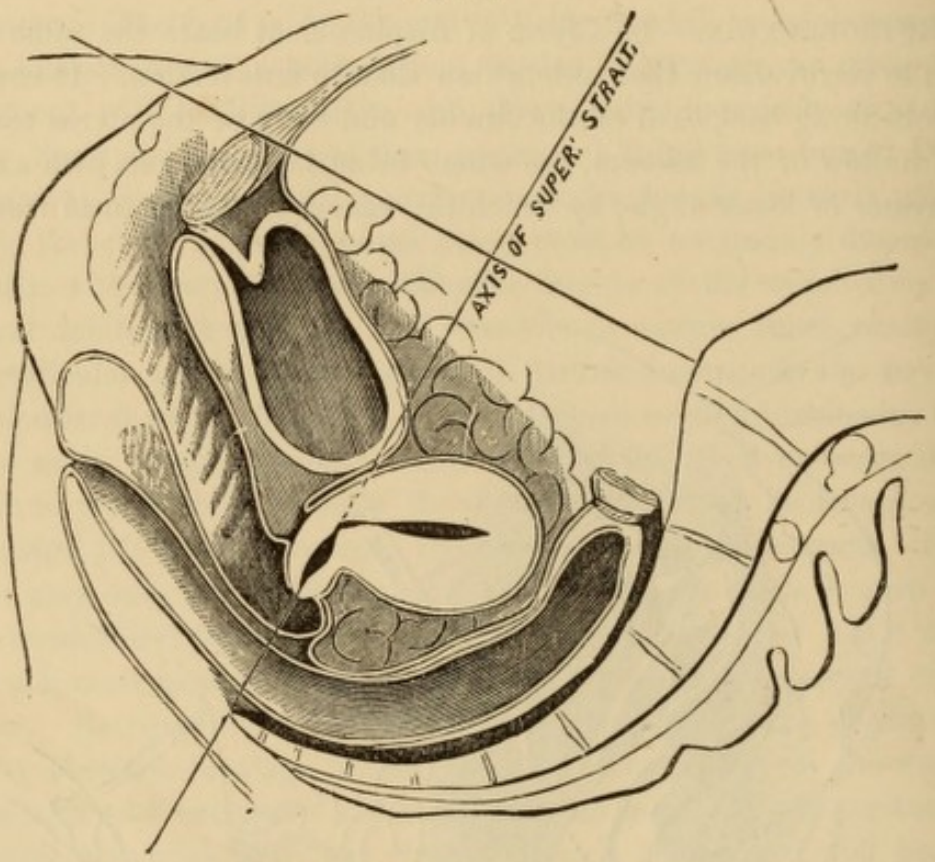
RETROFLEXION.

normal position, or deviates from it but slightly. It is generally the result of a weakness of the uterine tissues, in consequence of which

the body of the womb, either through its inherent weight, whether natural or preternatural, or in consequence of some force or pressure applied to it, is flexed at the junction of the body and cervix. Retroflexion occurs most frequently in women who have borne children, and rarely happens to the virgin uterus.

Causes.—The principal causes which occasion retroflexion are similar to those which give rise to retroversion, such as pregnancy and parturition, hyperplasia, endometritis, subinvolution, tumors either within the abdomen or upon the uterus itself. An habitual distension of the

Fig. 95.



PARTIAL RETROFLEXION.

bladder from retaining the urine too long, or the accumulation of large quantities of fæces above the fundus, may likewise be the occasioning causes of retroflexion, the uterine tissues being weakened and yielding, as above remarked.

Symptoms.—Irritability of the rectum is one of the chief symptoms of retroflexion, and if the pressure upon the gut be great, retention of stool will be a matter of course. Neuralgia of the womb may occur as a consequence of the natural congestion and nervous compression, and so-called uterine colic may result from a retention of

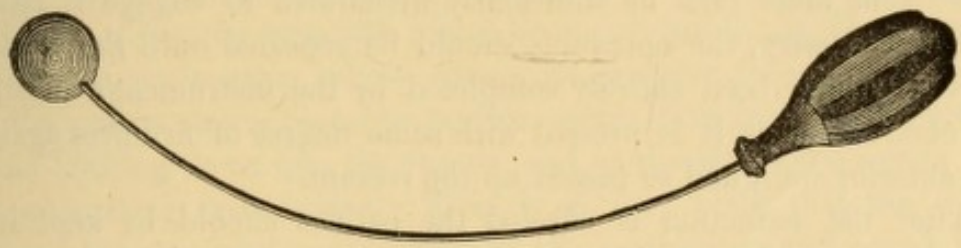
the secretion of the intra-uterine mucous membrane. If the retroflexion exist in a great degree, so as to occlude the uterine canal, dysmenorrhœa and sterility will be the consequences. Vaginal and rectal touch are the best means of diagnosticating retroflexion, and if there be any doubt remaining, the careful use of the uterine probe. A resort to these means of diagnosis will ensure against mistaking retroflexion for impacted fæces, an enlarged and prolapsed ovary or uterine tumors, with which it may otherwise be confounded.

Treatment of Retroversion and Retroflexion.

These forms of displaced uterus demand a resort to mechanical measures to ensure reposition in a great majority of cases, and especially in those occurring during pregnancy. This may be attained by the following means:

The Uterine Elevator for Retroversion.—This instrument, of which an accurate representation is given below, is composed of an ivory ball, a steel rod and an ebony handle. The diameter of the ball is about five-eighths of an inch; the rod, seven inches in length, and curved as in the cut, is firmly inserted into the ball at one extremity and into the handle at the other. Originally designed by the writer, and constructed for him for use in retroflexion or retroversion of the uterus, this little instrument has been found capable of affording very valuable assistance in such cases.

Fig. 96.



The very unsatisfactory manner in which these displacements have generally been managed by physicians has led the writer to adopt a new and very simple method of treatment, and to offer it to the profession in all such cases when an operation or mechanical interference is necessary. And for the following reasons:

1st. It is less painful and less disagreeable to the patient.

2d. It always ensures a more perfect reposition of the organ, which, consequently, is less liable to relapse.

3d. This plan will be found successful when all others adopted by skillful and experienced physicians have failed.

4th. This plan will succeed in cases in which it has hitherto been deemed necessary to produce abortion in order to replace the retroverted uterus. In these identical cases reposition is readily effected by this method, and pregnancy continues until the full term of gestation.

As soon as a case of this form of displacement is clearly diagnosed, if the urine or fæces are retained the usual means should be at once adopted for their evacuation. The patient should then be placed on the bed, near its edge, upon her knees and elbows, so that the force of gravity may assist in the reduction. The ball of the instrument, well lubricated, is to be brought to the anus, with the convex surface of the rod upward, then gently pressed till within the sphincter, when the handle should be slightly elevated, so as to bring the ball against the anterior wall of the rectum. The instrument is now to be firmly and carefully pressed up the rectum, when the ball will elevate the fundus, care being taken to raise the handle of the instrument more and more as progress up the rectum is made, and presently the uterus will regain its normal position immediately posterior to the symphysis pubis.

In cases of long standing—and the writer has recently replaced one of fifteen and another of thirty years' continuance—the reduction is not so quickly or so easily effected. The ball, engaging and partially elevating the fundus, will slip over and pass above it. The instrument must then be sufficiently withdrawn to engage it again, and, if necessary, the operation should be repeated until the work is proved to have been entirely completed by the instrument's meeting no obstruction as it is pressed with some degree of firmness against the anterior wall, and so passed up the rectum.

After the reduction is effected the patient should be kept in a recumbent position for a longer or shorter time—from two to twelve days, according to the more or less recent nature of the case—that the womb may become accustomed to its position; such remedies being administered in the mean time as may be indicated. The principal of these are Nux, Belladonna, Sepia, Sulphur, Calc. carb., Lycopodium, Calc. phos., Kali carb. We give for each of these medicines the principal indications; each symptom being a *key-note* which may be found a reliable guide. These, and other remedies which may be indicated in particular complications of retroversion, may be found at the latter part of this chapter, arranged in alphabetical order.

Lateroversion and Lateroflexion.

These forms of uterine displacement are of rare occurrence, and do not give rise, usually, to symptoms of any note. They may be conjoined with ante and retro displacements. They result either in consequence of inflammatory conditions of the womb, unnatural weight of that organ or direct pressure. Vaginal touch and the use of the uterine probe are generally sufficient to detect the nature of these rare malpositions of the womb.

Treatment.—Study the remedies mentioned at the close of this chapter, in order to learn which are best adapted to the attendant symptoms. As an auxiliary to the medical treatment, the patient should be instructed to lie as much as possible upon the side opposite to that of the obliquity, and to keep at rest as much as possible.

Treatment of Uterine Displacements.

The medical treatment of these various forms of uterine displacement will depend in a great measure upon the selection of remedies according to their principal characteristics, and to the corresponding characteristics and constitutional symptoms of the individual cases. For this reason we have combined in one *schema* the principal remedies for all the various displacements, believing that each variety and case of this disease will thus lead to its own appropriate remedy.

The uterus is held in its proper position in the centre of the cavity of the lesser pelvis, and in a line with the axis of the superior strait, simply by the round ligaments and a double fold of the peritoneum. When in a healthy state the round ligaments hinder its retroversion, while the peritoneum, which covers its superior three-fourths anteriorly and its entire posterior surface, serves principally to prevent it from sinking down into the vagina, and at the same time assists also in preventing retroversion. Thus, it is very plain that the womb cannot become displaced so long as the peritoneum and round ligaments are in a normal condition, and these ligaments can only lose their normal condition in connection with other disorders of the general system. Hence, the remedies below—or others which may be called for in special cases as they are indicated—by restoring the normal condition of these appendages, will cure all uterine displacements, when no mechanical obstruction, such as is necessarily present in complete prolapsus or complete retroversion, intervenes. These appendages are usually relaxed in consequence of some constitutional ailments, which are shadowed forth by the symptoms indicating the

proper remedy. The right interpretation of these symptoms, and the consequent administration of the corresponding remedy, will usually be followed therefore by a *radical cure.*

The practice of applying pessaries, or uterine supporters of any kind, is rapidly becoming obsolete. A few years more and all these barbarous appliances, as useless and degrading as they are disgusting to the female sex, will be finally laid upon the same mouldy and musty shelves with the cups and the blisters, the leeches, the lancet and the actual cautery.

There is scarcely any remedy in the whole Materia Medica that may not be found useful in these displacements, but the following are the medicaments most likely to be required:

1. Bell., Cham., Kali carb., Nux vom., Plat., Puls., Sabina, Sepia. 2. Aurum, Carb. an., Canth., Con., Croc., Ferr., Lil. tig., Op., Podoph., Sec. corn., Sulph. 3. Acon., Ant. cr., Arn., Asaf., Bry., Calc. carb., China, Cocc., Coff., Creas., Graph., Hyos., Ignat., Ipec., Magn. mur., Mosch., Natr. carb., Natr. mur., Phos. ac., Sulph. ac., Thuya, Zinc.

Aconite. If the prolapsus has occurred suddenly, and there is in consequence great inflammation of the parts, with burning pain as if from hot coals; excessive sensibility to the least touch; bitter, bilious vomiting; anguish and cold perspiration, or hot and dry skin; fear of death. Menses too late; almost suppressed.

Ammon mur. A very characteristic symptom is discharge of a quantity of blood from the bowels at every catamenial period. During the catamenia the discharge is more profuse at night.

Arnica. Where the prolapsus has been caused by a concussion, and a bruised, sore feeling remains. She cannot walk erect on account of a bruised, sore feeling in the uterine region. Menses light color.

Asterias rubens. Sensation of pressure on the lower abdominal organs, impeding locomotion. General feeling of distress in the womb, as though something were pushing out.

Aurum. Heaviness in the abdomen, with icy coldness of the hands and feet. Drawing pain at the pubes. Quarrelsome disposition. Melancholy, and thoughts continually running on self-destruction.

Belladonna. Pressure as though all the contents of the abdomen would issue through the genital organs. This is particularly felt early in the morning. Sensation of heat and dryness in the vagina. Drawing pain in the whole circumference of the pelvis. Pains in the pelvic region, which come on suddenly and cease as suddenly, or feeling in

the back as if it would break, hindering motion. Suppression of stools and of urine.

Bryonia. Pinching and uneasiness in the distended abdomen, as if the menses would appear. Frequent bleeding from the nose when the menses should appear. Constipation of hard, dry stools, as if burnt. Lips parched and cracked, and thirst. She desires to keep still, she feels so much better. Menses profuse and brown.

Calc. carb. This remedy is especially indicated in pale, leucophlegmatic temperaments. She feels a sort of inward coldness. The least exposure to cold air chills her through and through. She feels as if she had on cold, damp stockings continually. She has *vertigo on going up stairs*, and she is often all out of breath also, being obliged to sit down even before she reaches the top. The menses are too frequent and too profuse; the least excitement will often cause their return. Heaviness and painful weight in the limbs and great fatigue on walking. Constant aching in the vagina.

Calc. phos. When every cold causes rheumatic pains in the joints and in various parts of the body. This is a positive indication, and when this occurs the exhibition of Calc. phos. will at once remove the rheumatic affection and prevent the reappearance of the uterine displacement. Suffering from grief.

Cantharis. Burning in the vulva and violent itching in the vagina. Almost constant desire to urinate, with cutting, burning and passing of a few drops of urine, sometimes bloody, sometimes followed by a discharge of bloody mucus. Great amativeness.

Carbo animal. Great languor in the thighs, particularly before and during the menses. The menstrual function seems to exhaust her remarkably, so that she is hardly able to speak during its continuance.

Chamomilla. Frequent pressure toward the uterus like labor-pains, with frequent desire to urinate, often passing large quantities of colorless urine. Frequent discharge of coagulated blood, with tearing pain in the veins of the legs and violent labor-like pains in the uterus. Contrary to her condition in health, she is always out of humor, particularly at her menstrual periods, when she is headstrong even unto quarreling. She can hardly speak a pleasant word, and has to restrain herself in order to do so. Menses too early, dark, coagulated.

China. In cases where the prolapsus and attendant symptoms were superinduced by losses of fluids, particularly of blood. She has much ringing in the ears, painless lienteria and leucorrhœa. A sense of distension in the abdomen, which is not relieved by eructations. Menses very profuse. Metrorrhagia.

Cocculus. Much paralytic pain in the small of the back, rendering walking quite difficult and sometimes impossible. Irregularity of the menses, and at their appearance nausea and faintness.

Colocynth. A constant heat and dragging pain in the vagina. Chronic and repeated attacks of colic, drawing her double, with great restlessness and lamentation.

Conium. *Induration* and *prolapsus* at the same time. Much nausea and vomiting. Vertigo, particularly when in a recumbent position and in turning over. Intermittent flow at every emission of urine. The breasts become sore, enlarged and painful at every menstrual period. Principally with Conium, fifteen years ago, I cured permanently a case of prolapsus of six years' standing, in which all pessaries and abdominal supporters had failed to keep the uterus within the vulva. *The prolapsus was complicated with induration, ulceration and profuse leucorrhœa.* This lady has since borne several children, and has never experienced a return of the malady.

Dulcamara. The patient has always, as a forerunner of the menses, a rash upon the skin. All her symptoms are aggravated when the weather suddenly becomes colder, especially if the weather is damp.

Ferrum. The patient is weakly and complaining, yet her face is fiery red. The menses intermit two or three days and then return. Previous to the menses she has stinging headache, ringing in the ears, and discharge of long pieces of mucus from the uterus.

Graphites. The menses always delay. They are too pale and scanty. Before and during the menses cough throughout the day, fatiguing the chest; no cough at night. Constipation of large, difficult, knotty fæces, and itching blotches on various parts of the body, from which oozes out a watery, sticky fluid. Morning sickness during the menses. Pain in the epigastrium during the menses, as if everything would be torn in pieces. Much headache.

Ignatia. Menses scanty, black and of a putrid odor. Cramp pains in the uterus, with lancinations. A very weak, empty feeling at the pit of the stomach, with sighing respiration. She is full of suppressed grief, with which she seems to be weighed down.

Kali carb. Very much heavy, aching pain in the small of the back. Pain like a weight in the small of the back during the menses. Violent itching of the whole body during the menses. Stitching pains in and about the uterine appendages. Much distress in the abdomen for about an hour or two previous to an evacuation of the bowels. Sequence of parturition.

Kali bich. More particularly indicated in fat, light-haired persons.

Often where the prolapsus seems to have been produced by hot weather. Especially suitable if there be also leucorrhœa so tough as to be drawn out in long, ropy strings.

Lachesis. Pain in the uterine region, as if swollen. The uterus does not bear contact, and has to be relieved of all pressure. The patient feels constantly as if she must lift her dress from the abdomen. Suitable where the displacement occurs in connection with (or in consequence of) change of life. Violent pain of long standing in the right groin, extending either toward the genital organs or upward toward the liver or chest. Painful oblong swelling and induration in the right ovarian region, aggravated by moral emotions, rapid movements, prolonged walks and over-exertion.

Ledum. Abundant leucorrhœa; pale face; abundant urination, even at night. Ledum is especially indicated where the sufferings are greatly aggravated by warmth, as in bed or over the register. Great sensation of coldness all through her; she cannot keep warm; she appears deficient in vital heat.

Lilium tigrinum. Debility. Sensation as if she were being dragged downward in the abdomen; dragging from the chest and shoulders. She feels as of she wants to be held up. Sense of weight and downward pressure in the abdomen. Bearing down in the region of the womb, as if the contents of the abdomen would be pressed out through the vagina if not supported Anteversion, retroversion and prolapsus. Crazy feeling on top of the head.

Lycopodium. Sensation of pressure through the vagina on stooping. Sensation of great dryness in the vagina. Much borborygmus, especially in the left hypochondrium. Much red sand in the urine. Terrific pain in the back previous to every urination, with relief as soon as the urine begins to flow. Haughty, imperious, commanding.

Magnesia mur. Hysterical complaints and spasmodic turns. Much weakness in the limbs. Constipation of large, difficult stools, which crumble as they pass the verge of the anus. Poor sleep.

Mercurius. During every menstrual period anxiety, red tongue with dark spots, and burning, salt taste in the mouth, sickly color of the gums and the teeth are set on edge. This remedy is indicated in Prolapsus of the Vagina, which see. It is a very valuable remedy for all displacements where it is indicated. Cold and clammy sweat upon the thighs every night. Dissatisfied, fault-finding.

Natr. mur. Pressing and pushing toward the genital organs every morning; she had to sit down to prevent prolapsus uteri; she awakens every morning with violent headache, which lasts a long time. Con-

stipation, with sensation of contraction of the anus. Difficult expulsion of stool, fissuring the anus, with flow of blood, leaving a sensation of much soreness in the anus. Tearful, weeps easily.

Nitric acid. Violent pressing, as if everything were coming out of the vulva, with pain in the small of the back, through the hips and down the thighs. Very painful stools, with profuse discharge of blood, the pain lasting a long time and exhausting her.

Nux mosch. *Enormous distension of the abdomen* after every meal. Greatly troubled with dryness in the mouth and throat while sleeping. Great pressure in the back from within outward during the menses. Menses profuse and dark.

Nux vom. Prolapsus uteri from straining by lifting. Pressure toward the genital organs early in the morning, in bed, or during a walk, with a sensation of contraction of the abdomen. Constipation of large, hard, difficult stools, or small stools with frequent urging. Dyspepsia from high living. Cannot sleep after three A. M. Pain in the small of her back, preventing her from turning over in bed. Frequent urination; she passes little and often, with much burning pain. The prolapsus of long standing is often accompanied with dry cough and a sense of constriction around the hypochondria.

Opium. Among the weaknesses, even of long standing, produced by fright, prolapsus uteri is one, which is amenable to Opium, given very high. Also in constipation of many years' continuance, if characterized by hard, black balls, in connection with prolapsus, Opium, high, will be found to be the remedy. Inclines to gayety.

Petroleum. This remedy will be indicated in cases where the patients have been reduced in strength, so that the prolapsus seems to result from a chronic diarrhœa, which occurs only in the day-time. Seems anxious and irritable.

Phosphorus. Great sense of weakness and emptiness in the abdomen. Great sense of heat running up the back. A long, narrow, hard, dry stool, very difficult to expel. Sour stomach; belching up of great quantities of wind after eating. Very amative or very indifferent.

Platina. Painful sensitiveness and continual pressure in the mons veneris and internal organs, with internal chills and coldness. Scanty stool, and difficult expulsion on account of its sticking to the anus and rectum like soft clay. Her thoughts horrify her.

Podophyllum pelt. Prolapsus uteri, particularly following parturition. Prolapsus ani as an accompanying symptom. The stools are very frequent, several daily, but they are natural and yet exhausting stools. Morning headache, with flushed face.

Pulsatilla. Pressure in the abdomen and small of the back, as from a stone, with disposition of the lower limbs to go to sleep when sitting, and attended with ineffectual desire for stool. Menstrual colic, with great restlessness, tossing in every possible direction. Mild, tearful, yielding disposition. She cries at everything, is sad and desponding. Very bad taste in the mouth in the morning; nothing tastes good. She is pale and feeble. Menstruation late.

Rhus tox. Particularly suitable for very rheumatic persons; worse before a storm and in damp weather. She cannot lie long in any one position, but must shift about to obtain relief; the relief lasts but a short time, when she must change again. Walking at first is difficult, but as she proceeds she walks better and better. The Rhus in such cases will cure both the rheumatism and the prolapsus.

Sepia. Painful stiffness, apparently in the uterus. Pressing in the uterus, oppressing the breathing; sensation as if everything would come out of the vagina; she had to cross her limbs to prevent it. Prolapsus of the vagina and uterus. Sensation of weight in the anus, not relieved by an evacuation. Great sense of emptiness at the pit of the stomach. The urine deposits a clay-like sediment, which it is difficult to remove from the chamber. Menses too late.

Secale corn. Prolonged bearing-down and forcing pain in the uterus. She is of a thin, scrawny formation. Menstruation profuse.

Silicia. A pressing-down feeling in the vagina. Great constipation before and during the menses. Prolapsus in consequence of myelitis. Very difficult stools being an accompanying symptom.

Stannum. Great anguish and melancholy the week previous to the menses, ceasing as soon as the menses make their appearance. Old, neuralgic headache is an accompanying symptom. Each attack begins lightly, and increases gradually to its highest point, from which it is equally long in declining. The larynx and chest give out in talking, singing or reading aloud; such exercise induces so great weakness that she is compelled to desist. Mental irritability.

Staphysagria. A feeling of weakness in the abdomen as if it would drop. She is weakly and sickly, very sensitive to impressions; her teeth ache much, and have black streaks running through them.

Sulphur. Weak feeling in the genital organs. Burning in the vagina; she is scarcely able to keep still. She finds it difficult to walk erect; she must stoop on account of debility. She sleeps a heavy, dead sleep, so as to exhaust her; or she sleeps lightly and awakens frequently, and this weakens her. She feels very weak and faint from eleven till twelve in the forenoon; she must have her

dinner. Heat on the crown of her head; cold feet; hot and frequent flushes. Terrible sick headaches, which weaken her.

Sulphuric acid. Great weakness, with sense of general tremulousness, but without actual trembling. She wishes to do everything in a great hurry; can scarcely get her work done rapidly enough, and is dissatisfied with herself when she has finished. Great deal of acidity of the stomach. Menstruation too early and too profuse.

Thuya. A terribly distressing pain occurs in the left iliac region when walking or riding; she must lie down to get relief. The same pain occurs during her menstrual periods, and extends into the left groin. Very serious turn of mind.

Veratrum alb. Dysmenorrhœa, with vomiting and purging, or simply an exhausting diarrhœa with cold sweat, in cases of prolapsus uteri. One dose of Veratrum is often sufficient to cause the succeeding periods to be comfortable and to cure the prolapsus. Very amative, haughty, commanding.

Zinc. During the menses heaviness of the limbs, with violent drawing around the knees, as if they would be twisted off. Again, she is never well except during the menstrual flow. At other times she has boring pain in the left ovarian region, which is only partially relieved by pressure. Menses late. Temper variable.

CAULOPHYLLUM, CIMICIFUGA, HELONIAS may likewise prove of service in cases in which they are indicated.

CHAPTER XXXI.

DISEASES OF THE UTERUS—CONTINUED.

ACUTE AND CHRONIC INFLAMMATION.

THE varieties of inflammatory disease which attack the uterus may be subdivided in the first place into acute and chronic. Other subdivisions have been made by gynæcologists, however, which are founded upon the locality of the inflammatory action and the uterine tissue attacked. Thus we have acute and chronic inflammation of the endometrium or mucous lining of the womb, comprising the following subdivisions: *Acute General Endometritis,* in which inflammation affects the mucous membrane (and the tissue immediately subjacent thereto) of the cervical canal and of the body of the womb;

Acute Cervical Endometritis, in which the inflammatory action is limited to the lining membrane of the canal of the cervix; and *Acute Corporeal Endometritis*, in which the mucous lining of the body alone is affected. Of these three forms of disease, acute cervical endometritis is most frequently met with, and has been variously described and named by various authors, while acute general endometritis is the variety least frequently observed. *Chronic Endometritis* is likewise subdivided into *general*, *cervical* and *corporeal*. Inflammation of the parenchyma of the womb, or *Metritis* properly so called, is almost always an acute affection when it occurs as an original disease. It commonly presents itself as a secondary affection, in consequence of the inflammatory process of endometritis extending itself to the parenchyma of the womb. Puerperal metritis is by no means rare, however, and, as has been already described, is a very serious disease.

Acute Endometritis.

This diseased condition has been named by different writers *Acute Uterine Leucorrhœa*, *Internal Metritis*, and *Acute Uterine Catarrh*. It is usually ushered in by some precursory symptoms indicating a general febrile condition, and by others which point to the local development of the disorder. Thus we find general debility, headache, feverishness, and even chilliness, followed by severe pains in the pelvic region —"very low down," as it is sometimes expressed—which often extend into the surrounding parts. There is pain, weight and a dragging sensation in the back, and bearing-down pains; and very frequently vesical and rectal tenesmus, especially prior to the establishment of the discharge. In the more violent cases the inflammation involves the vagina, and may even show evidences of its presence in the swollen and sensitive condition of the mucous surfaces of the external parts. The discharge, or *uterine leucorrhœa*, may make its appearance in a very few days, or even hours, after the first onset of the precursory and inflammatory symptoms.

"At first the discharge is serous and bloody, but it soon becomes thick, yellowish or greenish, ropy, fluid or purulent; after drying up it leaves yellow or greenish stains on the linen, and stiffens it as if it had been starched; afterward the discharge becomes whiter, milky and mixed with transparent pieces of thick mucus. If this change of the discharge sets in, the inflammatory condition is almost entirely dispersed, which may take place at the end of thirty-six or forty days, or even sooner, when the discharge becomes chronic, or reappears again at the time of the menses, after sexual excesses, over-eating or

drinking, or even without any apparent cause. As a general rule, the more acute the inflammation the thicker and darker the discharge. In uterine leucorrhœa the discharge has always an alkaline reaction, while vaginal secretions always react like acids. Examined by the microscope, the discharge looks homogeneous, thick, containing globules resembling those that float in pus or healthy mucus.

"As regards the course of this affection, we may distinguish four periods. The first period sets in with a rather slight itching at the vulva, in the interior of the vagina, and sometimes in the uterus, with a sense of heat in the uterus, pains in the small of the back and in the back, increase of the sexual desire, and frequent urging to urinate. In the second period, which may set in about the third or fourth day, a serous discharge takes place, which is at first scanty, but soon becomes more profuse, assumes a greenish or yellowish, rather dark appearance, and is accompanied with increased burning urination. In the third period, which generally commences about the ninth day, the inflammation becomes less intense; the discharge is still very copious, thickens, becomes more and more whitish, and then decreases, with diminution of flow of urine. In the fourth period, when the disease inclines to become chronic, the discharge disappears and reappears again repeatedly and frequently, without any known cause."—*Jahr.*

As already remarked under the head of Vaginal Leucorrhœa, some constitutions are much more predisposed to the catarrhal form of disease than others; that is, in some it will make its appearance under the influence of provoking causes which in others would have no such effect. Thus, all the influences which may directly or indirectly lead to acute inflammation of, and consequent catarrhal discharge from, the mucous lining membrane of the womb, may be regarded as either predisposing or provoking. Many of these causes of either class are identical with those which result in acute inflammation of the mucous lining membrane of the vagina. And indeed very many cases of this form of endometritis are nothing more than the extension of the mucous inflammation from the vagina to the uterus.

But as very many of these morbid influences are so gradually developed as to result in chronic mucous inflammation or uterine catarrh, without evincing any very noticeable acute symptoms, we reserve a more particular enumeration of the causes of inflammation of the mucous coat of the womb in general till, in the succeeding section, we come to the consideration of the chronic variety.

The discharge itself, which results from the inflammation of the mucous surfaces of the cervix and fundus uteri, is easily distinguished by its alkaline reaction from the slightly acid secretion poured out by the vaginal membrane. But while in ordinary cases of uterine leucorrhœa the cervix uteri constitutes the exclusive seat of the disease, in the more severe cases, both acute and chronic, the inflammation extends also to the fundus, and at the same time invades also the mucous coat of the vagina. And in fact very few cases of leucorrhœa are met with in which the vagina fails to participate, so that in general the secretions which appear in leucorrhœa are found to be composed of the products of both vaginal and uterine mucous inflammation. Should the discharge be very acrid, it is apt to produce excoriation of the parts with which it comes in contact, and to give rise to intense itching. The irritation of the skin, together with that engendered by scratching, from which the patient cannot refrain, may give rise to extensive prurigo.

The following are the physical signs revealed by an examination: "An examination by touch reveals the vagina hot and dry or covered by the discharge. The os uteri is found gaping, the cervix swollen and very sensitive to pressure, the body slightly enlarged, and the whole organ lower than normal in the pelvis. Through the speculum the cervix is found to look swollen, œdematous and red, and from the pouting os pours forth either a clear albuminous-looking fluid, muco-pus, or long, tenacious shreds of cervical mucus."

This form of disease may affect the lining membrane of the entire uterine canal, or it may be confined to that of the cervix or of the body alone. In the latter case it generally results from sudden suppression of the menses, while endometritis following childbirth or abortion is apt to attack the entire uterine mucous tract.

Causes.—The disease may occur as a consequence of direct injury, or it may be an extension of inflammation of the vagina, whether gonorrhœal or simple. It often occurs as a consequence of taking cold during menstruation, even without suppression of the menstrual flux; and may arise from excessive sexual indulgence or other causes.

Chronic Endometritis.

Chronic endometritis, as before remarked, may be general, corporeal or cervical. *General chronic endometritis* is usually associated with chronic inflammation of the parenchyma of the womb, and is connected with areolar hyperplasia. *Chronic corporeal inflammation*

of the endometrium is of rather infrequent occurrence, while *chronic cervical endometritis* is one of the most frequently occurring diseases to which the uterus is liable; and although not of a very serious nature *per se*, yet it lays the foundation for, or has following in its train if neglected, numerous other disorders of a more troublesome and even dangerous character, and which render miserable the lives of their unfortunate victims. It frequently follows an attack of acute endometritis—the latter subsiding into the chronic form—but still more frequently approaches insidiously, and may have become a confirmed disease before any symptoms are manifested which call the attention of the patient to the fact that something is wrong with the womb. This warning symptom is generally a leucorrhœa, or it may be a severe dragging pain in the back and loins, which is aggravated by walking and standing, or both these conditions are conjoined. Menstrual irregularity of one kind or another soon shows itself; mental depression, ill-temper and hysteria are frequent accompaniments, or all these symptoms and many more may exist in a single case.

The uterine discharge which forms the principal symptomatic indication of chronic endometritis, especially cervical inflammation, varies in quantity in different persons, and at different times in the same individual. Like vaginal leucorrhœa, it may be so scanty as scarcely to become perceptible externally, or it may be so profuse as to require the application of several napkins daily. The discharge varies also in color, character and general appearance and effects. It may be colorless and semi-transparent, or it may assume a greenish-brown or even darker hue, as if, in the severer forms, it were mixed with blood; or it may be so thick and tenacious as to be with great difficulty detached from the mucous membrane to which it adheres. In the same manner its character and quality may be very different in different persons, or in the same individual at different times. Thus, it may be mild, bland and unirritating, or it may be acrid, and so cause excoriation of the labia, or even of the skin of the surrounding parts. So also in its direct effects it may vary in a remarkable manner. When very profuse it becomes rapidly exhausting. And while in the first instance due to some dyscrasia, some morbid influence or diseased condition of the system, it still further aggravates the general ill-health by the profuseness of its flow, as well as by the important functional derangements which sooner or later follow in its course.

The *causes* of chronic endometritis or uterine leucorrhœa—for these terms are used synonymously—may be divided into two classes.

The first may be grouped under the head of constitutional predisposition; and in this class also we include all those cases which result from the influence of other forms of constitutional or functional disorders, such, for example, as menstrual irregularities or organic displacements. From causes and morbid influences of this nature arise the great majority of the cases of uterine leucorrhœa which appear either in young or in older unmarried females.

The second class of causes of chronic endometritis we may term the provoking or special causes. These are most numerous in the married state, as arising from the great excitements and sudden and extensive organic changes to which the uterus and its appendages are constantly liable.

The *constitutional predisposing causes* are in general similar to those which result in chronic vaginal leucorrhœa. They are such as are implied in the terms leucophlegmatic temperament or scrofulous diathesis. Persons who come under this description may be thin or quite fleshy. In either case such persons are remarkably prone to suffer from the least exposure to cold, damp weather, and the immediate consequence of such suffering and exposure appears in the form of some blennorrhœa. These two circumstances, of sensitiveness to the cold dampness, and blennorrhagic discharge in consequence of it, are characteristics of this particular temperament. This constitutional predisposition is the one which most frequently leads to leucorrhœa, whether vaginal or uterine, or both, in young girls.

But after the accession of puberty the same constitutional influences may, and indeed constantly do, induce leucorrhœas, but in a less direct manner. The principal diagnostic characteristic of uterine leucorrhœa is its relation to menstruation, those forms of leucorrhœa which appear to be unaffected by the menstrual function being supposed to be purely vaginal, while those which are greatly aggravated either immediately before, or during, or immediately after the menses or menstrual period, are considered to belong more especially to the uterus.

And there are several varieties of uterine leucorrhœa considered with reference to the menstrual function. Thus, in young women of a delicate constitution the accession of the catamenia may be preceded by two or three monthly attacks of leucorrhœal discharge. This may be considered as a forerunner, and a truly uterine if not a vicarious secretion. Again, in many cases of suppressed menses the proper menstrual flow is replaced by a leucorrhœa, which appears regularly at the proper monthly periods, continues the usual number

of days, and perhaps discharges about the quantity which would correspond to natural menstruation. Where the menses themselves are normal and regular a leucorrhœa may appear in the intervals, which will greatly increase in quantity immediately before the appearance or immediately after the subsidence of the menses. In some of these cases the leucorrhœa encroaches more and more upon the menstrual flow, until it finally supersedes it altogether; and in the severer forms of this leucorrhœa it may produce menorrhagia, or true uterine hæmorrhage, which, like the former variety of leucorrhœa just mentioned, may also occupy the intervals and increase just before and just after the monthly periods. Again, as at the accession of the menses, so also about the time of the cessation of the menses, the few last periods are often marked by the occurrence of leucorrhœal discharges, either alternating with or appearing in the place of the usual menstrual flow. In many persons of a chlorotic temperament, leucorrhœa replaces the menses entirely, and finally, after child-bearing or after abortion a white, inodorous discharge will sometimes make its appearance and continue for months. In the case of spontaneous abortion this discharge will either tend to prevent subsequent conception, or, where that takes place, it will predispose to successive abortions. But this result will not be so much due to the discharge itself, although apparently its immediate cause, as to the morbid condition of the womb which produces the discharge.

Those forms of leucorrhœa which appear under the above-mentioned conditions may be considered as arising from the uterus, and chronic endometritis, whether general, corporeal or cervical, will be discovered upon making an examination by means of the speculum. In the great majority of cases the uterine leucorrhœa is complicated with a similar discharge from the vagina; and, on the other hand, those disorders of the vaginal mucous membrane which induce uterine leucorrhœa and chronic endometritis may be included among its constitutional causes.

Among the *special* or provoking causes of chronic endometritis and uterine leucorrhœa are to be ranked principally those influences which are incidental to the married state. Of these, excessive sexual intercourse is perhaps the most frequent and efficient. Similar in effect are the cold water and other injections resorted to by many for particular purposes. Child-bearing, abortions, and in fact all other influences capable of producing acute inflammation of the mucous coat of the womb, and consequent acute catarrhal discharge, are also to be classed as causes of similar chronic disorders. This is equally true

whether we consider the less violent and longer continued action of such influences to have resulted in a chronic inflammation, or whether this latter form of disease be but the continuation of the acute inflammation itself. And in general all those influences—mechanical, functional or sympathetic—which disturb the womb without exciting inflammation of its deeper tissues, may result in these varieties of subacute mucous inflammation, of which the leucorrhœal discharge is at once the evidence and the consequence.

Treatment of Endometritis and Leucorrhœa.

The remedies herein laid down will be found applicable to the various forms of endometritis and leucorrhœa. These cases are to be treated according to homœopathic principles—the case examined in its totality, and that remedy selected which is the nearest simile in its pathogenesis of the pathological and symptomatic array presented by the patient.

Remedies for Leucorrhœa.

1. Alum., Calc. carb., Creas., Merc. sol., Puls., Sep. 2. Amm. carb., Bov., Carbo veg., China, Ferr., Graph., Lyc., Phos., Sabina, Sil., Sulph. 3. Agaric, Aletris, Aralia, Ars., Borax, Canth., Carbo an., Caust., Cham., Cocc., Erigeron, Gelsem., Hedeoma, Helonias, Hydrastis, Hypericum, Iodium, Kali carb., Leptand, Lil. tig., Magn. carb., Mez., Natr. c., Natr. m., Nitric ac., Phos. ac., Podoph., Ruta, Stann., Sulph. ac., Zinc, Zizia.

Aconite is the only remedy in those forms of this disease where there is much irritability of the system, with fever and fear, thirst and vertigo in rising or sitting up. Menses late and scanty.

Æsculus hippo. Leucorrhœa, with lameness in the back, across the sacro-iliac articulations, and great fatigue from walking, because that part of the back gives out in walking even but a little way.

Agaricus mus. Where there is much itching externally and internally, with very profuse and dark-colored leucorrhœa.

Aletris far. General and local debility from protracted illness, loss of fluids or defective nutrition.

Alumina. Where the leucorrhœa occurs either before or after the menses; it is acrid and profuse. Relieved by cold washes. Transparent and mucous, running down to the heels in large quantities.

Ambra grisea. Leucorrhœa only at night. Stitches in the vagina before the discharge. Leucorrhœa of bluish-white mucus.

Ammon. c. Violent acrid leucorrhœa; sometimes burning, watery discharges from the uterus. Menses short, scanty, dark.

Ammon. mur. Leucorrhœa, with distension of the abdomen. Leucorrhœa like the white of an egg after a pinching pain around the navel. Brown, slimy leucorrhœa after every discharge of urine.

Anacardium o. Great loss of memory. Leucorrhœa, with itching and soreness. Maliciously inclined.

Antim. crud. Discharge of an acrid water from the vagina, which causes a sensation of biting down along the thighs. Amative.

Aralia. Leucorrhœa of an acrid character and offensive odor.

Arsenicum. Leucorrhœa whilst standing and emitting flatulence; leucorrhœa thick and yellow, corroding the parts which are touched by it. Great anxiety. Menses profuse.

Baryta carb. Sanguinolent mucous leucorrhœa, with beating of the heart, pain in the back and weakness even unto fainting.

Belladonna. Leucorrhœa, with colic; the pains come suddenly, and finally cease as suddenly as they came. Menses profuse, smell bad.

Borax v. White, albuminous leucorrhœa, with a sensation as if warm water were flowing down. Downward motion unpleasant.

Bovista. Leucorrhœa after the catamenia like the white of an egg, coming away whilst walking; or it may be yellowish-green and corrosive.

Calcar. carb. Leucorrhœa like mucus or like milk; it may be discharged more whilst urinating, and there may be heat and itching of the vulva.

Cantharis. Discharge of bloody mucus after urinating.

Carbo animal. Watery leucorrhœa, particularly when walking or standing. It may be burning or biting, and may stain the linen yellow.

Carbo veget. Profuse leucorrhœa only in the morning when rising. Milk-colored, excoriating the parts. It may be thick and yellowish, or white. Rawness and soreness of the vulva during the leucorrhœa.

Causticum. Leucorrhœa, particularly at night.

Chamomilla. Yellowish, smarting leucorrhœa, particularly after a meal.

China off. Leucorrhœa before the menses, with painful pressing toward the groins and anus. Bloody leucorrhœa, with occasional discharge of black clots or fœtid, purulent matter, with itching and spasmodic contraction in the inner parts.

Cinnabar. Leucorrhœa, causing during its discharge a pressing in the vagina.

Coccus cacti. Leucorrhœa, consisting of mucus, preceded by drawing and thrusting pains in the inguinal, vesical and pubic regions.

Cocculus. Scanty, irregular menses, with leucorrhœa between the periods, or leucorrhœa instead of the menses. Leucorrhœa like serum, mixed with a purulent, ichorous liquid.

Coffea. Profuse discharge of mucus and sometimes blood from the genital organs, which are very sensitive and itch voluptuously.

Conium m. Leucorrhœa of white, acrid mucus, causing a burning or smarting sensation. The leucorrhœa may be milk-colored and painful. Excoriating leucorrhœa.

Creasote. Leucorrhœa, with great debility, particularly of the lower extremities. It may be mild or acrid, causing much itching.

Drosera. Leucorrhœa, with labor-like pains.

Erigeron. Profuse, with spasmodic pains, and irritation of the bladder and rectum; usually scanty menses.

Ferrum. Leucorrhœa like watery milk, smarting and corroding when first appearing.

Gelseminum. White leucorrhœa; heaviness and fullness in uterine region; aching across bottom of back. In gushes day and night. Constipation.

Graphites. *Profuse leucorrhœa;* also great weakness in the small of the back. Great lassitude.

Hedeoma. Yellow leucorrhœa, causing itching, burning and excoriation.

Helonias. Leucorrhœa, with pain in the lower part of the back, soreness and tenderness of the breasts and nipples, particularly at the catamenial period.

Hydrastis. Yellow leucorrhœa, of a very tenacious character; long threads or pieces in it; sometimes offensive.

Hepar s. c. Leucorrhœa, with smarting of the vulva.

Hypericum perf. Leucorrhœa, with delayed menses, palpitation of the heart, pressure in the small of the back and heaviness in the lower part of the bowels.

Ignatia. Violent labor-like pains, followed by a purulent, corrosive leucorrhœa. Low-spirited women, who sigh a great deal. Weak feeling at the pit of the stomach.

Iodine. Leucorrhœa, corrosive even of the thighs and the linen. The leucorrhœa is aggravated at the menstrual period.

Kali bi. Leucorrhœa which may be drawn out in long strings. It is often yellow, stiff and ropy.

Kali carb. Yellowish leucorrhœa, with itching and burning in the vulva.

Kali hyd. Thin, watery or acrid, corrosive leucorrhœa, with itching in the vulva.

Lachesis. Leucorrhœa from three to eight days before the menses, copious, smarting, slimy, stiffening the linen and staining it green; also in cases where the menses are too short and feeble, although they appear at the regular time.

Leptandria. Leucorrhœa, with ulceration of the os uteri; "it is sometimes fœtid, with shreds of mucous lining in it; irritation of the bladder and rectum; frequent pain at the bottom of the bowels; general languor and prostration; heat and dryness of the skin."

Lilium tig. Thin acrid discharge, leaving a brown stain. Yellow leucorrhœa after the menses. It seems necessary to support the genital organs by pressing upward with the hand.

Lycopodium. Profuse leucorrhœa at intervals; it may be milky; it may be blood-red, particularly before the full moon. The great characteristic is *a cutting pain*, attending the leucorrhœa, *across the hypogastrium from right to left.*

Magnesia mur. Leucorrhœa immediately after every stool, if the stool be hard and crumbling as it escapes from the verge of the anus. Leucorrhœa at intervals, followed immediately by discharge of blood.

Manganese. In women whose bones are affected in a manner to be very sensitive to the touch.

Mercurius. Leucorrhœa always worse at night; it may be itching, burning, smarting, corroding, with sensation of rawness, but the symptoms are always worse at night. Discharges of flocks, pus and mucus as large as hazel-nuts. Dissatisfied, fault-finding.

Mezereum. Albuminous leucorrhœa, chronic and malignant.

Muriatic acid. Leucorrhœa, with exceeding soreness of the anus from piles or from fissures. Cannot bear the slightest touch upon the anus, which often itches violently, and is not relieved by scratching.

Nat. carb. Leucorrhœa yellowish; putrid leucorrhœa, ceasing after urination.

Nat. mur. Leucorrhœa early in the morning after colic; it may be transparent, white, thick mucus. Greenish leucorrhœa, particularly when walking.

Nitrum. White leucorrhœa, with lameness in the small of the back.

Nicolum. Profuse, watery leucorrhœa, particularly after urinating.

Nitric acid. Leucorrhœa consisting of mucus which can be drawn out; flesh-colored; leucorrhœa of greenish mucus; cherry-brown and fœtid leucorrhœa.

Nux mosch. Leucorrhœa of women who always awaken with a very dry tongue.

Nux vom. Fœtid leucorrhœa, tinging the linen yellow.

Petroleum. Profuse leucorrhœa every day; also with lascivious dreams at night.

Phosphorus. Smarting leucorrhœa, drawing blisters. Profuse leucorrhœa, with great sense of weakness in the abdomen. The leucorhœa is often corrosive.

Phosphoric acid. Profuse, yellowish leucorrhœa, with itching, some days after the menses. *Leucorrhœa after the menses.*

Platina. Albuminous leucorrhœa only in the daytime, particularly in women who have difficult stools from the glutinous nature of the excrements. Horrifying thoughts.

Plumbum. Leucorrhœa, with a continued sense of drawing in from the abdomen to the back.

Podophyllum. Leucorrhœa consisting of thick, transparent mucus. Leucorrhœa, with constipation and bearing down in the genital organs.

Prunus spinosa. Leucorrhœa, making the parts sore and tinging the linen yellow.

Pulsatilla. Burning leucorrhœa, thin and acrid. Milky leucorrhœa, with swelling of the vulva, particularly after the menses. Leucorrhœa of thick, white mucus, especially when lying, or before and during the menses, with cutting in the abdomen.

Ranun bulb. Leucorrhœa at first mild, afterward acrid and corrosive.

Ruta g. Corrosive leucorrhœa after suppression of the menses.

Sabina. Yellowish, ichorous, fœtid leucorrhœa and painful discharges of fœtid blood every two weeks. Leucorrhœa after suppression of the menses, inclining to be corrosive. Leucorrhœa, with itching of the pudendum. "Corrosive leucorrhœa, making the thighs sore, and causing intense itching during pregnancy and after delivery."

Sanguinaria c. Leucorrhœa of the climacteric period; it continues after the menses have ceased.

Sarsaparilla. Leucorrhœa on walking, particularly in women who have a sharp pain in the urethra at the close of urination.

Secale corn. Leucorrhœa in thin scrawny women with prolapsus uteri.

Sepia. Leucorrhœa, with stitches in the neck of the uterus. Leucorrhœa, with much itching in the vagina. Sanguineous-mucous, yellowish, watery or mucous leucorrhœa. Discharge of green-red

fluid from the vagina during pregnancy. Leucorrhœa worse after urinating. Leucorrhœa like pus, like milk, flowing only in the daytime, excoriating the thighs. Profuse mucous leucorrhœa, having a fœtid smell, with drawing pains in the abdomen.

Silicia. A painful smarting leucorrhœa after taking acids. Leucorrhœa during urination. Milky leucorrhœa in paroxysms, preceded by cutting around the umbilicus.

Stannum. Leucorrhœa, with great loss of strength; it may be transparent mucus, it may be yellowish. Chest weak in talking.

Strontiana. Leucorrhœa while walking.

Sulphur. Leucorrhœa smarting like salt. Leucorrhœa preceded by colic. Burning and painful leucorrhœa, making the vulva sore.

Sulphuric acid. Leucorrhœa of sanguineous mucus, with a sensation as if the menses would appear. Milky or transparent leucorrhœa, without sensation. Very weak, with sensation of trembling all over; the weaker she feels the more she trembles.

Tabacum. Leucorrhœa of serous liquid after the menses.

Tart. em. Leucorrhœa consisting of watery blood, liable to occur in paroxysms; worse when sitting.

Trillium. Leucorrhœa, "fœtid, yellowish, of the consistency of cream;" often excessive, and weakening the patient.

Zinc. Leucorrhœa of bloody mucus after the menses, causing an itching. Cutting colic, succeeded by leucorrhœa. Leucorrhœa consisting of thick mucus for three days before and after the menses.

Zizia. "Leucorrhœa, with retarded or suppressed menses; it may be acrid or bland and profuse; the menses may set in for one day, then stop, and be followed by leucorrhœa, at first acrid and afterward bland and copious; chronic leucorrhœa, attended by irritation of the spine or brain."

Metritis.

True parenchymatous metritis, or inflammation of the deeper tissue and substance of the womb, is a disease comparatively rare. It must be distinguished from endometritis, or inflammation of the mucous coat of the womb, which has just been described, and also from peritoneal metritis, or more properly puerperal peritonitis, inflammation of the peritoneal or serous coat of the womb and peritoneum generally. This latter disorder usually arises subsequent to parturition, and has received attention in its proper place.

Inflammation of the womb may be acute or chronic, and in either form may attack the uterus in each of the different conditions of

female life. It may be confined to the cervix uteri—as in fact it is in a great proportion of the cases, especially in the chronic form—or it may extend also to the fundus. It may be restricted to the proper tissue or substance of the uterus, or it may also involve either its serous covering or its mucous lining, or both. Acute inflammation of the uterus is seldom seen before puberty—never, perhaps, except as the consequence of mechanical injury. It very seldom appears in the virgin uterus, during pregnancy, or after the change of life. It is much more common in the married state and in connection with parturition. Rokitansky is of the opinion that in acute metritis the mucous lining is affected primarily, and that "this is scarcely ever the case with the uterine tissue, as far as can be demonstrated by the pathological anatomist, with the exception of the reaction following traumatic influences, especially of the vaginal portion."

The *causes* of inflammation of the womb are similar in the acute and in the chronic form, and they are here enumerated in common to avoid repetition. Among the most frequent causes—especially those which influence unmarried women—may be ranked exposure to cold while menstruating, and consequent sudden suppression of the menstrual flow, and exposure to cold soon after the monthly period, when, although the menses have subsided, the womb still remains in a highly congested and excessively sensitive condition. Great physical exertion, such as walking, during the monthly period may result in inflammation of the womb; excessive or violent sexual intercourse; the use of cold water or astringent or irritating injections; the extension of disease from the vagina or from the ovaries; wounds, violence or mechanical injuries of any kind; foreign bodies in the uterus; polypi, tumors or other adventitious growths may induce inflammations of different degrees of violence in different constitutions and in the different conditions of female life.

Exposure to cold and taking cold soon after child-bearing are the most common causes of acute metritis; and the inflammation which results in such cases, especially if complicated with suppression of the lochial discharge, may prove rapidly fatal. This is a much more severe and dangerous complication than suppression of the menstrual flow, since it may lead directly to uterine phlebitis.

Still another form of exposure to cold—or rather the taking cold in another variety of cases—deserves especial mention here, both from the frequency of the occurrence of such cases and from the almost invariably fatal nature of their termination. These are cases —lamentably frequent in these times—in which what is called "an

operation" has been performed in the early states of pregnancy for the purpose of inducing abortion. Here the violence offered to the parts, aggravated by exposure and over-exertion in traveling—often unavoidable in such cases—not unfrequently brings on inflammation, whose approach is marked by very severe chills, accompanied by intense anguish, excessive tenderness of the abdomen, rapidly increasing prostration, and followed by death, sometimes in seventy-two hours. In such cases the inflammation involves the serous coat of the womb, constituting a true peritoneal metritis of the most violent form, and of a character very closely allied to traumatic erysipelas.

Such are the formidable dangers which attend this violation of the laws of God and man. In her hour of extreme peril, in the midst of the most intense physical suffering and distress of mind, and in the immediate prospect of eternity, the dismayed female confesses her own crime and reveals the name of the person, often a practicing physician, but sometimes a male or female abortionist, who, undertaking to commit infanticide only, becomes involved in a double murder; for in the eye of the law whoever engages in a criminal act *becomes responsible for all the consequences of his undertaking*, however little some of them may have been expected or desired.

There are men who assume the sacred profession of physician, not to save but to destroy life, who, in defiance of all human and of all divine law, strew their pathway, not with living flowers, but with the withered blossoms, the shattered wrecks and crushed remains of embryonic life—monsters in human form, fiendish ghouls, who devour little children, who live by the slaughter of the innocents, and who qualify themselves for their future and eternal state by this lifelong destruction of such as are of the kingdom of Heaven. The murderer of a single individual we execute or seclude for life, but before such a murderer by wholesale and by profession, before such a destroyer of entire generations, human justice stands appalled, and, mournfully conscious of the utter insufficiency of all human means to arrest or to punish this gigantic social evil, sadly and sternly bids the unrepentant destroyer of "these little ones" fill up the measure of his crimes and await the dread summons of the Eternal Judge.

Symptoms.—The first symptoms which indicate the accession of acute inflammation of the womb are similar to those of endometritis, but more severe. Thus we find rigors followed by feverishness, heat in the pelvic region, deep-seated pain in the vagina, paroxysms of pains in the back, which dart through to the symphysis pubis, and

extend to the groins, and even down the thighs. The constant pain is less severe, but is aggravated by coughing and sneezing, and is accompanied by a sensation of bearing down; there is also usually a painful *sense of weight in the pelvis.* The pelvic pain is usually accompanied by vesical and rectal tenesmus. These are the most prominent symptoms where the cervix is principally affected.

But where the inflammation extends to the fundus, there is also pain in the hypogastric region, which is tender to the touch. In this case there is often a complication of the inflammation of the substance of the womb with that of its outer or peritoneal coat. The hypogastrium is excessively sensitive, the painfulness is greatly aggravated by the least movement or pressure upon the parts, and the febrile condition is far more general and severe. The disorder extends by contiguity or sympathy to the neighboring organs, and there is tenesmus of the rectum and difficult and painful micturition. The pains are of that sharp, lancinating character, and aggravated by the least motion, which is so peculiar to inflammation of the serous tissues. The pulse is quick, full and hard; the skin hot and dry; the thirst may be extreme; the bowels constipated; the stomach irritable; the tongue dry and furred; and there is *often a disposition to faint, especially on sitting up.* Headache may also be present, with redness of the cheeks and flushing of the face, disposition to delirium, twitching of the tendons, and alarming collapse of the vital forces. This accession of what is called the typhoid condition presents a formidable group of symptoms, which may appear in metritis occasioned by sudden and severe repression of the menstrual flux, with reabsorption, perhaps, of matters which should have been eliminated. In such cases the return of the menstrual flow indicates a favorable change in the condition of the patient. But the appearance of the menstrual flow in inflammation of the uterus from other causes, whether complicated with peritonitis or not, is not regarded as a favorable sign.

The *physical signs* of acute metritis are—sensitiveness to pressure on the abdomen over the region of the womb; the cervix uteri is found, upon examination with the speculum or by vaginal touch, to be swollen and the os gaping; pressure upon the cervix or upon the body of the womb, when made through the fornix vaginæ, gives rise to excessive pain; the vagina is usually hot and dry, unless endometritis coexists, in which case the usual secretion consequent on that condition will be found to be present. Acute metritis may be confounded with active congestion of the organ, or with pelvic peri-

tonitis, cellulitis or endometritis. It can only be diagnosed from the first named of these conditions by the progress of the case. It may be known from pelvic peritonitis, according to Dr. Thomas, by "mobility of the uterus, which would be fixed if it existed; by sensitiveness being confined to the uterus, and not existing over the pelvis, and by the enlargement and tenderness of the os and cervix." From cellulitis it may be known, according to the same authority, "by absence of a phlegmonous, tender mass in one broad ligament or near the uterus." If the case be one of endometritis, "it will be known by the fact that the uterus will not be found so markedly enlarged, nor so exquisitely sensitive upon pressure; the constitutional signs will not be so grave, and there will be the peculiar discharges marking this disease."

The very great amount of nervous organization connected with the womb, and the intimate relation and profound sympathy of this organ with the great nervous centres, render inflammation of its substance a very grave disease. And the severe headache, vanishing of sight, and even diminution of hearing, nausea, vomiting, excessive debility, fainting turns and other important constitutional symptoms which may appear in such cases, indicate the serious nature of the affection itself and the extent of its influence over the entire system. In the advanced stages of the more severe forms we find tympanitis, hiccough, low delirium, coldness of the extremities and discharge of offensive sanies from the vagina. These symptoms, especially if developed in spite of proper homœopathic treatment, indicate approaching dissolution.

Termination or Consequences.—I. Acute metritis may terminate in resolution or simple abatement of the symptoms, and this mode of termination is often seen under homœopathic medication. The fever runs a rapid course, especially in its severer forms, and where its progress is not arrested by the appropriate treatment, it may destroy life in three days, or even in two, or in cases of less intense severity it may prove fatal at the end of one week or more. In these continued uterine fevers the consequences of the fever may destroy life after the original disease has subsided. Intermediate between the prompt recovery and the fatal termination of the case from the severity of the primary inflammation are various forms of disease, which may be regarded as the consequences of the original disorder, and which may either destroy life or establish themselves as varieties of chronic disease of the womb. It may also terminate in the formation of abscess.

II. HYPERTROPHY, either with or without induration, we find among the immediate consequences of acute inflammation. The hypertrophied womb usually attains to twice its natural size, or even more. This increase in size is of course accompanied with increased weight, and of course affects the position of the womb in the pelvis, and its relation with the other pelvic organs. This actual thickening of the substance of the walls of the uterus must not be confounded with physometra or uterine tympanitis.

A certain amount of *induration* usually appears in connection with hypertrophy of the womb. This is the common result of inflammation, particularly of the cervix, and especially where this part of the uterus has been subjected to frequent inflammatory attacks. Induration is said to be simply the result of a bygone inflammation, but it is usually the consequent of such inflammatory action as is accompanied by hypertrophy or permanent thickening of the cervix, and so of those cases which assume the chronic form of metritis. This condition is very rare in the young and unmarried, but not uncommon after matrimony. Induration may be, as above stated, the simple result of repeated inflammation, or it may be the primary stage of scirrhous hardening and cancerous ulceration.

III. SOFTENING of the walls of the womb, or *ramollissement*, is another and more grave sequence of inflammation. This is sometimes found to be the condition of the uterus in women who have died of acute inflammation of this organ. The tissues of the uterus in such cases are found dark-red, swollen, softened and friable, with even disposition to gangrene from decomposition of the unhealthy (purulent) blood with which these tissues are engorged.

IV. GANGRENE is a more rare but necessarily fatal termination of acute metritis. This may result directly from violent inflammation, and occurs at any period from the third or fourth to the seventh or eighth day. It may result from such inflammation as occurs in consequence of strangulation of the uterus in cases of procidentia, *from the death and consequent decomposition of the fœtus in utero*, or finally it may appear in connection with phagedenic ulcers which occupy the inner surface of the womb. Only the former of these three causes of gangrene concerns us at present, but it seems best to give a complete picture of this rare form of uterine disorganization while under consideration. This gangrene generally begins in the cervix, and is confined to it. According to the authorities, it is impossible to detect this form of disease before it terminates in death, since the cessation of the pain and of the fœtid discharge from the vagina may

occur from other and independent causes. But a careful study of the symptoms present, and a faithful application of the corresponding homœopathic remedies, will enable the physician to do all that human means can accomplish to arrest the mischief, even if he does not certainly know that such disorganization is imminent. "The pulse is low, quick, concentrated; the patients are seized with shiverings, startings, and even convulsive shakings of the body, without any apparent cause; and at the same time they cease to feel any pain in the uterus, or but a less degree; they fall into a state of oppression or extraordinary uneasiness, which is but little short of fainting, and the extremities become so cold that scarcely any warmth can be detected in them." Such is the description, given from actual observation, of uterine gangrene. As the disease advances other and still graver symptoms appear, which threaten the speedy close of life if not promptly arrested: from the vagina is discharged a brownish liquid of exceedingly fœtid odor, a cadaverous-smelling diarrhœa sets in, and cold, clammy perspiration appears over the whole body, or on some parts of it only, the features change, and the patient sinks into a prolonged coma, with or without delirium. With symptoms so strongly marked the physician would have no difficulty in selecting the proper remedy. Whether this would prove sufficient to arrest the disorganization would depend upon how much progress it had already attained and upon the constitutional strength of the patient. In some cases of gangrene of the uterus this organ has been known to become detached from the body, expelled through the vagina, and the patient nevertheless survive this terrible accident.*

V. Pus may be infiltrated into the tissue of the uterus where the inflammation is very severe; and the reabsorption of this purulent formation, especially in cases of puerperal inflammation, gives rise to *uterine phlebitis*.† In this case both the veins and the lymphatics become the receptacles of the puriform matter, which, lodging in them in different places, leads to the formation of fresh abscesses.

V. Effusion of coagulable lymph is another consequence of acute metritis, especially in those cases in which the serous coat of the uterus is involved. The adhesions which result from the coagulation of this serous effusion, by confining the ovaries and especially the fimbriated extremities of the Fallopian tubes to the neighboring parts, may become the occasion of sterility or of extra-uterine pregnancy, preventing these extremities from embracing the ovaries.

Acute metritis, which occurs in pregnancy from whatever cause,

* Jahr on *Diseases of Females.*

† See *Puerperal Peritonitis.*

will commonly result in the death of the fœtus, and the secondary inflammation of a very low form which is slowly developed in the womb in consequence of the retention of such blighted embryos may even lead to the death of the mother. So intimate and profound is the sympathy between the life of the mother and of the fœtus *in utero*, that while the death of the former almost necessarily leads to the destruction of the latter, the death of and subsequent putrefaction of the fœtus, where it is not expelled from the womb, may result in fatal gangrene of that organ. A remarkable deathly look, sunken appearance of the eyes and dark discoloration of the lids, together with a peculiar deathly feeling—*malaise*—which pervades the entire system of the patient without any especial assignable cause, may be considered ground of suspicion of the death of the fœtus *in utero*. Cases have been known in which the womb retained within itself and preserved from decomposition a blighted fœtus which had attained the age of three months before its death. In these cases the constitutional symptoms attracted attention to the examination of the case before any specific indications were given by uterine pains or vaginal discharge. In such cases the womb may seek to retain the product of conception till the full period, and then throw it off. Of course the farther advanced the ovum is before its vitality is lost, the more serious are the symptoms which ensue if it is retained in the womb. In many instances the product of conception, blighted in the first weeks, is entirely reabsorbed, or at any rate disposed of without being thrown off externally.

Areolar Hyperplasia—Chronic Metritis.

Dr. T. Gaillard Thomas describes the condition known as chronic metritis under the title "Areolar Hyperplasia, or Diffuse Interstitial Hypertrophy of the Uterus." It is a disease of nutrition, he says, "which very frequently affects the uterus, and is characterized by congestion, hypergenesis of the connective tissue of the organ, and hyperæsthesia of its nerves." This condition has been described by various authors as engorgement, infarct, irritable uterus, inflammatory hypertrophy, and by a variety of other titles. Either the entire womb may be involved, or, which is the most common form, the disease may be limited to the cervical portion; or, again, the body alone may be affected, while the cervix is nearly normal. The fact that this disease occurs most frequently in the cervix may be accounted for by this portion of the organ being more exposed to external influences than is the body or fundus. It generally results from parturi-

tion or abortion, and is most frequent in multiparæ, nulliparous women being almost exempt, as well as virgins.

The *causes* of chronic metritis, or hypertrophy of the connective tissue of the uterus, are predisposing and exciting. The first named are—constitutional taint; long-continued nervous or physical prostration or general debility; childbirth, or imprudence during convalescence from childbirth; and puerperal peritonitis. The exciting causes are generally connected with parturition or abortion. The disease may result from the subsidence of an acute inflammatory attack of the lining membrane or parenchyma of the womb.

The *symptoms* of this disease are multiform. They are not only due to the pathological condition of the uterus, *per se*, but very many of the most troublesome features of such cases are due to a sudden blazing up, as it were, of the smouldering inflammatory fire with which the course of the disease is occasionally marked; to displacements of the organ, to which its increased bulk and weight necessarily render it liable; to the pressure of the enlarged and heavy womb upon the pelvic viscera and nerves. Dr. Thomas gives the following enumeration of these symptoms, all of which, however, are not present in every case: "If the cervix alone be affected there are—pain in back and loins; pressure on bladder or rectum; disordered menstruation; difficulty of locomotion; nervous disorder; pain on sexual intercourse; dyspepsia, headache and languor; leucorrhœa from secondary endometritis, or granular degeneration of mucous membrane. If the disease be general or corporeal, the symptoms generally resemble very closely those of corporeal endometritis. The following are especially indicative of the affection: A dull, heavy, dragging pain through the pelvis, much increased by locomotion; pain on defecation and coition; dull pain, beginning several days before menstruation, and lasting during that process; pain in the mammæ before and during menstruation; darkening of the areolæ of the breasts; nausea and vomiting; great nervous disturbance; pressure on the rectum, with tenesmus and hæmorrhoids; pressure on the bladder, with vesical tenesmus."

Vaginal touch will generally discover that the uterus, in consequence of its abnormal weight, has descended in the pelvis, and is perhaps lying upon the muscles of the perineum. The cervical portion will be found to be more or less enlarged and painful on pressure, while the os is usually gaping to the extent, perhaps, of admitting the tip of the finger. Pressure upon the cervix will give rise to considerable pain, and if the finger be passed high up into the rectum and pressure made upon the body of the womb, an extraordinary

degree of sensitiveness will be discovered; the pain produced in some cases occasioning fainting. The womb is almost always displaced—usually retroverted. The use of the uterine probe will show with a sufficient degree of accuracy the extent to which the enlargement of the womb has progressed, as well as reveal the degree of sensitiveness of the uterine walls. In some cases the cervix is enlarged to such an extent as to act as a foreign body in the pelvis, giving rise to great inconvenience of locomotion, constipation, and rectal tenesmus and vesical derangements of various kinds.

It is important that this disease be distinguished from cancer in its earlier stages. A careful examination and comparison of all the symptoms, subjective and objective, will enable a differential diagnosis to be made. The cancer cachexia is not manifest in chronic metritis; there is a tendency to amenorrhœa in this disease, while in cancer of the womb the tendency is to menorrhagia and uterine hæmorrhage; and again in chronic metritis the enlarged cervix feels like dense fibrous tissue, while in cancer (scirrhus) the cervical tissue feels like cartilage. On this point of differential diagnosis Dr. Ludlam writes: "I have several times resorted to an expedient that has helped me to settle the diagnosis between them. You will do no harm by trying it. It is simply to use the cotton tampon saturated with pure glycerine. If the enlargement is due to plain, uncomplicated cervicitis, the depletion by means of the glycerine will soon lessen the size of the uterine cervix very perceptibly. If, however, the swollen state of the cervix arises from cancerous infiltration or from an interstitial fibroid, the glycerine will not sensibly diminish its bulk." *

The *prognosis* of this disease is not very cheering. It may continue for years, and be relieved at the cessation of the menstrual function, or it may even be cured spontaneously before the change of life sets in. On the other hand, a more serious form of organic disease may grow out of it when this period arrives. It may occasion serious cardiac, pulmonary or other forms of disease, under which the patient may sink. A proper attention to diet, position and other hygienic measures, and a careful selection of remedies, however, may in very many instances, and especially where there are but few or no serious complications, bring about a restoration of health. "It is quite as important to prescribe the proper posture for this class of patients as it is in cases of acute cervical metritis. Keep them in a horizontal or reclining posture, and off their feet, at the month especially. Shopping, visiting, party-going are as injurious as a journey by rail or an

* Ludlam's *Lectures, Clinical and Didactic*, etc., p. 572.

excursion on horseback. Such a patient should let her sewing-machine rest and her servants take care of themselves."—*Ludlam.*

Treatment of Acute and Chronic Metritis.

In cases of acute metritis absolute rest in bed, upon the back, should be insisted upon. The patient should not be allowed to get up upon any pretext, not even for the purpose of evacuating the bladder or rectum. In chronic cases, as is remarked above, while absolute continued recumbency is not necessary, it should be enjoined during the menstrual period, and comparative quietude should be observed at all other times.

1. Acon., Apis, Bell., Bry., Canth., Cham., Coloc., Kali carb., Lach., Nux vom., Puls., Sabina, Sepia. 2. Ars., Carb an., Con., Hyos., Merc. sol., Lyc., Rhus tox., Sulph. 3. Arn., Calc. carb., Carbo veg., Chin., Cocc., Coff., Creas., Crocus, Ferr., Graph., Hep., Ignat., Ipec., Jod., Magn. mur., Opium, Phos ac., Sec. corn., Stram.

Aconite. This remedy is useful where there is a real synochal fever, hard, rapid pulse, hot, dry skin, intense thirst; sharp shooting pains in the whole abdomen, which is very tender to the touch.

Apis mel. Stinging, thrusting pains, similar to those arising from the sting of a bee. Absence of thirst. Urine scanty. Dyspnœa.

Arnica. In cases where the inflammation has been caused by a bruise or a concussion.

Arsenicum. Burning, throbbing, lancinating pains; burning like fire. Great restlessness and anguish, with fear of death. She is sure she will die. Thirst for frequent sips of water, only a little at a time. Cold water aggravates her symptoms. She wants more covering over her—wants to be wrapped up.

Belladonna. The pains are sudden, coming on quickly, and ceasing as quickly after continuing a longer or shorter time. Or there are clutching pains, as from clawing with the nails. Pressure as if all the parts would issue through the vulva. Throbbing headache, with heat, red face and eyes, and throbbing of the carotids. Involuntary flow of urine. Furious delirium. The menstrual or lochial discharges suppressed or very offensive. The parts are very sensitive; she cannot bear the least touch or a jar of the bed even.

Bryonia. The least motion aggravates her sufferings. Her head aches as if it would split open. Sitting up (as if in bed) causes nausea and fainting. Lips parched and dry; mouth dry, and very thirsty. Constipation, the stools being hard and dry as if burnt.

Calcarea carb. This remedy will often be found indicated in persons of leucophlegmatic constitution. The feet feel cold and damp. The head and upper part of the body are in a profuse perspiration; constant aching in the vagina. Thirst for cold water, worse at night. Pulse tremulous, or full and accelerated. Stitches in the neck of the uterus. The history of her case shows that her menses have been too profuse, and returned too often or too soon.

Cantharis. Frequent and almost continual desire to urinate, ineffectual, or with cutting, burning pain, and passing a few drops only at a time, which are often mixed with blood. Burning in the uterine region. The urinary symptoms are of the greatest importance in determining upon the selection of this remedy.

Carbo animal. In cases of chronic or subacute metritis. Inefficient urging to urinate, with painful pressure in the loins, groins and thighs. Great sense of soreness in the pit of the stomach. General sense of lassitude. Leucorrhœa, coloring the linen yellow.

Carbo veg. Much soreness about the vulva, with aphthæ. Aching or pinching in the iliac regions. Languor, weariness and physical depression toward noon, with faintness and hunger. Flatulence, momentary relief from eructations or downward emissions. She wants to be fanned.

Chamomilla. In cases of inflammation which come on in connection with a fit of passion. Heat all over, with thirst and redness of the face; one side of the face red, the other being pale. Great impatience; she can hardly restrain herself to patience and to treat people with civility. Urine abundant and light-colored.

China. The inflammation has supervened upon great loss of blood. She suffers from distension and oppression of the abdomen, which is not relieved by eructations. Much ringing in the ears. The sufferings are increased by the least touch. Painless diarrhœa.

Cocculus. Much paralytic pain in the back and paralysis of the lower extremities. Sensation as of sharp stones in the abdomen on motion. Head and face hot, feet cold. Pulse hard and small. Metallic taste in the mouth. Intense thirst or aversion to drink. Shivering over the mammæ.

Coffea. In cases where the inflammation is induced by excessive joy; she is in a state of ecstasy, and is very sensitive to contact.

Colocynth. Inflammation, which comes on in consequence of violent indignation. Severe colicky pains, causing her to bend double, with great restlessness. Cutting as from knives in the bowels, with great distress, distension of the abdomen; diarrhœa, which is aggravated by

everything which is eaten or drunk. Feeling in the whole abdomen as if the intestines were being squeezed between stones. Full, quick pulse; great thirst; bitter taste in the mouth.

Conium. Burning, sore, aching sensation in the region of the uterus. The urine intermits in its flow. Much vertigo, particularly on turning over while lying down. She usually has a bitter taste in her mouth, and thirst. The pulse is unequal. Some pulsations are smaller than others. The pulse is also irregular; sometimes it beats slower, sometimes faster.

Creosote. Stitches in the vagina, proceeding from the abdomen, causing her to start at every pain. Putrid, acrid, corrosive leucorrhœa. A low form of fever. Putrid fever.

Crocus. Black, stringy discharge from the uterus, rolling and bounding in the abdomen as from a fœtus. Stitches in the abdomen arresting the respiration.

Ferrum. Fiery red face. The bowels feel sore on touching them, as if they had been bruised or weakened by cathartics. Leucorrhœa resembling watery milk.

Graphites. Particularly when the ovaries are affected. Eruptions, tetters and excoriations on various parts of the body. A tendency to obesity.

Hepar s. c. Particularly where there is evidence of a tendency to suppuration. Burning, throbbing pain; chilliness.

Hyoscyamus. Especially if the inflammation be developed by emotional disturbances. If there appear spasmodic symptoms—jerks of the extremities, face and eyelids, etc. In cases which fall into the typhoid state with delirium; the patient throws off the bed-clothes; she wishes to be naked.

Ignatia. Cramps with lancinations; the pains are aggravated or renewed, particularly on touching the parts. The woman is apparently full of suppressed grief. There is sorrow and sighing. An empty feeling at the pit of the stomach.

Ipecac. The patient suffers with a continual nausea; every movement is attended with a cutting pain almost constant, running from left to right. Pain about the umbilicus, extending toward the uterus. A continual discharge of bright-red blood from the uterus. Rapid pulse, with or without thirst.

Jodium. Acute pain in the mammæ, developed by the inflammation of the uterus; the mammæ also become very sore. There is a low, cachectic state of the system, with feeble pulse.

Kali carb. Intense thirst morning, noon and night continually,

and very rapid pulse. Distressing cutting, shooting, darting and stitching pain all over the abdomen, the stitching pains being in the ascendency; the more completely the stitching pains seem to predominate the more certainly will Kali carb. be the appropriate remedy.

Lachesis. She cannot bear any pressure, not even of the clothes, upon the uterine region. She wishes frequently to lift them—not that the abdomen is so very tender, but that the clothes cause an uneasiness. A sensation as if the pains were ascending toward the chest. This remedy is especially indicated in cases where the inflammation is an attendant symptom of the critical age. The pain in the uterine region increases till relieved by a flow of blood from the vagina; not long afterward the same symptoms are repeated. Exacerbation of the sufferings after every sleep, whether by day or at night.

Lycopodium. Cutting pains across the abdomen from right to left. Much rumbling and working in the abdomen, particularly in the left hypochondrium. Red sand in the urine. Much pain in the back previous to the flow of urine. Dryness in the vagina. Discharge of wind from the vagina.

Magnesia mur. Hysterical complaints and spasmodic turns. Uterine spasms extending to the thighs. Constipation of large, difficult stools, which crumble as they pass the verge of the anus.

Mercurius. Lancinating, boring or pressing pains. Much perspiration, which, however, affords no relief. Moist tongue, often accompanied with intense thirst. She is worse throughout the night.

Nux vom. This remedy is very frequently indicated. Pain as if bruised in the neck of the uterus; frequent desire to urinate, with pain. Scalding and burning. Frequent and ineffectual desire to defecate, or passing a small quantity of fæces at each attempt. Much pain in the small of the back, which is made worse by attempting to turn in bed. Heaviness and burning in the abdomen. Much pain in the forehead above the eyes, and fainting spells. The symptoms are aggravated after four in the morning. She is despondent, sleepless, or dreams frightful dreams.

Opium. In cases originating in fright; the fear of the fright still remaining. Flushed face; delirium; soporous. In her lucid intervals she complains of the sheets being too hot for her. She is sleepy, but cannot sleep. Coldness of the extremities. Discharge of fœtid matter from the uterus.

Phosp. acid. In some cases of great debility, with great indiffer-

ence to all about her. Meteoristic distension of the uterus. Slow fever.

Platina. Particularly after confinement if there be excessive sexual excitement. Painful pressure in the region of the mons veneris and genital organs. Voluptuous tingling in the vulva and abdomen. Profuse discharge of thick black blood. Constipation, the stools adhering to the anus and rectum.

Pulsatilla. In mild, yielding, tearful temperaments. Tension and contraction in the abdomen as if the menses would make their appearance, with nausea and sometimes vomiting of mucus. Semi-lateral headache; bad taste in the mouth; nothing tastes good. Absence of thirst. Nightly diarrhœa and scanty urination.

Rhus tox. Particularly after confinement. Worse at night, especially after midnight. Restlessness; she cannot lie still, but must change her position, which affords a few moments' relief. Slow fever, dry tongue. Powerlessness of the lower limbs; she can hardly draw them up.

Sabina. Especially after confinement or miscarriage. Metrorrhagia of clotted and fluid blood, with pain extending from the sacrum or lumbar region to the pubes. Severe stitching in the vagina from before backward. Frequent urging to stool; finally a liquid portion is discharged, followed by a hard portion.

Secale c. Where there is a strong tendency to putrescence. The inflammation seems to be caused by suppression of the lochia or menses. Discharge of thin black blood, a kind of sanies, with tingling in the legs and great debility.

Sepia. Burning, shooting and stitching pains in the neck of the uterus. A constant sense of pressing into the vagina; she feels that she must cross her limbs to prevent a protrusion. A painful stiffness in the uterine region. Sense of weight in the anus. Putrid urine, depositing a clay-like sediment, which is difficult to remove. Icy coldness of the feet. A great sense of emptiness in the pit of the stomach.

Stramonium. The face is bloated with blood. She awakens with a shrinking look, as if afraid of the first object she sees. She desires light and company. She is disposed to talk continually. Strange fancies; she imagines all sorts of absurd things—that the bed is full of creases, or that she is double and lying crosswise, etc. The head is often jerked from the pillow, and then falls back again.

Sulphur. The vulva seems much inclined to become excoriated early in the attack. Frequent flushes of heat, passing off in a little

moisture and faintness. Feet cold, or with burning soles, so that she wishes to find a cold place for them or to put them out of bed. Sense of heat in the crown of the head. She feels suffocated; she wants the doors and windows open. Very light sleep; she awakens very frequently. Weak, fainty spells, occurring frequently during the day. After having improved under other remedies, she gets worse again until she receives a dose of Sulphur. She feels unusually faint, with strong craving for nourishment from eleven o'clock till twelve at noon.

The remedies mentioned under the articles on Endometritis and Leucorrhœa may also be consulted with advantage, more especially those belonging to the category of "New Remedies." It should be borne in mind that in the treatment of a case of chronic metritis a remedy should be chosen with the utmost care, a due regard being paid to the totality of the symptoms, and its administration continued for some time, as no improvement can be perceptible at once, and the rapid changing of medicines might possibly lose to the patient a good chance of recovery.

Irritable Uterus—Hysteralgia.

The nervous disorders of the uterus, which in their various forms are included under the names of Hysteria, Hysteralgia, Irritable Uterus, Neuralgia of the Womb, etc., present a class of cases which, although neither structural nor directly functional, are no less important, both from the severe sufferings in which they principally consist and from the complications to which they eventually give rise. Hysteria has already been treated of in full. We shall now call attention to that painful disorder which is known as Hysteralgia or Irritable Uterus, offering a few preliminary remarks, however, upon the subject of

Nervous Irritation.

The two different nervous systems of the human body—the ganglionic and the cerebro-spinal—although distributed to some considerable extent to the same organic structures, possess entirely different functions and susceptibilities. Thus, the ganglionic nervous system is the one which supplies all the organic structures and sustains all the functions of the organic and involuntary life, while the cerebro-spinal nervous system supplies the same structures in their various degrees with the still higher powers of voluntary action, sensation, perception and sensibility. The former has exclusive relation to the

phenomena of nutrition and reproduction, and so its filaments and ganglionic connections are distributed more or less palpably to all the substances and tissues of the body. The latter has more especial relation to sensation, volition, perception and *sensibility;* hence also its fibres are to be found in nearly all the structures of the body, even in those known as involuntary and not directly subject to the voluntary nervous system.

Thus, while the nerves from each of these two great vital centres are supplied alike to almost every structure or tissue in the body, those from each centre have their appropriate and readily distinguishable functions. And the disorders which may arise in connection with the nerves from the ganglionic system are entirely different from those which may arise in connection with the nerves from the voluntary or cerebro-spinal system. In the former case we have *inflammation, congestion, engorgement* in connection with the circulatory apparatus, which is under the immediate and absolute control of the organic or involuntary nervous system. This inflammation may be *active,* and it is then usually considered to be more immediately dependent upon excitement of the arterial circulation; or it may be *passive,* and it is then supposed to be connected with arrest or stagnation of the venous circulation. Thus, organic nervous irritation gives rise to inflammatory congestion, both active and passive, acute and chronic.

On the other hand, the cerebro-spinal irritation gives rise to a purely nervous congestion; that is, to one which corresponds in the nervous system to the inflammation of the circulation in organic irritation. Thus, in disorders which arise in connection with the cerebro-spinal nervous system we have *irritation,* irritability, increased and excessive sensibility; and the susceptibility to this painful irritability is augmented just in proportion to the extent of this form of nervous development in the particular structure. As where the tissues are most vascular there may be the most active inflammation, the most violent congestion, so where the voluntary and sensitive nervous filaments are most abundant, there may be the most excessive irritability, the most distressing sensibility. Such is the case in the most remarkable manner in the uterus. In addition to its necessary relation to the ganglionic nervous system, the womb, although not immediately subject to the voluntary nervous system, *is alive with nervous filaments, and most intimately connected with the entire cerebro-spinal nervous system and sensitive sphere of the whole female body.* The womb and ovaries are the seat of the highest vital

action and functions of the female life; the highest and holiest joys and hopes are associated with the healthy condition of these organs and the proper performance of their functions; and the profoundest suffering and the most extensive and lifelong distress must necessarily result from the disorder of the nervous system connected with them and from the impairment of their functional action.

Inflammation, whether acute or chronic, active or passive, involves some structural change, especially some more or less perceptible derangement of the arterial or venous circulation, and is essentially a disorder of the ganglionic nervous system of organic life. *Irritation*, whether existing in the condition of excessive irritability of the nerves or of positive pain, as in neuralgia, is essentially an affection of the cerebro-spinal nervous system, the nervous apparatus of animal life. And as inflammation may exist, even very extensively, without pain, so pain, or the disorder of the higher nervous system, may exist without inflammation. Inflammation necessarily involves a certain amount of structural change of tissue, as in congestion; but irritation does not involve change of tissue, except perhaps such modification of the substance of the nerve itself as is entirely beyond our minutest scrutiny. In inflammation the development of the disorder is always, perhaps, at the originally affected part, while in irritation the sensation of pain or other evidence of nervous disorder may be at the sentient extremity of the affected nerve, or it may be in some other and remote part. Inflammatory congestion leads to effusion or to suppuration, according to the nature of the tissue which becomes the seat of the morbid action and to the severity of the action itself. Irritation or nervous congestion may result in irritability, excessive sensibility, intense pain, cramps or spasms where the nerves distributed to the muscles are affected, and finally in paralysis from exhaustion or collapse of the nerve-power itself.

As too ready susceptibility to inflammation indicates a weakness of the organic nervous system, so excessive irritability indicates a corresponding debility of the cerebro-spinal nervous system. The weaker the nerves the more sensitive they are, and the less can they bear of opposing influence without being thrown into a state of excessive irritability or pure nervous erethism. But this form of nervous debility, which leads to excessive suffering, does not seem incompatible with a most remarkable power of endurance of pain. Women of delicate constitution and exceedingly irritable nervous system are often seen to endure for days and nights such distressing neuralgias, with entire loss of sleep, as would seem capable of destroying a strong

man. Such pains are often seen to come on with suddenness, to continue with most intense severity for many hours, and often finally to disappear with equal suddenness, and leave no mark or trace of their long-continued presence.

But as in those forms of disease which have been referred to as connected with the organic nervous system pain may precede the acute inflammatory action, so in those forms of purely nervous disorder which have been described as *irritation* the excessive sensibility and distressing irritability may precede such nervous derangement as would actually impair the functional action of the parts. Thus, we find in the first stage of a purely nervous irritation of the uterus no positive failure of its functions, but only an exceedingly great amount of pain in their performance. The menstrual function may be neither prevented nor impaired, otherwise than by an intense and agonizing pain preceding and accompanying it; so in coition, especially if the womb is touched; and so finally in pregnancy, the nervous irritation may not at first prevent the fulfillment of the functions of the uterus, only rendering them exceedingly painful. But such irritation cannot but cause all these functions to become more or less impaired in the course of time.

These nervous affections may be transitory and evanescent, or they may be permanent and lifelong, in accordance with the nature of their causes. But as we have shown that the irritability of the nervous system is in proportion to its weakness, so it will presently appear that debilitating influences are among the most frequent causes of this irritation of the uterus; thus complete recovery can only be possible in those cases in which the patients can altogether escape from these debilitating influences, and also have their dynamic effects entirely remedied and removed by suitable medication.

Irritable Uterus—Hysteralgia—Neuralgia of the Womb.

Irritable Uterus.—In *irritable uterus* the womb is in a painful and tender state, is morbidly sensitive and irritable, the least touch or pressure producing the most exquisite pain, and yet there is no apparent congestion, inflammation or induration.

The principal symptoms which may indicate this condition are—deep-seated pain in the lower part of the abdomen, as if in the pelvis; aching pain in the back and loins, always present, but sometimes much more and sometimes less severe. Upon examination by the touch, or even by the speculum where this is practicable (which is seldom the case in this affection), the os and cervix uteri are found in their normal

condition, except the remarkable sensitiveness to the touch; and, as remarked by Dr. Gooch, who first described this form of uterine disorder as distinct from inflammation, this painful and tender state of the organ is neither attended by, nor tends to produce, change in its structure.

Late writers on female diseases have inclined to consider irritable uterus a very rare form of disease. Thus, Tilt says: "Irritable uterus, as an essential disease independent of inflammation, can only be hysteralgia, a rare disease of which I have only seen two instances, and Scanzoni three." * But even if this irritable uterus is but rarely found as an original disorder, it is still so common, being an almost universal attendant upon displacements of the womb, and it exerts so important an influence upon the entire female economy, that there is little danger of attracting too much attention to it. And in fact under this general head are properly enumerated many conditions and symptoms which nosologists might designate by other names; but these conditions and symptoms are the very things which make up the case of the patient for whom we wish to prescribe, and not for some nosological disease by which she may be supposed to be affected.

The pain is not confined to the sacral and pubic region; it is often felt in the sides of the abdomen, in the hips or in other parts of the body, or it may extend from the back completely around to the groins, the hypogastric region and down the thighs.

In its nature the pain of irritable uterus is as various as is its seat. "It is most frequently described as a dull, aching, wrong feeling in the back, with more or less sense of pressure, weight, dead feeling, heaviness, fatigue or debility. Not unfrequently in the abdomen it is a sore pain, a sharp, needle-like, lancinating pain. With some it is mere soreness, and in very many, after the acute character has subsided, soreness remains often so great that the weight of the bedclothes becomes troublesome. In the hips and down the limbs there is often the same wrong and dull pain, with a sense of fatigue and an inability to move, but sometimes it is sharp, neuralgic and toothache-like, and occasionally excites spasmodic and painful action of the hips, thighs, etc. The sensations are often *pulsatile*, resembling those preceding or accompanying the suppurative stage of inflammation. This beating, 'strumming,' vibrating pain is referred to the womb, vagina, bladder, rectum, etc., and is often very tormenting. A *burning* sensation, or feelings of moderate or severe degrees of heat, is not un-

* *Uterine and Ovarian Inflammation*, London, 1862, p. 228.

common in the vagina, the vulva, urethra, sometimes in the sacral or hypogastric regions, over the whole lower part of the abdomen, and extending to all the anterior portions of the thighs. This is very distressing, and sometimes so severe that patients have declared the burning could not be greater were they to stand perfectly exposed before a hot fire or if coals of fire were placed within them." *

In addition to pain, and very frequently where there is no pain whatever, there are numerous sensations more or less distressing, indicating an irritable state of the uterus and the adjacent organs. Some of these are very common, as sensations of weakness, debility, languor, often with feelings of fullness, pressure, weight; a bearing-down sensation in the back, vagina, rectum; an open feeling, as if there were no support and all the pelvic contents must escape, or as if the patient would "fall in pieces" when in the erect position; a sense of pressure on the rectum, as if the bowels must be moved, or simulating the fullness and weight of hæmorrhoidal tumors. A great sensation of distress, of prostration, often exists after the bowels have been moved. Similar troubles are also experienced about the neck of the bladder and the urethra, especially at its orifice, with frequent, sometimes almost constant, inclination to urinate, and then a burning, scalding sensation.

Such are some few of the multitude of sensations which arise from irritable uterus—sensations which vary in different cases, both in kind and in severity, some persons having some and other persons other symptoms, which may be so mild as hardly to be noticed, or so intensely painful as to be almost unendurable.

These sensations are very severely *aggravated* by every kind of *motion*, such as walking, sneezing, coughing, vomiting, and by every effort or movement of the body which may cause pressure of the contents of the abdomen upon the irritable womb. They are also aggravated in the most remarkable manner by *menstruation*. It may be that a disorder of the ovaries was the original cause, in part at least, of the irritability of the uterus, and that such ovarian disease also tended to produce what is termed dysmenorrhœa. But even if this were so, the irritable uterus could not but render the function of menstruation still more intensely painful. When perfectly quiescent and motionless, even the most irritable womb may be comparatively easy. But physiological stimulus, no less than mechanical violence, arouses its painful irritability; hence, both before and during menstruation in such cases the pain is intense and agonizing, and from whatever

* Hodge, *Diseases Peculiar to Women*, p. 55.

cause the irritability of the uterus arises, dysmenorrhœa is an invariable result.

Leucorrhœa of some kind is also an almost invariable attendant upon irritable uterus. This discharge may be vicarious, as appearing in place of the menstrual flux, or it may appear as a temporary substitute for the menses.

As has been elsewhere shown, irritation of the organic nervous system leads to inflammatory congestion, while irritation of the cerebro-spinal nervous system leads to simple congestion, and to painful sensations or to spasmodic contractions, according to the *sensory* or *motor* nature of the nerve-filaments which are principally involved. This *irritability of the uterus*, if it be supposed to involve each of the classes of nerves distributed to that organ and its appendages, becomes the initial stage of a great variety of disorders of the sexual apparatus and of the entire organism of the female. And this general conclusion has been reached by some who certainly did not understand the reasons which support it. This is fully implied in the expression of a recent and able English author, where, speaking of irritable uterus, he calls it "that scapegoat of uterine pathologists in England."* The whole subject has been discussed in an extended manner and with remarkable clearness and ability by Professor Hodge, to whom, in the preparation of the present work and in common with the profession at large, we are greatly indebted, and to whose work† we would refer all those desirous of a more thorough exploration of this and kindred subjects. The various disorders of the female sexual system Dr. Hodge considers as the causes, the consequences or the complications of *irritable uterus*.

HYSTERALGIA, or NEURALGIA OF THE UTERUS, needs here to be considered as connected with irritable uterus, and yet, as to a certain extent, distinct from it. Irritable uterus is rather a negative condition of susceptibility or excitability from general nervous weakness in the organ, while hysteralgia is a more positively painful condition which may be considered to be added to the irritable state by some special provoking cause. Thus, in cases of irritability of the uterus the patient may be comparatively easy when perfectly at rest, while any exertion, such as rising from the bed, walking, coition or menstrua-

* Tilt, *Uterine and Ovarian Inflammation*, p. 334.

† *On Diseases Peculiar to Women, including Displacements of the Uterus.* By H. L. Hodge, M. D., Professor of Obstetrics, etc. in the University of Pennsylvania. Philadelphia: Blanch•rd & Lea.

tion, may develop the most painful sensations. "In dysmenorrhœa, or painful menstruation, the greater portion of the pain consists, I am convinced, of neuralgia; the deep lumbar pain is decidedly ovarian, and not uterine."—*Tyler Smith.* Here it is evident that both irritable uterus and hysteralgia may depend upon some primary morbid condition of the ovaries.

Symptoms.—"Neuralgia of the neck of the womb often exists independently of any other lesion of this organ or of the body of the uterus: the patients complain of pains that are seated high up in the vagina, without any alteration being perceptible, even after the most minute investigation. Contact is always painful, and sexual intercourse often produces such agonizing distress that the patients would rather bear any other torture."—*Jahr.* "In real uterine neuralgia the pain is situated in the uterus itself, to which it is referred by the patient throughout the attack, or in the uterus and ovaries simultaneously. This pain, generally speaking, comes on suddenly, without being preceded by any premonitory symptom, unless it be slight numbness. A few minutes before and after the attack the patient may be perfectly well and free from pain, whereas during its existence she is often rolling in agony on the bed or the ground. Real neuralgia is essentially intermitting in its character, returning for a limited time at stated intervals during the twenty-four hours. Sometimes the attacks only occur once in the twenty-four hours, sometimes oftener. They last from one hour or two to ten or twelve. An attack is composed of a series of paroxysms, each of which is followed by a period of comparative freedom of variable duration. During the attack pains are also felt in the lumbo-dorsal, ovarian and other uterine regions, and there may be exquisite cutaneous sensibility of the entire abdominal region. All these pains, however, disappear along with the uterine tormina, as soon as the attack ceases, merely leaving for a time numbness and soreness."—*Bennet.*

"That affection which we shall designate *acute hysteralgia* is sometimes the immediate consequence of marriage. The pains in such cases, sometimes of a burning nature, are more generally attended with a sensation of pinching and of forcible pressure in the hypogastrium and pelvic cavity, occasionally extending to the groins and loins. Like cramps and colics, they are intermittent, leaving, however, in the intervals a tenderness and sensibility of the hypogastrium which render them liable to be confounded with slight metritis. In chronic hysteralgia—the real uterine neuralgia—the paroxysms occur without assignable cause, and without anything of an inflam-

matory character. It appears in paroxysms, varying in frequency and regularity."—*Boivin and Duges.*

The *causes* of hysteralgia, or uterine neuralgia, may be of two kinds: First, those influences, termed provoking, which may develop a positive neuralgic condition from an already existing negative state of uterine irritability or excitability. Second, those influences which are capable of developing a true uterine neuralgia where there was no pre-existing irritability. In the first class, as already mentioned, every bodily exertion, the orgasm of coition, or the molimen of menstruation, as in dysmenorrhœa, may easily induce the neuralgic sufferings. In the second class, patients of general nervous temperament, subject perhaps to what is termed "spinal irritation," may experience neuralgic paroxysms in various parts of the body upon every over-exertion. Fatigue, too severe and long-continued labor or any undue exercise in which such persons go beyond their strength, will invariably produce neuralgia; and it requires only some special local or functional influence, such as excessive coition, over-exertion while menstruating, to cause the neuralgia to be developed as an hysteralgia, rather than as a prosopalgia, a megrim or a tic douloureux. And in either class of patients there is no doubt that the local irritation unavoidably arising from displacements of the uterus and its appendages may occasion constant or periodically recurring neuralgic sufferings, which may be felt in the womb itself, in its immediate vicinity, or developed in the epigastric or other region remote from the real and original seat of the disorder.

Treatment.—For the treatment of the various forms of the more painful nervous disorders of the womb and its appendages, irritable uterus, hysteralgia or uterine neuralgia and painful coition, study and compare the following remedies:

1. Bell., Cham., Kali carb., Plat., Puls., Sab., Sep. 2. Carb. an., Con., Croc., Ferr., Gels., Nux vom., Op., Rhus tox., Sec. corn., Sulph. 3. Asaf., Asterias, Bry., Calc. carb., Chin., Cocc., Coff., Creas., Cypriped., Graph., Hyos., Ignat., Ipec., Lil. tig., Magn. m., Mosch., Natr. c., Natr. m., Nux mos., Phos. ac., Thuya, Veratr. a.

Asafœtida. May be indicated in decidedly venous systems and nervous temperaments. Labor-like pains, with cuttings and bearing down. Menses too frequent and too scanty. Hysteria. Hypochondriac, anxious, sadness and apprehension of dying; paroxysms of shuddering. Fits of great joy, with occasional bursts of laughter.

Asterias rubens. General feeling of distress in the womb, as though

something were pushing out. Twitching in the uterus. Feeling of extreme anxiety, as though some misfortune were impending—as though some bad news were about to arrive. The menses are apt to delay.

Aurum. Almost constant thought, more or less intense, of suicide.

Bryonia. The uterine sufferings are increased from the least motion. Desire for things which cannot be had, or which are refused, or not wanted when offered. Frequent nose-bleed.

Calc. carb. Pale, leucophlegmatic, weakly, fearful persons. Fear of going crazy. Vertigo on going up stairs. Frequent spasms. Sense of weight and soreness in the uterus.

Causticum. Pains in the abdomen, causing her to bend double. Fullness and pressure in the abdomen, as if she would burst. Constant but ineffectual desire to eructate. Violent increase of the pain after the least nourishment, or after tightening her clothes round her waist.

Cham. The mental state of the patient leads to this remedy. In all her sufferings there is a vein of ill-humor; she can hardly speak pleasantly; feels like scolding about everything. She often gives vent to her ill-humor in spite of all restraint.

China. Much singing in her ears. A sensation in the abdomen as if it were packed full, which is not in the least relieved by eructation. Worse every other day.

Cocculus. Painful pressure in the uterus, with cramps in the chest and fainting nausea. Suppression of menses, or leucorrhœa in their stead. Feels too weak to talk loud.

Coffea. This remedy also is chiefly indicated by the mental symptoms. Ecstasy. Full of ideas. Quick to act; no sleep on this account. The physical system seems exalted and almost transported by the mental exaltation.

Conium. Stitches extending from the abdomen to the right side of the chest. Vertigo when lying down or turning over. Intermission in the flow of the urine.

Crocus. Sensation of rolling and tumbling in the abdomen. Great mental dejection. Menses suppressed, or dark and stringy.

Ferrum. The patient is weak and nervous. She suffers much, but has very red cheeks.

Graphites. Itching blotches here and there over the body. Menses delay or are suppressed. The patient seems bloated and inclines tc obesity. She is weak and irritable.

Hyoscyamus. She inclines to that kind of insanity which leads to

nakedness—to throw off her dress or the bed-clothes. Uninterrupted, loud laughing at the approach of the menses. She is very much inclined to spasm. Uterine cramps, with pulling in the loins and small of the back.

Ignatia. Uterine cramps, with cutting stitches. Great sense of soreness at the pit of the stomach. Full of grief and sighing. Brooding over imaginary troubles.

Ipecac. Much pain about the umbilicus, extending toward the uterus. The most of the distress is about the navel, but it runs off into the uterus, the real seat of the disease. One continued nausea.

Kali carb. Stitching pains about the tender uterus or all over the abdomen at times. Always much distress in the abdomen an hour before stool.

Magnesia mur. Sleeplessness, with difficult stools, which crumble as they escape the verge of the anus. Frequent hysterical spasms. Uterine cramps, with pains extending down the thighs.

Natrum mur. Very sad and gloomy during the menses. Much palpitation of the heart and morning headache. Frequent dreams of robbers in the house, and on awakening will not believe to the contrary till search is made. Great disgust for bread. Uterine cramps, with burning and cutting in the groins.

Nux vom. Much sense of soreness in the neck of the uterus on rising up or sitting down. Wishes to urinate or to defecate very often, but little at a time, attended with pain. No sleep after three A. M. No appetite. Has indulged in high living, rich food, condiments, etc.

Opium. She is nervous and irritable, and passes nothing but hard black balls from the bowels. Her bed feels so hot that she can hardly lie on it. She is sleepy, but cannot go to sleep.

Phosphorus. Sensation of great weakness and emptiness in the abdomen. Sensation of great heat in the back, running up from the coccyx. Sharp cutting pains in the abdomen. Sexual desire almost irresistibly strong. Much flatulency.

Phosphoric acid. The uterus is distended with gas. Pain, universally, in the liver during the menses. She must often rise at night in order to pass large quantities of colorless urine. Is very weak, and indifferent to the affairs of life. Listless, apathetic.

Platina. A voluptuous tingling in the genital organs and abdomen, with oppressive anxiety and palpitation of the heart. Frequent sensations as if the menses would appear. The mons veneris and vulva are extremely sensitive, feeling cold at the same time. Menses pro-

fuse, with black clotted blood. Much anguish; she feels as if she would lose her senses and die soon.

Pulsatilla. With almost all her sufferings there are sure to be tears and cries. She weeps very easily about this or that; she can hardly give her symptoms for weeping. Menses suppressed or flowing intermittently. She has a bad taste in her mouth in the morning, and nothing tastes good.

Rhus tox. In many cases following parturition. A vitiated discharge continues from the vagina, with shooting upward in the parts, and with a bursting sensation in the head. Much pain continues in the right limb, with numbness from the hips to the feet, for weeks after delivery. General unhappiness of temper.

Sabina. The pain extends from the sacrum to the pubes. A slight sensation of motion in the abdomen, as if something were alive. Much irritability of temper. *Music is intolerable to her.*

Secale corn. This remedy is often indicated in thin, scrawny individuals, and in those who are afflicted with melancholy, anguish, dread of death. A constant sensation of pressure or bearing down in the uterus.

Sepia. Great sense of emptiness at the pit of the stomach. The uterine region is tender to the touch. Little shooting, burning pains in the neck of the uterus. Sense of weight in the anus. Must cross her limbs, as if to keep the uterus from protruding. Very sad and fearful about her health; often weeps about it.

Sulphur. Frequent flashes of heat, which pass off in a slight perspiration with weakness. Much sensation of heat in the crown of the head. She feels badly at the pit of the stomach from eleven till twelve in the forenoon; she is weak, empty at that time, can't wait for her dinner. Sleeps in very short naps, and is easily awakened. The most of the pain is in the left iliac region and in the left side generally. Much depression of spirits, or she is very happy and gay; everything is very beautiful to her.

Thuya. Extremely scrupulous about the least thing. Walking or riding brings on such extreme suffering in the left inguinal and iliac region that she is obliged to go to bed.

Zinc. The flow of the menses always relieves all her sufferings, but they return again soon after the cessation of the menses. A constant distressing boring pain in the left ovarium, only partially relieved by pressure or during menstruation, but returning again after the flow.

CHAPTER XXXII.

DISEASES OF THE UTERUS—CONTINUED.

Ulceration.

THE term ulceration as applied to the cervix uteri has given rise to many disputes amongst gynæcologists, which have arisen in consequence of the various definitions of writers on the subject. Dr. Arthur Farre holds to the view that the term ulceration should be applied only to cases in which there is a loss of substance, extending beyond the mere abrasion of the cervical surface and extending deeply into the tissues. If this be accepted as a true definition of ulceration of the uterus, then will such cases seldom be met with except in connection with syphilis or other specific disease. Bennet gives a broader definition, and regards ulceration as "a solution of continuity from which is secreted pus or a puriform, sanious or other matter." This of course takes in all forms of so-called ulceration, from simple epithelial abrasion to the malignant and deep ulceration, and for practical purposes is perhaps the best that can be given.

Ulcers of the uterus may be divided into the following distinct classes: *Granular*, *Follicular*, *Inflammatory*, *Syphilitic*, *Corroding* and *Cancerous* Ulcer. These will be considered in the order in which they are named.

It seems proper, however, to say a few words in advance regarding the methods of examination to be pursued in order to secure a correct diagnosis in such cases, as well as to refer to the general principles governing their treatment.

In the forms of disease of the uterus hitherto treated of in the present work the *touch* has been deemed generally sufficient to enable the practitioner to determine with sufficient exactness the nature of the difficulty. And in fact the well-practiced touch is a surer guide to diagnosis in such explorations than is the speculum, which must necessarily interfere more or less with the position and appearance of the vagina. And the touch, whether *per vaginam* or *per rectum*, or both, is usually fully competent to determine the nature of the various forms of displacement. But in the examination of cases of suspected ulceration of the cervix, the speculum should be used to confirm the indications obtained by the touch, and to assist in decid-

ing as to the simple, malignant or cancerous nature of the ulceration itself.

Still, from the very great reluctance of many women to submit to such ocular examination, even when conducted in the most delicate manner possible, it seems better for the young physician to learn to depend as much as possible upon the touch in forming his diagnosis, and only to resort to the speculum in doubtful or difficult cases, or perhaps in the first examination of such as come under homœopathic medication from allopathic hands. The finger may be as truly educated to discriminate the different conditions of the uterine surface and substance as it may be to strike the strings of the harp or the keys of the piano. And it is a subject of no small gratulation to remember that not only the most eminent homœopathic physicians, but also the entire body of respectable practitioners of our school, have set their faces against the disgusting and disgraceful resort to the speculum upon every possible pretence and occasion. However fashionable the use, or rather abuse, of the speculum was at one time—and we are glad to say it is now so no longer—such cultivation of morbid curiosity on the part of the physician, to give it no worse name, and such pandering to the prurient sensualism of some woman, and such unnecessary wounding of the delicate sensibilities of others, have never obtained currency in our school. And not only do all the soundest principles of medical exploration dissuade from the indiscriminate introduction of the speculum, but the whole tenor of our homœopathic therapia leads to a more excellent way, by substituting the subjective, the sensational, the constitutional and functional symptoms for the pathological details of structural changes as the basis for medical treatment.

Hence, we think that in most cases the touch alone will prove amply sufficient for *the purposes of diagnosis,* and far superior in certainty to the speculum in the great majority of cases. In displacements of the womb and other organs it may be necessary to investigate by the touch the situation of the parts; and in some of these cases of malposition, as in retroversion of the uterus, manual assistance may be needed in order to restore the parts to their proper place. But in actual practice, so long as we do not give homœopathic remedies for diseases by name, so long as we do not wish to confine ourselves merely to the removal or palliation of the consequences of the illness, so long as we make it our great aim, as skillful physicians, to restore our patients to health, and so long as we consider the disease removed only so far as we see such restoration to health, just so long

shall we seek to find the remedy which shall correspond to all the symptoms of the case, and *which shall especially represent the subjective and constitutional symptoms*, instead of relying mainly upon the indications afforded by the speculum or the touch.

And we believe that a careful and attentive study of these symptoms and of the attendant conditions will enable the physician to make the right, the best possible prescription for his patient. For thus he regards the first elements, the dynamic causes, rather than the ultimate results of the morbid affection. And herein do we differ from the so-called physiological school, as well as from the pathological and chemical schools. The method here inculcated is in strict accordance with pure homœopathy, and it might perhaps be deemed the physiological method were not this term already appropriated as the designation of an entirely distinct system. This method, which we may perhaps be permitted to call our own, since we adopt and advocate it, may be termed the vital method. It is essentially the method of Hahnemann, of Bœnninghausen and others, whose learning and skill have contributed to make homœopathy an honor to the medical profession. In this method we realize that pains or subjective (sensational) symptoms come before the functional derangements, as these latter come before structural or organic changes, and that the two latter forms of disease are but the extension and ultimate development of the morbific influences shadowed forth in the former. So that if we pay strict attention to the subjective, the sensational, the constitutional symptoms, in addition to the local manifestations and to the attendant circumstances and conditions (which are also constitutional symptoms, and so of the first importance), we shall come far nearer the mark, and be far more sure of healing the sick, than if we directed our principal attention to the more external and ultimate symptoms or forms of the disease.

For purposes of diagnosis, and especially to satisfy the patient and her friends, the touch may be resorted to, and in some cases the speculum even. But for guides in the selection of the remedy, the indications afforded by the patient herself, those which we have designated as subjective, sensational, constitutional and functional, afford us the greatest certainty and lead most directly to the happiest results.

Granular Ulcer.—This form of ulceration has been likewise denominated, by various writers, *erosion*, *abrasion* and *granular degeneration* of the cervix. It consists essentially of a changed condition of the

mucous surface of the cervix surrounding and immediately within the os. It is of very frequent occurrence, but sometimes gives rise to but few and very slight constitutional disturbances. In other instances, however, various derangements of the system attract attention to the difficulty. It is usually accompanied with profuse leucorrhœa, which may be bloody or purulent; a very annoying and fixed pain in the back and loins, of which the patient principally complains, especially when walking; disordered menstruation, the menses being generally too profuse; pain during coition and sore feeling afterward; a variety of nervous disorders and hysteroid symptoms.

Upon resorting to the vaginal touch, the cervix will be felt to be deprived of its usual smooth surface, and a granular condition of the parts or a velvety feeling is imparted to the sense of touch. The speculum will show the cervix, and more particularly that part lying adjacent to the os, and the entrance to the cervical canal itself, covered with pus, which, upon being brushed away, reveals a deeply red surface having a granular appearance, and resembling the inner surface of the eyelids in the disease known as "granular lids." The os is usually more or less patulous, and sometimes everted. There appears to be little or no destruction of tissue, and, on the other hand, there may even be the appearance of thickening of the epithelium and consequent elevation of the diseased part. In mild cases it may be difficult to ascertain whether the parts involved are not simply congested, or to perceive the limits of the ulceration when ascertained to exist.

The most common *causes* of this form of ulceration are found in uterine displacements, in consequence of which there is almost constant friction of the cervix against the vaginal walls, or it may arise from injury to the cervix during sexual intercourse, by wearing pessaries or by parturition. It is commonly associated, in the worst cases especially, with endocervicitis, and may be produced by anything which occasions hypertrophy of the uterus, or endometritis.

Occasionally, these granulations in this form of ulceration become greatly enlarged, constituting what are known as *cockscomb granulations*. These fungous excrescences spring up principally in the vicinity of the os uteri; they are sometimes found within the canal of the cervix, are of a livid red color and very vascular. They discharge an abundant purulent secretion, and are capable of giving rise to copious hæmorrhage from the least touch.

Sometimes the ulcerated surface takes on an aphthous appearance, constituting what is known as *Aphthous Ulceration*, or it may be the

seat of diphtheritic deposit, and is then termed *Diphtheritic Ulceration.* Again, the parts involved may present numerous congested and varicosed veins, and under such circumstances the term *Varicose Ulceration* has been applied to it.

Follicular Ulcer.—This variety of uterine disorder consists in inflammation and ulceration of certain mucous follicles of the cervix. Dr. Farre says of these that they are lined by epithelium and basement membrane, and that those upon or near the margin of the os may be sometimes observed to contain short papillæ. The papillæ of these follicles become enlarged, and present the appearance of red and elevated tubercules, which look as if ready to bleed at any time. This form of uterine ulceration is not so frequently met with as the granular ulcer, and indeed may be regarded as somewhat rare.

Inflammatory Ulcer.—Of the "true inflammatory ulcer" Dr. Thomas writes as follows: "In procidentia uteri of long standing it is seldom absent, and the deep excavations, precipitous edges and inflamed bases of the spots leave no room for difference of opinion as to their nature. This form of ulcer is very rarely met with, except as the result of direct injury, with coexisting parenchymatous congestion or inflammation. Thus it may arise from the injuries resulting from friction in procidentia and anteversion and retroversion, or from excessive coition, where the cervix is much enlarged and its parenchyma inflamed."

Syphilitic Ulcer.—It seems to be a settled question that syphilis may attack the uterus both primarily and secondarily. It is not our purpose, however, to treat of this class of affections, further than to say that great care should be exercised in making up the diagnosis where syphilis is suspected, and that syphilis manifesting itself in this locality, whether primarily or secondarily, should be treated in the same manner as syphilis manifesting itself elsewhere.

Corroding, Phagedenic or Malignant Ulcer.—This form of ulceration is fortunately uncommon, and its existence as distinct from cancerous ulceration has been positively denied. In its extent, malignancy, in the rapidity of its course, as well as in the usual fatality of its termination, it is no less formidable than cancer itself. Malignant, non-cancerous ulceration is more apt to happen to women at the middle period of life or at a more advanced age, but it sometimes

occurs in women who may still be said to be young. The ulcer generally begins in the cervix uteri, and the uterus is at the same time somewhat harder and larger than in the natural state. It does not, however, grow to any considerable size. The ulcer spreads from the cervix to the fundus, and it is not unusual to see the greater part of the cervix destroyed by it, and the rest changed into a tattered, ulcerated mass. The ulceration is not always confined in its boundaries to the uterus, but it sometimes spreads into the neighboring parts, as the vagina, the bladder and the rectum, making communication between them and producing dreadful havoc. "This disease attacks females of the lymphatic temperament, and generally about the period of the cessation of the menses or soon after."

Malignant ulceration of the womb is attended by heat and pain in the pelvis. But the first important symptom is the alarming hæmorrhage to which it gives rise, and which may be mistaken for a profuse menstruation. There is also a fœtid discharge, which varies from a light straw color to dark brown. That portion of the uterus which is not ulcerated is scarcely at all enlarged, and is free and movable, thus differing from the true cancerous ulceration. "In cancer uteri there is extensive deposition into the cellular membrane and glands between the vagina and rectum, as well as into the substance of the uterus itself, connecting them so as to form one large mass, and *rendering the whole immovable;* the finger on being introduced into the vagina finds very little space *and no power of moving the parts with which it comes in contact;* whereas in corroding ulcer, no deposition having taken place, the uterus can be moved by gentle pressure, and parts of the pelvic contents having been destroyed by ulceration there is more space than usual in the cavity." From simple ulceration of the cervix this malignant form is distinguished by the excessive fœtor of its discharge, by the more intense character of the pain and by the rapid extension of the ulcerative process. Corroding ulcer of the cervix, which may also extend to the fundus of the womb, slowly eats away the uterine walls, and in the allopathic practice is only hindered and delayed in its final and fatal termination. But in the homœopathic practice we possess the very important double advantage of being enabled at the same time to give remedies which shall promote the healing of the local difficulty, and improve, instead of still further injuring, the general health. These cases cannot be cured unless by such means as shall eliminate from the system the dyscrasia which lies at the foundation of the ulceration, and at the same time remedy both the bad health which caused and that which followed it.

Treatment of the above Varieties of Ulceration.

These forms of ulceration never exist alone, and the ulceration cannot be made to heal permanently until the other morbid conditions of the womb are removed, and until the general health is more or less completely restored. Non-malignant ulcerations may heal spontaneously—that is, on the recovery of the general health and on the subsidence of the provoking cause or causes of the ulceration—but where the general health is neglected or grows worse, where the ulcerations are left to themselves or aggravated by improper treatment, they may continue to spread and become so extensive as to destroy life indirectly by undermining the constitution, or directly by the hæmorrhages which they may occasion.

Simple ulceration of the womb is far more amenable to homœopathic medication, and far more easily and safely treated by such gentle and yet constitutional means, than by the application of caustics, either liquid or solid. At the same time, the general health is restored by selecting remedies to suit all the constitutional indications, and the patient is not only cured of her ulcer, but radically cured by the removal from her system of the dyscrasia which, combined with incidental local causes, produced the ulceration.

Hygienic and dietetic measures are of great importance here as in other diseases. Nourishing food should be taken freely, but all stimulating food or drink should be avoided. The disordered digestion and want of appetite should be cared for. Plenty of fresh air and sunlight should be insisted upon for the patient, and a very moderate degree of exercise allowed where not contraindicated. It should be borne in mind that walking, or journeying by railway or any other method of rough riding, may be very injurious.

Remedies.

1. Ars., Arg. nit., Asaf., Lach., Lyc., Merc. sol., Nux vom., Puls., Sep., Sil., Sulph., Thuy. 2. Bell., Bry., Calc. carb., Carb. veg., Con., Hep., Phos., Phos. ac., Rhus tox., Staph. 3. Ant. cr., Arn., Aur., Carb. an., Caust., Cham., Chin., Creas., Graph., Hydrast., Mur. ac., Natr. carb., Ruta, Sab., Secale corn., Stann.

Antim crud. Profuse discharge of acrid water, containing portions of pus. Gastric derangement with white tongue is often present. The stools are often liquid, containing portions of solid matter.

Argentum nit. Bleeding ulcers, the hæmorrhage being of short duration. She seems dizzy and cloudy in her head; the headache is not severe, but dull and constant. The moral and nervous disturbances come on in quite regular paroxysms every night, in the morning, or at noon, more particularly after dinner. Great debility, particularly in the lower extremities. Much chilliness and nausea are often attendant in such cases. This remedy, in substance, is often useful in the old practice, because of its frequent homœopathicity to the case, but it is far more useful in our hands in the two-hundredth preparation, and for the same reason.

Asafœtida. The menses are scanty; they are often too early, and last but a short time. The ulcer has high, hard edges, and easily bleeds. The ulcer is sensitive and painful. The discharge is profuse and greenish, thin and offensive. An hysterical condition is frequently attendant upon such cases.

Hepar s. c. The ulcer has a bloody suppuration, smelling like old rotten cheese. Its edges are sensitive, and it often has a pulsative sensation. The discharge is also corroding. The ulcer itches very much.

Hydrastis. For simple abrasion or other forms of ulceration, even malignant and cancerous. Much gastric disturbance, flatulence and constipation. Sinking or weak feeling in the epigastrium.

Lycopodium. Red sand in the urine. Great rumbling and commotion in the abdomen. Pain in the back. Great depression of spirits.

Muriatic acid. The ulcer has a putrid discharge, is sensitive and attended with a great sense of weakness. If the anus be *very sensitive*, either with or without hæmorrhoids, Muriatic acid is sure to be the remedy.

Phosph. acid. The ulcer has a copious, putrid, bloody discharge. There is an itching or corroding pain, or the ulcer is entirely destitute of feeling. The patient is apt to be quite indifferent to everything, even to those things which used to interest her most.

Secale corn. The ulcer feels as though it had been burnt. It discharges a putrid bloody fluid, and is sometimes decidedly gangrenous and painless. It is more frequent in thin and scrawny individuals.

Zinc. The ulcer has a bloody, acrid discharge, but is of itself rather destitute of feeling. Her various sufferings, headache, etc., subside during the menses. An excessively violent and obstinate pain in the

brain sometimes accompanies this ulcer. This pain may even assume the form of an intermittent.

For other ulcerations, whether thought to be malignant or not, see also the remedies recommended for cancer; since the same remedies may answer for either form of ulceration, the malignant as well as the non-malignant, the sensational and constitutional symptoms being of primary importance in making the prescription.

For *sensation of coldness in the ulcers* the following remedies may be consulted, they being placed in the order of their importance in this respect: BRYONIA, ARSENICUM, SILICIA, MERCURIUS, RHUS TOX.

CANCER AND CANCROID.

CANCER is an hereditary constitutional disease which is characterized by the peculiarity of its several forms, by the progressive nature of its development, by the intensity of its pain, and by its remarkable tendency to terminate fatally.

The *hereditary nature* of the cancerous dyscrasia is proved, in part, by statistics, from a variety of sources, of cases in which the relatives of those subject to cancer have been known to have had the same disease. Among the French authorities on this subject we may mention Velpeau, who states that in one-third of his cancer patients he could certainly trace an hereditary taint. Lebert's experience gives but one in twelve as thus constitutionally predisposed. Among English authors we find that Mr. Paget traces an hereditary predisposition in this manner in but one in four of the cancerous persons who have come under his notice. The statistics collected by Mr. Libbey, at the Middlesex Hospital, show an average of but 8¾ per cent. of the cases as thus proved to be hereditary cancer cases. In the Cancer Hospital the aggregate collection of the cases seen by the medical officers connected with the institution yields an average of one in seven who had relations previously affected by this disease, while Mr. Cooke, from whose recent work * on this subject I have taken these details, states that one in four of the cancer cases which have come under his observation give evidence of the hereditary nature of the disease in themselves.

But it may be urged that these statistics do but indicate that a large proportion, still a minority, of the cases of cancer appear directly hereditary, as having relations who have suffered with the same disease; and that therefore the proof of the hereditariness—that is, of

* *On Cancer: its Allies and Counterfeits.* By Thomas Weeden Cooke, Surgeon to the Cancer Hospital and to the Royal Free Hospital, etc. London, 1865.

the constitutionality of this disease—is very far from being conclusive; and it may be affirmed that cancer may arise directly in persons who have no hereditary or constitutional predisposition to this form of disease. This conclusion we deem entirely incorrect. And we attach the more importance to a correct statement of the matter because it involves some very interesting practical considerations relative to Hahnemann's psoric theory on the one side, and to the interchangeableness of different forms of ultimate disease on the other. Thus, in reply to the objection of the insufficient nature of the proof of the constitutionality of cancerous disease, it may be stated that even as individual cases of disease often require a long time to incubate before they develop themselves, so the cancerous affection may have been increasing in intensity for several generations before it reached a sufficient amount of deviation from the natural state to be able to ultimate itself in an actual cancerous growth. Again, it may be remarked that people do not always know the history of their families, and especially may oversights of this kind be considered probable when we remember that the cancer, like other constitutional diseases, may skip over an entire generation.

But the main point to which attention is invited in this direction is the fact that *this latent dyscrasia, extending from one generation to another, may be developed in entirely different forms in different generations, and in different individuals of the same generation.* This fact, which has been in a great measure overlooked, we regard as of great practical interest and importance. It is found that there is another distinct disease, no less fatal, perhaps, and certainly no less surely progressive in its course, which appears to be the constitutional complement of cancer. And this disease is phthisis; which is, like cancer, an ultimate, organic, structural development of a constitutional dyscrasia—which is, like cancer, a tuberculous affection—and which, attacking principally a younger class of persons, destroys its victims in about the same average time that cancer does. These two forms of disease appear mutually interchangeable, since both their ultimate and fatal manifestations appear in different generations and branches of the same family, and in different individuals of the same generation. Thus it happens that *cases of cancer which cannot be traced to any cancerous affection in other members of the family may be referred to a strongly-pronounced* hereditary predisposition to phthisis; and, conversely, cases of phthisis are seen to grow out of dyscrasia which in other relatives, branches and members of the same family have been developed as true, malignant, fatal cancer.

In the *peculiarity* of its *principal forms* cancer differs remarkably from all other organic diseases. These forms are three in number—*scirrhous, hard* or *Fibrous Cancer; Encephaloid, soft* or *Medullary Cancer,* and *Colloid* or *Gelatinous Cancer.* In addition to these varieties, when cancerous disease attacks the epithelial surface of the womb—or, in other words, is superficial—it has been termed *Cancroid* or *Epithelial Cancer,* although its malignancy and tendency to destruction and death are assured. The *scirrhous* seldom or never appears before puberty, is moderate in size and slow in its development. The *encephaloid* variety is the one which most frequently appears in infancy; it may occur in any part or tissue of the body; sometimes attains an enormous bulk; is the form which secondary cancerous deposits usually assume; is liable to very dangerous hæmorrhage; and when once ulcerated runs a very rapid course. The *colloid cancer,* itself firm and resisting, contains a peculiar jelly-like matter —occurs only in adults—most commonly in the abdominal cavity; may grow rapidly and to an enormous size; rarely proceeds to ulceration, and most commonly destroys life by encroaching upon some vital organ, and so permanently obstructing its functional action. The scirrhous form is the most frequently seen, and especially in the female breast and uterus, and is also the most difficult of cure. The encephaloid variety comes next in frequency.

These different forms of cancer have been by some supposed to represent merely the different stages of the disease, its different states of development. It may indeed be true that particular cases of cancer may, in the course of their progressive development, successively represent, and with more or less accuracy, all these various forms. But in general such a statement could hardly be supported by the facts. From the difference in the degree and intensity, if not also in the kind, of the cancer poison, as well as from the innate variety of the constitutions in which it is developed, the cancer itself naturally assumes a variety of forms from the first. Thus while scirrhous or hard cancer usually softens in its advanced stages, others, like medullary cancers, which may occur in a wider range of human life, in the young as well as in the old, and which are more malignant, as being more rapidly fatal, are soft from their very commencement.

Still, there does not seem to appear in these different forms any essential difference in the elements which may be deemed the radical constituents of cancer, or any other difference than that of proportion in the manner in which they are combined. The disease is characterized by—1, proliferation of areolar tissue; 2, excessive generation

of cells; 3, tendency to molecular death, invasion of neighboring parts, and return if removed by surgical means, constitutional implication usually progressing until the death of the person affected. All these characteristics belong to every form of cancer we have mentioned. Without stopping here to enter minutely into the discussion of the question as to whether there exists a true characteristic cancer cell, histologically distinct from all other normal or abnormal formations—a question once supposed to be settled in the affirmative, but rendered now more than doubtful by recent investigations—we merely indicate the general elements of cancer structure. These are the so-called nucleated *cancer cell*, a peculiar *fibrous structure*, among the meshes of which the cells are found, and a no less peculiar *viscous fluid*, with which the two former elements are more or less abundantly surrounded. The combination of these three elements constitutes the cancerous growth, and the relative proportion of these elementary ingredients may be considered to determine the form of the cancer itself. Thus, if the fibrous element predominate—as it does in the earlier stages of the great majority of cases—we have the scirrhous form. If the cells are more abundant, we have the encephaloma or soft cancer. If the viscous fluid be in the ascendant, there results the colloid or gelatinous cancer.

Some cases are anomalous, presenting more the appearance of *fungous growths*, others again are more like bleeding tumors, hence termed *bloody cancers;* and it not unfrequently happens, notwithstanding the classification of these malignant affections, that a growth will be met with which cannot be classified under any of them, and which partakes of the nature of two, or even of all, varieties. But an attentive study of all the symptoms and conditions will enable the practitioner to decide as to the malignant nature of the disease. But such decision, independent of the data upon which it is founded, is of use rather with reference to diagnosis and prognosis itself than from any influence which it should be allowed to exert upon the selection of the remedy. For the remedy must be selected at first hands—that is, from the symptoms themselves, which will guide aright—and not from our diagnosis of the case, which may be, and often is, wrong.

As already implied, the cells which were supposed to be the absolute characteristics of cancer, and so called true cancer-cells, have more lately been deemed less positively determinate. Virchow,* the latest and highest authority in cellular pathology, considers the dry or juicy nature of the cells as much more decisively indicative of the benig-

* *Cellular Pathology*, p. 530, et seq.

nant or malignant character than is their shape or form. "The forms which yield dry, juiceless masses are relatively benignant; those which produce succulent tissues have always more or less of a malignant character." And in deciding upon the benignant or malignant nature of any growth, he says: "In the case of all these formations, every one of which corresponds more or less completely to a normal tissue, investigations ought not to be conducted with a view to determine whether they have a physiological type, or whether they bear a specific stamp impressed upon them; our final decision depends upon the answer to the question *whether they arise at a spot to which they belong or not, and whether they produce a fluid which, when brought into contact with the neighboring parts, may there exercise an unfavorable contagious or irritative influence.*"

We make this extract in order to show how modern science is finally compelled to pay tribute to the true spiritual doctrine, rather than to the more gross and external theory which it had before received as a revelation from nature. The distinction of cancerous from other cells as a matter of external form is no longer deemed reliable, the form being, at least as often as otherwise, homologous to the natural and healthy cell-forms. The true distinction to which all must finally come is, that as the cancer-cell is itself the result of a morbid deviation, so it tends to perpetuate the same morbid influence implanted within it. It is a homologous growth as to form, and no less truly homologous in its vital activity, in perpetuating its own disordered vitality, exactly as if a ball projected into space in a curved line and meeting no obstruction would complete and continue on in the original circle. Thus, all the elements of cancer are positively homologous—that is, similar formations to other and healthy tissues. But they are heterologous in their composition—that is, in the proportions in which they are combined to form a cancerous growth. In like manner different chemicals may be harmless or poisonous, according to the different proportions in which the same ingredients are arranged, or, as in the case of those called *isomeric*, according to the different manner in which the same ingredients are arranged, even in exactly the same proportions.

The scirrhous and encephaloid forms are the most common cancerous growths of the uterus, the former occurring much more frequently than the latter. But whatever may be the condition which gives rise to cancerous formation, "it is certain that any form of the affection may arise from one and the same disorder. This is proved by the facts that several deposits of different varieties may coincidently exist,

that one form may change into another, and that one being removed by surgical means, a different one may replace it."—*Thomas.*

The *progressive nature of its development* forms another and important characteristic feature of cancer. All the different forms of cancer may sometimes be seen in a single case in its successive stages; they appear to pass into and succeed each other, the indurated forms becoming softer, but the soft never, so far as we are aware, becoming hard. The development may be slow, it may occupy years, and for a season appear entirely stationary, although this is scarcely ever the case in cancer of the uterus. Here the disease being usually found to seize primarily upon the vaginal portion of the cervix, the alteration of the tissue will extend from the os externum to the os internum, and from thence it will gradually extend over the interior surface of the body and fundus. At the same time, the softening and other degenerations of tissue extend from within outward. But the progress of this fearful disease is not confined to the uterus alone. From the intimate connection of this organ, through its peritoneal covering, with the bladder, the rectum and peritoneum, and directly with the Fallopian tubes and ovaries, the cancerous affection is in due time communicated successively and in different degree to all these organs, and even to the peritoneum itself. In addition to the other and incidental sufferings which must follow such extension, the cancerous ulceration sometimes occasions vesico-vaginal and recto-vaginal fistulas, accidents which very greatly aggravate the pitiable condition of the patient. From the nature of the disease itself as possessing an essentially progressive character, it cannot but go on extending its ravages and increasing its tortures, unless arrested in its course by medical skill, until death closes the scene. For as there are forms of disease which are self-limited in their course, extent and duration, so this one of cancer (so named by the ancients from its large surrounding veins and general resemblance to the body and claws of a crab) is just the opposite. It seizes upon tissue after tissue and organ after organ, hardening, softening, wasting away all within its reach, till the exhausted system can endure no more.

The *intensity of the pain* forms another and characteristic feature of cancer. This is a sharp, lancinating or *stabbing pain.* It is similar to that which occurs in felon or whitlow, and it is no less acute. "It is not constant, or the patient could not live, but comes at uncertain intervals, and is so startling as well as severe that it makes the sufferer bound from her chair or couch, not infrequently with a sharp cry of anguish. It is as though a dagger had been thrust into the tumor." This pain

comes in paroxysms of varying duration, which are accompanied by an increased activity of the circulation, a turgescence of the enlarged veins which lead out from the cancer; and the paroxysm may often subside by a more or less profuse hæmorrhage, which seems to relieve the pain. Hence these paroxysms may be regarded as periodic (or irregular) aggravations or acute attacks, superadded to the constant chronic affection.

These intense stabbing pains afford an almost infallible diagnostic indication, especially when they thus recur in paroxysms. Such pains appear only (except in the case of felon already mentioned, where there could be no danger of mistake) in cancer and in acute inflammation of the mammary gland. But in the latter cases the two exciting causes which lead to mammary abscess—lactation and mechanical violence—will suffice to prevent the pains which attend such conditions from being mistaken for cancerous; and besides in these cases of abscess the pains come on much more rapidly, as in fact does the whole inflammation.

The remarkable *tendency to a fatal termination* can never be overlooked in the consideration of cancer. In cancers of the breast and other exposed parts of the body the mischief may be apprehended, and effectual means taken by the exhibition of the appropriate homœopathic remedies to arrest its progress before it has too deeply seized upon the system. But cancer of the uterus may become very firmly established before its presence is even suspected. Hence the invariably fatal termination of this form of cancer. Originating, as we have already shown, in a constitutional dyscrasia, by its presence, by its derangement of the proper functions of the organ upon which it seizes, and by the serious injury inflicted upon the system by the severity of its pain, it tends to reduce the vital strength, and thus render it more difficult to establish in the system a vital reaction of sufficient energy to throw off the incubus; and this physical depressing influence is greatly increased by the moral influence which the knowledge of the terrible nature of her disease must exert upon the patient herself.

Causes.—These are either *primary*, predisposing, hereditary, constitutional influences, or *secondary*, exciting, provoking causes. Of the former we have already said all that was necessary. Of the latter we make brief mention here.

And in the first place, it should be remarked, in this connection, that nearly if not quite all the secondary or provoking causes of cancer in the woman, with which alone we have to do in the pres-

ent work, are directly or indirectly connected with her sexual system. Cancers of the womb and of the breast, which form the great majority of all that attack women, are evidently thus directly related, while those which, however rarely, occur in other parts, either remote from the sexual organs or not in immediate physiological relation to them, may be seen to result from general depressing influences, which, as in the case of widowhood, or even of those who remain unmarried, have at least an indirect relation to the sexual condition.

And in this connection it is interesting to observe the condition in life of a number of cases. Of one hundred and eight cases recorded by Scanzoni, ninety-one were married, seventeen were maidens, thirty-six were sterile, seventy-two had had several labors.

Excessive sexual excitation and immoderate coition form one of the most prominent causes of cancer of the womb. In connection with this, it must be remembered that constitutional predisposition plays a most important part. The insatiable desire known to be present in some of these cases, which is of course the immediate cause of such sexual excesses, is itself a constitutional condition, existing before it develops itself in this voluptuous orgasm of the sexual apparatus.

In like manner, disorders of the menstrual function, with leucorrhœa, which, by the author already referred to, are set down as the provoking causes of one-half of his cancer cases, must be deemed to be dependent upon or connected with a true cancerous dyscrasia. Otherwise, why have not the same disorders resulted in cancer in the thousands of other women who have suffered with them for years?

The same thing again is true of the cases of cancer which are developed under the influence of "emotions of grief, fretfulness, the cares of life, affliction after some bereavement, etc." All these powerful depressing influences are capable of developing cancer only in those women in whose systems are implanted the seeds of a true cancerous dyscrasia, or one which may be interchangeable with it, complementary to it.

If we examine the age at which the great majority of cases of cancer occur, we shall find still further proof of their connection with the sexual system. The average age at which this disease makes its appearance is about the forty-eighth year. This of course brings the disease in immediate relation with the change of life. And in fact there is little reason to doubt that the various causes which so afflict the female economy as to result in the development of this disease find their culminating point at this climacteric period. All

of the provoking influences already mentioned may concentrate their forces as it were at this period, and produce such cancerous disease at or soon after the cessation of the menses as they could not have done before. And this disease may be developed in the uterus or in the breast, or in some other part or organ, under the influence of other local provoking causes, or under the influence of what may be termed a reduplicated hereditary predisposition. For example, a woman of cancerous constitution whose mother had cancer of the womb will be so much the more likely to have this dyscrasia in her own case developed in the same organ; and married women are much more likely to have cancer of the womb at this time than those who have remained single, although many cases of the latter sort are recorded. And in this country this form of disease is much more prevalent in the Southern than in the Northern States. It has been observed that at the South the same constitutional dyscrasia assumes the form of uterine cancer which at the North would, at an earlier period of life, have been developed in the form of pulmonary phthisis.

Cancer of the Uterus.

The preceding discussion of cancer in general will obviate the necessity of any more than a very brief account of the particular forms and varieties of this disease as it attacks the uterus, breast or other organs. The most common form in which cancer appears in the uterus is the *scirrhous*. This form may be slow and insidious or very rapid in its development, according as it attacks the older or the younger females, and it is usually the least amenable to treatment. In fact, unless it can be diagnosed in its earlier stages, and properly treated from the very first, the prospect of doing any more than to relieve and prevent suffering, and so perhaps prolong life, is more than doubtful. Scirrhus of the womb passes through two general stages, and thus may appear to the physician on his first examination under either of its two forms. These are the primary form of induration and the secondary form of ulceration.

Indurated, Non-ulcerated Cancer of the Uterus.—This disease almost invariably attacks the cervix, but in some rare cases it is found primarily in the fundus or body of the uterus itself. From the view we have taken of the nature of the cancerous affection it will be natural to conclude, as is taught by high authority on this subject, that the disease does not spring from a previous and different form of inflammation, with or without induration, but that cancer is *sui*

generis—that it arises as it were on a general constitutional foundation all its own, seated, built up and developed under the influences of special provoking causes. And from its remarkable tendency to a fatal termination it becomes most important to determine the existence of the disease at the earliest possible moment, but this is no less difficult than it is desirable; for where the indurated form of cancer attacks women at the critical age or more advanced period of life, its onset is gradual and insidious, and it is liable to be confounded with the induration which may result from benign inflammation; and where it attacks younger women it may develop itself in a much more rapid manner, and without any such severe local symptoms as would lead to an examination of the affected organ.

Disease of the uterus of much less importance than cancer may give rise to much more strongly marked symptoms. "I must again repeat that my own experience, as well as the analysis of that of others, leads me to the conclusion that cancerous growths of the uterus in the incipient or non-ulcerated stage of their development are always indolent, and give rise to no symptoms sufficiently decided to induce patients to complain or to seek advice. Thus we can explain how the disease in its incipient stage does not come under the notice of the conscientious practitioner, who never uses the speculum without serious reasons for so doing." Easy as it is, generally, to recognize cancer of the uterus in the advanced periods of the disease, it is often very difficult to distinguish it in the commencement from a simple induration of a benign character in the lower portion of the uterus. The diffused swelling of the affected part, with a considerable hardness and complete absence of sensibility, the appearance of the disease at the critical age, and the impossibility of referring the commencement of the affection to an anterior labor, may be regarded as characteristic signs of the commencement of cancer. And there is no doubt but that in many cases, especially of women who still menstruate, the cancer is very rapid in its growth and progress, and so may attain considerable size and present extensive induration and adhesion to the surrounding parts, before its existence is suspected; and even then the results of vaginal exploration are said to be insufficient to distinguish in a certain manner a chronic engorgement of the vaginal portion of the cervix uteri from scirrhous induration. A careful study of all the symptoms and conditions of the patient will be absolutely essential in order either to determine the nature of the disease or to decide upon the appropriate remedy.

As it is of the utmost importance to distinguish cancer of the womb

at the earliest possible period, we gather from other writers the records and summary of symptoms which may appear before the cancer advances to the ulcerated stage. Among the earliest symptoms are: "Leucorrhœa alone or combined with menorrhagia; aching in the back and sense of heaviness in the hypogastrium; dull pain in the top of the thighs, with bearing down; then there occurs darting, lancinating pain between the pubes and the sacrum, or in the course of the vagina, with a sensation of glowing heat, more or less frequently experienced, and often attended with dysuria and mucous deposition from the urine; itching of the vulva, which is affected with a kind of flabby swelling or with erysipelatous inflammation; pain in coitu; dyspeptic symptoms prevail, such as flatulence, heart-burn, sometimes vomiting, and sympathetic cutaneous eruptions." Or the appetite may at first be very greatly increased and the digestion excellent, or with attacks of indigestion from over-eating. "In the course of the disease retention of urine frequently occurs, requiring the use of the catheter, or incontinence of urine may take place."

The first symptoms generally are: menstrual irregularities; a temporary increase of the menstrual flow; leucorrhœa, which is either continued or lasts for a short time only, white or yellowish, sometimes changing to a reddish color after intercourse or after any other local irritation; sense of weight at the hypogastrium, with pressure on the rectum or on the urinary organs; stool and emission of urine sometimes more painful, and always more or less difficult; disagreeable sensation during intercourse; occasional transitory shooting stitches, especially at the period of the menses or after physical or moral excitement; transitory pullings in the loins or groin, and hysterical ailments; hæmorrhoidal distress; alternate distension and caving in of the abdomen, etc. Sometimes we discover even at this period slight swellings or indurations of the womb, occupying rather the neck than the body of the womb, with a sort of irregularity in the shape of the neck. These symptoms may remain unchanged for a long time, but as soon as cancer has openly set in, the neck, and even the body of the uterus, and likewise the lips of the os tincæ, are swollen, hard, knotty, lobed and more or less red, but smooth and not sore, covered with bloody mucus or with pure blood, painful to pressure, and sometimes accompanied by engorgement of the ovaries. In some cases there is only a single clearly circumscribed tumor, the seat and extent of which may be discovered by an examination through the rectum; in most cases there are several tumors, or even, if the entire uterus should be invaded, a group of several

rounded irregularities at the surface. These tumors might sometimes be confounded with fibrous bodies if the other signs that accompany the cancer did not render such a mistake impossible. Besides, in its attacks upon the uterus, cancer but very rarely commences in the body or fundus, whilst these are the parts which are especially selected by the fibrous tumor. When cancer does involve the body of the uterus, it may be distinguished from fibrous tumor by its presenting a hard swelling of the whole uterus, and by the adhesions to the adjacent parts which attend such malignant indurations.

In attempting at the earliest possible period a diagnosis of a supposed cancerous affection of the uterus, we should consider—

I. The portion of the womb affected, the vaginal portion of the cervix being the most likely to be attacked by scirrhus.

II. The extreme hardness and general insensibility of the tumor.

III. The period of life, the cancerous disease being most apt to occur at the cessation of the menses.

IV. The gradual development of the tumor in such women, or its more sudden appearance in those who are younger.

V. The severity, lancinating, *stabbing* and paroxysmal character of the pains.

VI. The extension of the disease into the adjacent tissues, and consequent adhesion of the tumor to the surrounding parts.

The Ulcerated Form of Cancer of the Uterus.—In its second or ulcerated stage cancer of the uterus is much more easily recognizable. The ulceration itself, in connection with the surrounding induration and the peculiarly fœtid nature of the discharge, very strongly marks the nature of the case; while, as the disease advances, the countenance assumes a no less peculiar straw-colored complexion, which when once seen can almost always be relied upon as an infallible indication of the presence of cancerous affection. "As soon as the cancer has broken out, the pains, which until recently had been transitory, become more permanent, with acute lancinating pains, like needles or knives thrust through the part; the loss of blood becomes more frequent and sometimes habitual; a fœtid serous or bloody leucorrhœa sets in, which becomes fouler the more the ulceration progresses, being sometimes mixed up with small flocks of putrid matter of a brownish color, and frequently having an excessively pungent (offensive) odor, or also with little coagula of blackish blood. If the menses have continued so far, they often increase to a flooding; in women where they have stopped they act as if

they would reappear; others discharge constantly a profuse watery liquid without smell, or having an insipid sickening odor; at the menstrual period this liquid becomes rose-colored. This serous discharge generally indicates that the ulceration has either commenced or is imminent. Pain now succeeds pain; the loins, small of the back, hypogastrium, iliac region, even the nates down to the thighs, become the seat of contusive tearing or distensive pains, sometimes mingled with smarting pains or acute stitches in the neck of the uterus, and sometimes preventing sleep to such a degree that the patients dare not give themselves up to it."

The mental functions remain unimpaired in spite of all these distresses, and these cancerous diseases do not always prevent conception, although the products of such conceptions seldom survive birth or the full term, and in most cases they perish at an earlier period. Neither is the cancerous disease communicable by contact, as is proved by the immunity of the husbands in such cases.

As the disease advances in its course the ulceration becomes more extensive; the patient's strength is wasted by the intense pain, which is now almost constant, with dreadful paroxysmal aggravations; the loss of sleep and the repeated hæmorrhages break down the system still farther; hectic fever makes its appearance daily, or even oftener, leaving the sufferer, after each accession, weaker than before; the appetite fails, the digestion becomes impaired, assimilation is impossible, and the life itself is finally exhausted by a chronic disease which originates in its constitutional foundations, and which, while ultimating in a single organ, eventually involves every vital function within its fatal influence.

This disease may reach its termination in from five or six months to as many years; in its later stages it may be attended with most obstinate constipation or excessive diarrhœa, or both; the body may be reduced by gradual emaciation so as to resemble a skeleton, or the lower limbs may become infiltrated and the whole body bloated as with dropsy. In this latter case, especially in those advanced in life, colliquative diarrhœa sets in with putrid and dark-colored stools and horrible pains, which reduce the patient to a state of collapse in a manner not unlike that of the Asiatic cholera.

The diagnosis of the more frequently seen open or ulcerated cancer is comparatively easy. Here, in addition to the constitutional symptoms and conditions already referred to under the diagnosis of the non-ulcerated form of the disease, we have others, afforded by the touch, the diagnosis being made more full and less

liable to be mistaken by the indications obtained from the use of the speculum.

I. The ulcerated surface is hard and diversified by lobules, tubercles and ridges.

II. The peculiar pale, straw-colored complexion is very characteristic of this stage of cancerous disease.

III. The odor of the discharge from ulcerated cancer, so exceedingly offensive and so persistent on the finger after examination, and even in the whole room, is alone sufficient to determine the nature of the disease in the great majority of cases.

Encephaloid or Medullary Cancer.—This, known also as hæmatoid cancer, melanosis, encephaloid disease, is the most common, next to scirrhus, and may appear in the womb or in any part of the system. It runs a very rapid course, but is more amenable to treatment than scirrhus. It is composed, in great measure, of a soft white, pulpy substance, in color and consistence very closely resembling that of the healthy brain, whence its name, encephaloid. The *fungus hæmatodes* bears the same relation to the medullary cancer that the open ulceration does to scirrhus—it constitutes its secondary stage. When the medullary disease advances to ulceration, red, ragged, bleeding growths sprout rapidly from the open surface; hence their designation as fungus hæmatodes—bleeding fungus. The medullary cancer is far less liable to form adhesions with the contiguous parts than is the scirrhus.

The Colloid or Gelatinous Cancer is much more rare than the encephaloid, and consists of a congeries of gelatinous cysts, generally of the size of a hazel-nut, containing serous fluid, and having an investing envelope of delicate structure, which binds the cysts into a connected mass. "This form may exhibit the appearance of small portions of greenish-yellow transparent gum or jelly, arranged in regular cells; hence it is sometimes denominated *alveolar cancer*." The most common seat of this form of cancer is the abdominal cavity, although it has been known to occur elsewhere. It grows rapidly, often to a very great size, rarely proceeds to ulceration, but eventually proves fatal by encroaching upon organs whose healthy action is essential to the prolongation of life.

Mammary Cancer.—The female breast is even more frequently than the womb the seat of cancerous disease. In this situation it is

much more readily and much earlier detected, and thus an opportunity is offered for administering the proper remedies at the very onset of the disease. The extreme stony hardness of a suspected tumor in the mammæ, and the fact that it appears already adherent to the surrounding tissues, will greatly aid in deciding as to its malignant character. Some of these apparently scirrhous formations are developed in consequence of a blow upon the breast; many of these, whether they might have finally resulted in open cancer or not, are readily cured and caused to disappear entirely by the exhibition of Conium. (See the article on *Mammary Cancer*.)

Cancroid or Epithelioma.—The special form of cancer known as cancroid or epithelioma differs from other varieties of cancerous disease chiefly in this, that there is less parenchymatous involvement, the disease being more superficial, and the systemic poisoning, usually so rapid in true cancer, being much more tardy of production. Dr. T. G. Thomas writes thus lucidly concerning it: "Cancer of the uterus, like the same disease in other parts of the body, has two distinct stages—that of formation and that of destructive ulceration. In the first of these a generation of heterologous material takes place in the interstitial portions of the structure affected, and as the second period becomes established a connection is formed with the surface by ulceration. In certain cases the morbid influence, instead of exciting interstitial deposit, is exerted upon the mucous membrane itself, affecting its production of epithelial cells. In such cases less deposit occurs in the tissue underlying the mucous membrane. To this class the names of *epithelial cancer*, *corroding ulcer* and *cauliflower excrescence* have been applied. As Mr. M. H. Collis remarks, its special name is unimportant, 'if its difference from cancer and its analogies to it be kept clearly in view.'"

Cauliflower excrescence, as above remarked, is one of the terms employed in designating epithelioma, or, more correctly, it is a special form of epithelioma. It appears at first in the form of a tubercle, which increases in size with considerable rapidity, becomes fissured and branches out, forming a soft, irregular mass, which, when well advanced, bears some resemblance to a cauliflower—a resemblance which is often wanting. It gives forth a profuse and watery discharge, which is not, however, usually so fœtid as the discharge from medullary cancer. It sometimes becomes very large, filling the whole vagina, and is very vascular, giving rise to frequent profuse hæmorrhages.

Volumes have been written in description of the forms of cancer, but we do not deem it necessary to give more minute accounts of these and the other less common varieties of this disease, since the symptoms themselves will inevitably lead the homœopathic physician to select the most suitable remedy in each case.

Treatment.

Remedies for Cancer in general.

1. Ars., Bell., Carb. an., Con., Graph., Hydrastis, Creos., Sep. 2. Aur., Chin., Clem., Magn. mur., Merc. sol., Nitr. ac., Sep., Sil., Staph., Sulph. 3. Apis, Calc. c., Cocc., Jod., Lach., Lyc., Murex p., Phos., Phytolac., Rhus tox., Sab., Thuya.

Remedies for Scirrhus.

1. Bell., Carb. an., Con., Sep. 2. Aur., Chin., Magn. mur., Staph. 3. Clem., Cocc., Phos., Rhus tox.

Arsenicum. Lancinating pain through the part. Terrible dartings and lancinatings, which burn like fire. The more like fire the burning sensation is, the more strongly does it indicate Arsenicum. Acrid, corroding, burning discharges. The discharge may be thin or thick, brown or black. The discharge is often extremely offensive. The sufferings are usually worse after twelve at night. The patient is very easily fatigued.

Aurum. The womb is discovered to be prolapsed and indurated. The pain is like that of a bruise, with shooting and drawing. The mind constantly dwells on suicide.

Belladonna. The woman finds it difficult to stand, on account of a pressing down as if the internal organs would pass out. Occasional pains, which come on suddenly and finally leave as suddenly. Flow of blood between the periods; the blood often feels hot. The blood often has a very bad smell, and flows profusely. Violent pain in the back. The parts feel dry and hot internally.

Calc. carb. Pale, leucophlegmatic temperament. The feet feel as if she had on cold, damp stockings. Vertigo on going up stairs. The menses flow too often and too abundantly. Sore, burning feeling in the internal genitals. A constant aching in the vagina. Very sensitive to the least cold air, which goes right through her.

Carbo an. Violent pressing in the loins, the small of the back and the thighs during the menses, with unsuccessful desire to eructate,

with chilliness and yawning. Great languor in the thighs before and during the menses. After the appearance of the menses she feels so tired she can hardly speak, accompanied by yawning and stretching. Weak, empty feeling at the pit of the stomach.

China. This medicine will be useful when a profuse and long-continued hæmorrhage has seemed to produce the suffering. There is usually an ichorous leucorrhœa and dysmenorrhœa. The patient is worse every other day. Flatulency, which is not relieved by discharges of flatus.

Clematis. For softened scirrhus, with corrosive leucorrhœa and lancinating pain, the other symptoms agreeing.

Conium. There are burning stitches, stinging, nausea, vomiting and sadness. The breasts are relaxed, except at the menstrual periods, when they often swell and become sore and painful. The urine intermits in its flow. There is much vertigo, particularly on turning her head when lying in a prostrate position.

Creasote. Shooting stitches in the vagina; burning and swelling of the external and internal labia. Profuse discharge of dark coagulated blood, or of a pungent bloody ichor, preceded by pain in the back. Aggravation of the pains at night; fainting on rising from the bed. She always feels chilly at the menstrual period. Complexion livid; disposition sad, irritable.

Graphites. In women inclining to obesity, and whose history reveals a disposition for the menses to delay; swelling of the feet; itching blotches in various parts of the body, which discharge a glutinous, watery fluid. Now that she has symptoms of cancer her skin is better. The ovaries are also affected. She has violent lancinating, stitching pains through the uterus down to the lower extremities. Heaviness in the abdomen, with exacerbation of the pains when standing.

Jodium. Uterine hæmorrhage after every stool, with cutting in the abdomen and pains in the loins and small of the back. Great weakness during the menses, particularly on going up stairs. Long-lasting uterine hæmorrhages. More particularly indicated in scrofulous persons. Dwindling and falling away of the mammæ.

Lachesis. More particularly if the cancerous affection be developed at the critical period or as a consequence of the change of life. The frequent hæmorrhages at that period may indicate the approach of this disease. Sometimes the pain increases more and more, until relieved by a profuse discharge of blood; and after the lapse of a few hours or days the same phenomena are again exhibited, and so on.

At times the pain is as violent as if a knife were thrust through the abdomen, the pain itself resembling this sensation.

Lycopodium. Pains passing through the vagina on stooping. Darting pain in the labia. Discharge of wind from the vagina. Much borborygmus and gurgling in the left hypochondrium. All her sufferings increase at about four P. M., and abate at about eight or nine in the evening. The urine deposits a red sand; it is often very frothy. Pain in the back before the flow of urine, which is much delayed.

Mag. m. If the peculiar constipation of this remedy be present; large, hard, difficult stools, which crumble as they come or to pass the verge of the anus. Let the action of the remedy be continued a long while after the bowels become regular and comfortable, and the scirrhus will also disappear.

Mercurius. This remedy may be particularly indicated if there be prolapsed vagina. The inguinal glands sympathize with the cancerous affection. In cases in which there is syphilitic taint in the system, see the most characteristic indications for this remedy under Leucorrhœa and Prolapse of the Vagina.

Murex pur. Has cured carcinoma uteri where very great depression of spirits, a sort of deep hypochondria, prevails as the characteristic symptom.

Nitric acid. In cases where the syphilitic taint is the basis of the affection. *The urine is very offensive.* The inguinal glands are sympathetically affected. The patient is worse after twelve at night. Violent cramp-like pains, as if the abdomen would burst, with constant eructations. Violent pressing, as if everything were coming out at the vulva, with pain in the small of the back, through the hips, down the thighs.

Phosphorus. In tall, slim women, with sense of emptiness in the abdomen; much heat up the back, and a narrow, tough, dry stool, like a dog's. Cutting pains through the abdomen, sometimes with vomiting. Very sleepy, particularly after dinner. Belching up of an immense quantity of wind after eating. Frequent and profuse hæmorrhages, pouring out freely, and then ceasing for some hours or days.

Rhus t. Is particularly indicated where repeated drenching in the rain has deranged the uterine functions. The menstrual discharge causes a violent biting pain in the vulva. Vitiated discharge, with shooting upward in the vagina. Rheumatic pain and stiffness, relieved by motion.

Sepia. Lancinating pains from the uterus to the umbilicus. A putrid excoriating discharge from the vagina. A sense of weight and pressing down, which causes her to cross her thighs lest the organ should escape. Sensation of weight in the anus, not relieved by an evacuation. Very cold feet and hands—icy cold. Great sense of weakness and emptiness at the pit of the stomach. Yellowness of the face, particularly across the bridge of the nose, like a saddle. Shooting stitches, with burning in the neck of the uterus.

Silicia. Discharges of blood between the regular periods. Increased menses, with repeated paroxysms of icy coldness over the whole body. Attacks of melancholy; anguish in the pit of the stomach. She wishes to drown herself. Fœtid, brownish, purulent, ichorous leucorrhœa. Always great costiveness immediately before and during the menses. Momentary attacks of sudden blindness.

Staphysagria. Particularly indicated where syphilis or mercurialization acts as an exciting cause. Flow of blood from the genital organs occurring a long time after the critical age. Spasmodic pains in the vulva and vagina. The teeth turn black or show dark streaks running through them.

Sulphur. This great polychrest will be found suitable in a large majority of cases if we are called early, and if we find a few of the following symptoms prominently developed: offensive, corrosive, ichorous leucorrhœa; sensation of heat in the crown of the head; coldness of the feet, or burning in the soles of the feet at night; flushes of heat, which pass off in a perspiration, with faintness. The patient feels remarkably weak and hungry at the pit of the stomach from eleven in the morning till noon; she cannot wait for her dinner. She sleeps lightly at night, and awakens very frequently. Violent burning in the vagina, with painful soreness during sexual intercourse.

Thuya. This remedy will be particularly indicated if syphilis acts as an exciting cause of the disease. Cauliflower excrescences, bleeding easily, having an offensive pungent odor. To be especially studied, *and given in cauliflower excrescences* if the other symptoms correspond. Warts, condylomata and other excrescences about the vulva or anus. Ulcers on the internal surface of the vulva. The vulva has a sore and smarting feeling. Pressing and contractive pain in the vulva when sitting. Cramp-like pain in the vulva and perineum when rising from a seat. Cramp pain in the vulva, extending as far as the abdomen.

For other remedies and indications see Leucorrhœa, Amenorrhœa,

Dysmenorrhœa, Menorrhagia, Inflammation of the various organs, and compare and study the various remedies there recommended.

Gangrene, Putrefaction or Ramollissement of the Uterus.

These forms of degeneration of the womb arise only in consequence of other primary disorders, and require no particular description in this place. The following medicines should be carefully studied, and the remedy selected according to the individual characteristics of each case :

Aconite. When the congestion and inflammation of the part are extreme. Great anguish and fear of death. Dry heat of the skin and intense thirst for cold water. When the pain has suddenly ceased, the characteristic discharges have taken place, and the febrile and mental symptoms continue, Aconite is unquestionably the remedy to be administered first and in repeated doses.

Apis. Absence of thirst and scanty secretion of urine. Violent stinging, plunging pains. Great restlessness.

Arsenicum. Rapid sinking; cold perspiration; extreme restlessness; great fear of death. Aggravation after twelve at night. Thirst for little water at a time and very often. Undigested food passes the bowels, with great distress and increase of prostration. Repeat the medicine frequently till better.

Belladonna. The eyes are much congested with blood. She rather desires death than fears it. There is a strong sense of heat about the vagina; involuntary discharge of fæces and urine. The discharge is fœtid.

Carbo veg. The patient wants more air—wants to be fanned all the time in the face. Eructates frequently, with momentary relief.

China. Sensation of great distension in the abdomen, which distresses her much. Frequent eructation, which affords no relief. Ringing in the ears. The characteristic discharges of China.

Creasote. There is very great fœtor; excoriation and prostration. The fœtor has a pungent effect.

Secale corn. The patient is of a passive disposition, of a thin and scrawny appearance, and subject to passive hæmorrhages.

CHAPTER XXXIII.

DISEASES OF THE UTERUS—CONTINUED.

Dropsy of the Uterus.

DROPSICAL accumulations in the uterus may consist of mucous or serous fluids. In the former case they appear to be simply the result of such closure of the orifice of the uterus as may prevent the discharge of its natural secretions. In the latter the fluids assume, in quality and in quantity, rather the character of ordinary dropsical effusions.

Displacements of the uterus, by producing flexion of the cervix, and so bringing its walls in contact at the point of flexion, may occasion such an obstruction of its orifice as to cause the mucous accumulation. The same result may follow the pressure of a polypus or tumor, or other approximation of the walls of the cervix; and as amenorrhœa is nearly always associated with uterine dropsy, this mucous secretion appears sometimes to take the place of the menses. Cases have been recorded in which these mucous accumulations would occur from time to time in the absence of the menses, and then again disappear on the return of the proper menstrual flow.

This mucous form of dropsy of the uterus may thus be called *recurrent*, in contradistinction from the other, serous variety, which is more continuously persistent. Mucus from the accumulation sometimes appears to break away with more or less regularity, discharging itself and again re-forming. This variety appears in some instances to have relation to the menstrual nisus, aggravating about the time of the usual monthly periods.

In many women the cessation of the menstruation extinguishes the inflammatory affection of the womb, which has been kept up by the menstrual molimen. But in some cases the deprivation of the monthly discharge increases the inflammation and renders chronic the congestion, which before had been but occasional and relieved by the menstrual flow. In such cases, while the body of the womb becomes the seat of a persistent morbid activity, *its neck becomes atrophied, so as to impede more or less the exit* of the fluids contained within the cavity of the uterus. The result is, that the womb becomes more and more distended by a sero-sanguinolent, a muco-sanguinolent or a muco-purulent fluid. Severe uterine pains of an expulsive character may re-

peatedly occur, till at last the fluid is ejected and the patient is relieved. The same process of formation and expulsion of such accumulations may be renewed again and again.

But in the *persistent* form of uterine dropsy the fluid appears to be of a much more decidedly serous nature, and to be connected with a true dropsical diathesis. Reasoning from the analogy of similar disorders in other parts of the system, we may suppose that in this case there is considerable thinning of the mucous membrane of the uterine walls, and that this serous fluid is secreted from the submucous cellular tissue, or rather from the vessels which it contains. This is the *idiopathic* dropsy of the uterus, and the accumulation may go on for years, until relieved by art or terminated by death.

Either of these forms of dropsy may be associated with hysteria or anæmia. And in those cases of dropsy of the uterus which appear in consequence of structural disease of that organ the fluid is generally mixed with purulent matter or blood; while in certain conditions of the system the dropsical accumulations in the uterus, principally those of the mucous variety, become decomposed, and so give rise to volumes of gas, which may escape with a loud report. This is termed *physometra;* where both water and gas are contained in the womb, the term *pneumo-hydrometra* is descriptive of this anomalous and unusual condition.

Dropsy of the uterus may be recognized by the enlargement of the uterus itself; by the sharp pains which may be present; by the suppression of the menses by which it is attended; by the displacements, severe losses of blood, and other and perhaps malignant disorders of the womb which accompany or precede it; by the constant oozing or occasional gushing of fluid from the uterus, or, where no such escape of the fluid occurs, by the long continuance and gradual increase of the enlargement of the uterus itself. Its diagnosis may be assured, however, by dilating the cervical canal by means of tents if not sufficiently dilated, and introducing an elastic catheter within the cavity of the uterus.

By a careful observation of all the attendant symptoms and circumstances of the case uterine dropsy may be distinguished from pregnancy, with which it is most apt to be confounded, and from *physometra*, by the duller sound on percussion and greater gravity of the concomitant symptoms. And in cases where the catheter or uterine sound is introduced, the discharge, whether mucous, serous, purulent or bloody, will go far to determine both the existence of the dropsy and

the nature of its cause. And where flexion of the cervix, as in displacement, or total occlusion of its canal from organic disease, prevents the introduction of the sound, this circumstance will prove scarcely less certainly diagnostic.

In cases, especially recent ones, principally dependent on occlusion of the cervix resulting from flexion in displacement, the removal of the cause may at once relieve the complaint. The remedies should always be selected after a careful comparison of all the symptoms and conditions, as well constitutional as organic and local. And in cases of more direct dropsical condition (*idiopathic dropsy*), or where the dropsy appears in connection with scirrhus or other malignant disease of the uterus or its appendages (*symptomatic dropsy*), the evacuation of the accumulated fluids may afford temporary relief, and give more time and better opportunity to remedy both the organic disease and its consequences.

Those forms of dropsy which occur in connection with pregnancy, whether the accumulation be formed between the membranes of the ovum and the uterus, or consist in an excess of the liquor amnii itself, have been considered with the other disorders accompanying the pregnant state.

Dropsy of the uterus, like that in all other organs of the human system, will cause a corresponding sympathetic affection of the whole body.

Apis. *Absence of thirst* is very characteristic of Apis in uterine dropsy. Stinging pains, as of bee-stings. Abdomen very tender to the touch.

Arsenicum. Very thirsty for small and often repeated portions of water. Water disagrees with her; it does not pass from the stomach, but seems to remain there and distress her. The lower limbs seem almost paralyzed. She can hardly walk. She is very weak, and easily wearied from exertion. She wants to be in a warm place and to be wrapped up warmer.

Belladonna. The characteristic symptoms of pressure, as if all would pass out of the genital organs, particularly early in the morning. Urine dark and scanty; sometimes it is as yellow as gold. She is usually worse after three in the afternoon. The tenderness of the abdomen is aggravated by the least jar even of the bed or chair upon which she sits, and she is obliged to step with great care in walking for fear of a jar.

Bryonia. The swelling increases during the day and diminishes

during the night. Her lips are dry; she wishes to moisten them often. She is thirsty for cold water. The urine is dark and scanty, although discharged frequently, and it deposits a pinkish-colored stain. All her symptoms are aggravated by motion. Her stools are hard and dry, as if burnt.

Calc. carb. In persons of a leucophlegmatic temperament. She has been menstruating too often and too profusely; she has some amenorrhœa and dropsy of the uterus and adjacent parts. She has vertigo on going up stairs; fluttering of the heart and faintness. Damp, cold feet. Swelling at the pit of the stomach. She is very weakly in general.

Camphor. Red urine, depositing a thick sediment, with much coldness of the external surface. The urine is emitted *very slowly*, the bladder being nearly paralyzed. The urine is sometimes *green*.

Cantharis. More or less strangury. Tenesmus of the cervix vesicæ. Bloody urine. Pains in the limbs; coryza. There is much swelling of the uterus, pain in the abdomen, vomiting and fever.

China. The dropsy has been developed by profuse hæmorrhages, or in aged women. Uncomfortable distension of the abdomen; she wishes to belch up wind frequently, which, however, affords no relief. Urine dark, scanty and sandy.

Colchicum. The urine is very dark, very scanty, and discharged in drops, depositing a whitish sediment. Watery stools without sensation. The dropsy had supervened upon the sudden suppression of the menses, which had but just made their appearance. Much flatulency.

Conium. The mammæ sympathize very much; they enlarge, become hard and painful. The urine intermits. There is vertigo when lying in a recumbent position, especially on turning over.

Digitalis. The heart sympathizes very much; the pulse is accelerated or intermittent. The stools are very light-colored.

Dulcamara. This remedy will be indicated when the dropsical affection makes its appearance after the suppression of perspiration by cold, damp air. Every cold change in the weather makes her worse.

Ferrum. Dropsy of the uterus, with great debility and fiery red face.

Helleborus. The secretion of urine is almost suppressed; the urine is very dark, and deposits a dark, coffee-ground sediment. Debility; coma somnolentum; piercing pains in the limbs; loose, gelatinous evacuations.

Kali carb. Will often be found particularly indicated in aged women.

Lactuca. Excessive swelling of the abdomen, feet and eyelids.

Ledum. Pains in all the limbs; the skin is dry; she feels very cold, and cannot keep warm. Worse from warmth.

Lycopodium. There is much red sand in the urine. Borborygmus, particularly in the left hypochondrium. Sensation of fullness clear up to the throat on eating even a little. Constant sense of satiety.

Mercurius. Much perspiration, affording no relief. Constant short and choking cough. Anguish.

Phosphorus. Œdematous swelling of the hands, feet and face. Cough, shaking and exhausting, with shortness of breath. The urine contains quantities of gray sand. The bowels are loose and stools whitish. Belching up of quantities of wind after eating even a little.

Rhus t. In cases of dropsy resulting from amenorrhœa caused by being drenched in the rain. Rheumatic stiffness. Restless at night; she must change her position frequently. Terrible cough, which seems as if it would tear something out of her chest.

Sepia. Dropsy supervening upon a case of miscarriage. The urine is very putrid, or deposits a clay-like sediment which is difficult to remove from the vessel. She feels as if she must cross her limbs to hinder the escape of some of the internal parts through the vagina.

Sulphur. In persons whose skin is full of pimples and eruptions. Heat upon the crown of the head, with coldness of the feet. Frequent hot flushes, with spells of faintness. She is unusually hungry before noon, cannot wait for her dinner. The soles of her feet are hot; she must put them out of bed or find a cool place for them. She walks all bent over forward.

PHYSOMETRA—UTERINE TYMPANITES.

Physometra or Uterine Tympanites consists in the formation and accumulation of gas in the uterus. This is generally the result of the decomposition of certain substances—such as shreds of the membranes, portions of a dead fœtus or of putrid coagula—which may be retained within the cavity of the uterus. It would seem, however, to be occasionally an idiopathic affection, in which the gas is generated within the cavity of the uterus by the mucous lining of that organ, and produces considerable distension and discomfort. Dr. Gooch relates instances of this kind. In such cases it is possibly complicated with, and forms a part of, hysteria.

In the first variety the gas results from the decomposition of a fœtus, or of any extraneous substances remaining in the uterus after parturition; from the decomposition of the products of menstruation, where, by sudden suppression of the catamenia by cold, they may have been retained in the womb; or from the decomposition of leucorrhœal mucus or of cancerous discharges. All the effluvia from such putrefying processes are fœtid and offensive, and many of them are inflammable. In these cases there may be serious constitutional symptoms, and even putrid fever.

Symptoms.—The uterus distended with gas forms a round and more or less extended tumor in the hypogastric region; in the idiopathic variety of uterine tympanites there may be no constitutional symptoms, nothing to attract attention save the increase in size or occasional discharge of flatus per vaginam. In the symptomatic variety, which results from decomposition, there may be chills, a low form of fever, with symptoms more or less grave, according to the quantity of the matter undergoing decomposition in the womb, and to the rapidity with which the process takes place.

Diagnosis.—1. Idiopathic physometra may be distinguished from *pregnancy* by the resonance of the tumor, by the absence of ballottement, of fœtal movement and of the signs afforded by auscultation, and by the occasional pain.

2. From *hydrometra*, or dropsy of the uterus, by the greater elasticity of the abdominal tumor, and by its resonance.

3. From *ascites* by the defined shape of the tumor, by its resonance and by the absence of fluctuation.

4. From *scirrhous* and *steatomatous* dispositions by the elasticity and resonance of the tumor.—*Churchill.*

The objective symptoms, noisy discharges of flatus, and the circumstances of the patient, as in those cases succeeding parturition, will greatly aid in determining the nature of the difficulty. "You can satisfy yourself that the accumulation has been in the womb by passing a small canula or a male catheter through the os uteri. Then, by placing the outer extremity of the instrument under water, you can evacuate the tumor through it, and be assured of the escape of gas therefrom."—*Ludlam.*

Treatment.—Idiopathic uterine tympanites may be radically cured by one or the other of the following named remedies, selected according to the indicating symptoms. The symptomatic variety, inasmuch as it depends upon the decomposition of foreign bodies remaining within the cavity of the womb, may require special attention to re-

move these decaying substances if possible, and injections of warm water may be employed to cleanse away the peccant matters. By means of sponge tents the cervical canal may be kept open, thus allowing a free discharge of the noxious material as well as of the gas that is generated.

Bromine. Loud emission of flatulence from the vagina. Aggravation of the symptoms from evening till midnight. Rest also aggravates, motion relieves. The left side is the most affected.

Lycopodium. Discharge of wind from the vagina. Great sense of dryness in the vagina. The symptoms are worse or come on about four or five P. M., and abate four or five hours later. Much borborygmus in the abdomen and in the left hypochondrium. Red sand in the urine. Much pain before urinating.

Phosphoric acid. Meteoristic distension of the uterus. She has always a pain in the liver during the menses. She passes large quantities of colorless urine at night. Indifference to all the duties and concerns of life.

For other remedies consult those mentioned under Cancerous and Gangrenous Affections of the Uterus.

Moles—Hydatids.

The various shapeless bodies which are occasionally discharged from the vagina are termed Moles. These may consist of masses of squamous epithelium from the vagina itself, of the membranous product which is expelled in some cases of dysmenorrhœa, or of fibrinous collections from the cavity of the uterus. These constitute three varieties of what may be termed *false or spurious moles*, as occurring in the unimpregnated female.

The flakes or tubular pieces of squamous epithelium exfoliated from the vagina are easily recognized. "The fibrinous masses expelled from the uterus resemble an almond in size and shape, being to some extent casts of (the interior of) the uterus; they are smooth externally, and possess a very imperfect central cavity. The dysmenorrhœal product consists of the uterine mucous membrane, exfoliated in a more or less perfect form. When entire it has the shape of the cavity of the body of the uterus, is rough externally and smooth within, having a distinct triangular cavity, with two openings above and one below, at the sites of the Fallopian tubes and the canal of the cervix uteri."—*Smith.*

The *true* or *genuine moles* are all the result of impregnation, and

their different varieties may be arranged under three classes—blighted ova, fleshy moles, vesicular moles or hydatids.

In the *blighted ova*, which compose the first class of these moles, the embryo itself early perishes, while the ovum, being retained, increases in size and solidity, not by the normal growth of regular pregnancy, nor even as in cases of tumor and polypus, but by the effusion of coagulable lymph from inflammation of the lining membrane. This forms successive layers over the surface of the dead ovum, giving it eventually a great degree of consolidation. Some of the masses, when cut into, have no cavity, but the chorion and amnion are demonstrable, although the enveloping membrane may be one or two inches in thickness. It seems somewhat surprising that the covering of the fœtus should be so carefully constructed when there is no embryo. But such is the fact.* In such cases the fœtus is undiscoverable, because it has been dissolved in the liquor amnii, but the remains of the umbilical cord may, however, be generally discerned attached to some part of the inner surface. In addition the membranes may be traced, with the placental development, on some portion of the periphery of the ovum.

The influences which cause the death of the embryo transform the ovum from a perfectly normal development into a more or less disorganized mass, which is sooner or later expelled as a foreign body. The blighted ovum, if not expelled within two or three months, degenerates into a fleshy mole.† The influences which originally destroy the embryo are usually supposed to consist in certain already-mentioned changes in the structure of the ovum itself. But we believe the reverse to be the case—that disorganization of the ovum and membranes results from embryonic death in the first instance. Whence then come the fatal forces? That on the maternal side all is comparatively well is implied in the continuation of the original growth of the ovum considered externally. That the fatal element may have been inherent in the more interior constitution of the female ovum is indeed possible. But in most cases we believe it is originally contained in the seminal aura of the male, and thus imparted to the ovum in fecundation. In many instances in which the husband has been affected with syphilis which has been treated allopathically, and so completely suppressed externally as to induce the belief of a radical cure, the offspring come into the world wrinkled as if with old age, prove entirely incapable of independent nutrition, and constantly decrease in weight from the moment of birth till that

* Ashwell † Churchill.

of their death. These received from the paternal side the element which destroyed their vitality as soon as the support of the mother (in utero-gestation) was withdrawn, and the stores laid up by her in the mass of the infant's body were consumed. Just so in those cases where a still more concentrated and active form of the fatal element is imparted by the male; by the time the supplies originally furnished by the ovum are exhausted, the embryo is blighted, destroyed, and the vital forces which should have formed the fœtal body are vitiated and perverted, till the mole is the only result.

Fleshy Moles appear to be but the fuller development of the perverted process just described in connection with blighted ova. They remain three or four months, "until at length the degenerated ovum is expelled, consisting of the nest-like membranes and a small embryo of two or three weeks' growth, or in some instances the fœtus may have disappeared, and traces only of the umbilical cord remain." They may either consist of a solid mass, or they may contain a central cavity possessing a distinct lining membrane, in which there yet remains some of the liquor amnii. The solid moles are generally much larger than the hollow ones, and of a more irregular form. The larger ones are about the size of two fists. If the texture be examined, it will be found solid, but not very dense, spongy like the placenta, but more filamentous in some parts; in others consisting of fibrinous clots, and also portions of the fœtus, such as one or other extremity. The limbs of the fœtuses have occasionally, though very rarely, been discovered.—*Churchill.*

Hydatids, or Vesicular Moles, constitute what are termed *hydatiginous degenerations of the ova.* They have also been termed "*cystic degeneration of the chorion.*" "The hydatids themselves, in the recent state, are full of transparent fluid, and are either round, pyriform or oblong in shape, the size of the vesicles greatly varying. Some of them are borne upon pedicles, others are growing from the larger hydatids. As a rule, the activity of the growth and the increase of the villi (which degenerate into hydatids) are greatest in early pregnancy, and it is at this time that the hydatiginous degeneration is most prone to occur." These hydatids bear a very close external resemblance to polypi or pediculated tumors—so much so that some of the latter-named growths occurring in the virgin female have been considered to be hydatids. But it is now well settled that the name hydatids should be applied only to such formations as may arise

in connection with or subsequent to sexual intercourse and impregnation; although here it must be remembered that the death of the embryo not being immediately followed by the expulsion of the ovum, the molar formation may be retained for months, and the hydatiginous variety for years, and then be discharged without prejudice to the character of the female, who may have become a widow in the mean time.

The hæmorrhage which is apt to occur at the period of the expulsion of the hydatids by successive installments renders them more dangerous than moles of other varieties.

Molar pregnancy, which results from the presence of the hydatid variety, is more strongly marked, since in this form the uterus at the fifth or sixth month may be as large as it should be at the end of pregnancy. It is not easy to determine the presence of this disease with absolute certainty, at least in the early months. But the duration of the abdominal enlargement beyond the term of utero-gestation, the disproportion between the size of the tumor and the period since it was first observed, together with the absence of quickening, of all fœtal movements and of the sounds of the fœtal heart, will conclusively prove that a regular pregnancy is not present. Then the greater weight of the abdomen and the absence of resonance will distinguish it from physometra. The absence of the sense of fluctuation will in like manner serve to distinguish molar pregnancy from hydrometra. The occasional hæmorrhages, and even the irregular discharge of a colorless, inodorous, aqueous fluid, are relied upon by some authors as unfailing diagnostic signs, but they are by no means sure to occur in every variety of molar pregnancy; and even when they are present they are far from being so characteristic of the existence of moles as to afford any positively reliable indication. The use of tents and the introduction of the uterine sound will enable the practitioner to distinguish hydatids from uterine polypus, while from cancer it would be known by the absence of the fœtid discharge and the general constitutional disturbance.

Treatment.

A careful study of the symptoms of the patient will be necessary in order to determine the nature of the case and to make the proper prescription. As abnormal growths, the womb seeks to expel these moles sooner or later. This is effected by uterine contractions and pains similar to those of ordinary confinement, but more closely resembling such as occur in cases of miscarriage after the death of the

fœtus. The large quantity of water and sanguineous discharges which may attend such efforts at expulsion sometimes render the case very serious; and it will be the object of the homœopathic practitioner to promote this expulsion, and so remove the cause of the dangerous condition.

But few special indications for the selection of remedies can at present be given. To promote the expulsion, PULSATILLA, SECALE CORN. or CAULOPHYLLUM may be given. The hæmorrhage which may follow such expulsion must be treated as are other hæmorrhages, according to the indicating symptoms.

CALCAREA CARB. and SILICIA have been recommended to remove a disposition to the formation of moles. NATRUM CARBONICUM has been successfully administered in several cases.

The following remedies have been recommended for particular study in these abnormities: CALCAREA CARB., SULPHUR, SILICIA, MERCURIUS, ACONITE, ARSENICUM, CHINA, FERRUM, GRAPHITES, BELLADONNA, HYOSCYAMUS, KALI CARB., LYCOPODIUM, SABINA, SEPIA. And in general all the remedies mentioned in this work under the various heads of *Cancer*, *Tumors*, *Polypi* and *Dropsy* should be carefully studied and compared, for it is only by selecting the medicine in accordance with all the constitutional symptoms and conditions in such cases that we can hope either to promote the expulsion of these morbid growths or to prevent their recurrence.

UTERINE POLYPI.

On page 607 reference has been made to Vaginal Polypi. We now come to treat of those peculiar and sometimes dangerous growths from the uterus known as Uterine Polypi.

Polypi have been divided into three varieties, corresponding to their general differences of structure; these are the Glandular, the Cellular and the Fibrous. *Glandular* polypi consist in enlargements of the glandulæ Nabothæ in the canal of the cervix. They sometimes occur in clusters about the size of currants, and are suspended by very fine pedicles. *Cellular*, mucous, fibro-cellular, gelatinous or vesicular polypi are the least frequent, grow with the greatest rapidity, and may attain the most considerable size: these have already been sufficiently described under the head of Fibro-cellular Tumors or Soft Polypi. The *Fibrous* polypi constitute the most common variety, and may occur at the same time in the uterus and in the nasal fossæ.

These morbid growths received the name polypus, or many-footed,

partly from their fancied resemblance to the *Polypus marinus* (a sea animal), and in part from their being found in some cases to take their rise from more than one stem or foot. They are generally round, oval or pyriform, but may assume other shapes in consequence of the pressure of the surrounding parts. The polypi are covered by the mucous membranes of the uterus or vagina, from which they arise; they may vary from the size of a filbert to that of a child's head; they are mostly insensible to the touch, but bleed from the least contact, as well as spontaneously. They are attached to their base by a pedicle of variable size, sometimes being connected by a slender stalk, like that of a leaf, at others by a fleshy attachment of considerable thickness. The glandular polypi are soft in texture, and may contain a small quantity of mucilaginous fluid. The cellular variety is soft, and in great measure composed of cells which contain yellowish liquid. The fibrous polypi are more dense in structure, sometimes hollow, and either empty or containing blood, gelatinous or fatty matter, and hair. And whatever may be their structural consistence, hard or soft, vascular, mucous or fibrous, whatever their variety in size, and whatever the circumstances attending their development, all polypi have these two general characteristics: they take their origin from cavities or outlets of the body which are lined by mucous membrane, and they are attached by a pedicle or stem.

The polypi are made up of different constituents—vascular structure, fibrous tissue and mucous membrane—and these different tissues are but the prolongations of the mucous and sub-mucous organs from which they spring; or they may be considered as hypertrophies of some of the minute glands or mucous follicles, attended by a corresponding hypertrophy of all the neighboring organic tissues, whether mucous, cellular or fibro-cellular. And according to the different proportions of these constituents and of the fluid infiltrations, the polypus itself becomes hard or soft, fibrous or vesicular, as is the case in the formation of hard or soft cancer. As regards their exact seat in the genitals, polypi occasionally arise from the vaginal walls, less often from the mucous membrane of the *fundus*, but more frequently from the interior of the *cervix* uteri, and even from the *os*.

In addition to these three most general varieties of polypus, some authors enumerate also certain other morbid growths as polypoid, though we think with hardly sufficient reason.

The *causes* of polypi are not very definitely ascertained. Any condition which tends to keep up a congested condition of the uterus may lead to hypergenesis of the constituents of the mucous mem-

brane, which may take the shape of uterine polypus, but of the determining cause nothing is positively known beyond this—that they may take their origin from a certain dyscrasia of the system which is less positively malignant than that which is developed in the form of cancer. As already stated in treating of the fibro-cellular tumors —which if pendulous are properly termed soft polypi—these growths sometimes appear in connection with actual cancerous disease.

Polypous tumors may appear in single or married women, mostly of the middle age; they do not necessarily prevent conception, but usually appear to destroy its product by abortion.

The *symptoms* which make their appearance in connection with polypi are very important. These growths are not themselves particularly sensitive or painful, but a very severe form of inflammation is almost always attendant upon their presence. This may arise from the same general influences which develop the polypi themselves, or in consequence of the irritation which the morbid growths occasion in the lips of the os uteri and other parts with which they come in contact. Ulceration of these irritated and inflamed surfaces is not uncommon.

The other most remarkable and constant symptom of polypus is the hæmorrhage, which is hardly ever wanting. Hæmorrhages which arise in connection with polypi are irregular as to their time and quantity, but constantly recurring, and by no means proportioned to the extent of the tumor. A small polypus may occasion as great a loss of blood as one much larger; and it is said that the very large polypi are less troublesome in this respect than those which are smaller.

The reason of this liability to greater loss of blood where the polypi are small than where they are large will be found in the fact, now perhaps for the first time stated, that the hæmorrhage itself is not from the polypi at all, but from the inflamed, congested mucous surfaces of the adjacent parts. The small polypi especially have no such vascular developments as would account for the alarming hæmorrhages which often appear in connection with them.

The discharge which appears in connection with polypus is either mucous or muco-purulent. In other respects the constitutional symptoms are very similar to those which arise in cancerous cases, even to the sallowness of the complexion; only the intense, lancinating, stabbing or burning pains, singly, successively or in paroxysms, which are constantly the attendants of cancer, do not appear to result from polypus. Neither is the discharge so offensively fœtid. As a general

thing, the presence of uterine polypus is readily detected by touch or the speculum. But if the growth be small, and attached high up within the cavity of the body, the use of the probe will be necessary to make the exploration complete. In some cases it may be necessary before introducing the probe to dilate the cervical canal and internal os by means of tents.

Treatment.—It occasionally happens that the womb of itself throws off a polypus, breaking its attachment and casting it out as a foreign body; or, again, that the growth becomes disorganized and broken up, and is washed away gradually by the uterine secretions; but such terminations are not to be expected, and, as the drain upon the vital forces by frequently repeated and profuse hæmorrhages may produce very serious constitutional effects, which may even result fatally, it may be fairly said that the sooner a polypus is removed after its presence has been detected the better it will be for the patient.

Where these growths do not give rise to any serious disturbances it will be well to attempt their removal by means strictly medical. In such a case the remedies laid down on pages 580, 581 and 608 may be consulted with great advantage. Again, there are many cases in which any mechanical means used to remove a polypus—especially if it be intra-corporeal, for instance—may result very disastrously; whereas by strict adherence to homœopathic principles in the selection of remedies to meet the symptoms and conditions of the patient, not only are sufferings mitigated, but the best means are being resorted to to bring about a spontaneous cure, either by a casting off of the morbid growth or by its absorption. When, however, the presence of the polypus absolutely endangers life, and there is good reason to apprehend a speedily fatal result if it be not promptly removed, the removal may be accomplished either by excision, torsion, the ligature, ecrasement or the galvano-caustic wire. If the polypus be situated in the vagina, its removal is not difficult, or even if it be within the cervical canal external to the os internum; but if its attachment be within the corporeal cavity, there may be considerable difficulty attending its removal. If it be necessary, the cervical canal and os internum must be dilated by means of appropriate tents, and the growth drawn down as much as possible with a tenaculum fixed into it. If, from the situation of the tumor or the extent of its attachment, it cannot be safely removed entire, it may be taken away piecemeal, or freely incised, with the hope that its vitality will be thereby destroyed, and that it will then slough away and be discharged.

Uterine Fibroid Tumors.

These morbid growths may be developed in any part of the uterus, but the body or fundus is most frequently their seat. They consist essentially of hypertrophied uterine tissue, to which they are homologous. As a general thing, they consist of connective tissue and hypertrophied muscular texture, and they present under the microscope an appearance of "long, fine fibres, generally united in bundles; of fusiform fibre-cells analogous to fibro-plastic elements, and of round or elliptic granules of small size, the whole being bound together by fine intercellular substance." Sometimes these tumors are characterized by the formation of cysts within their substance, and when this condition exists the growth is denominated a *fibro-cystic tumor*.

These tumors vary greatly in size, in some instances being very diminutive, of the size of a pea, and in others attaining a growth of almost fabulous proportions. They have been divided into three varieties, according to their situation—viz., *sub-peritoneal, sub-mucous* and *intramural* or *interstitial* fibroids. The first variety has its growth from the surface of the peritoneum attached to the womb, and may be detected through the abdominal parietes as a somewhat loose tumor within the pelvic cavity. The sub-mucous fibroid grows from the sub-mucous tissue of the womb, and either distends the mucous lining, pushing into the uterine cavity, or the muscular wall, pushing the tissues outward. The intramural variety grows within the uterine walls, enclosed in its proper capsule or envelope, and is generally very slow to increase in size.

The *causes* which produce these tumors may be said to be unknown. They occur most frequently in women of the negro race. It is highly probable that they are dependent, so far as a predisposing cause is concerned, upon the scrofulous or some other systemic poisoning, excited into peculiar action by uterine functional derangements incidental to pregnancy, parturition or menstruation.

Uterine fibroids are liable to various changes of structure, such as fatty, cartilaginous, or even calcareous degeneration. They are liable likewise to become inflamed and to suppurate, and sloughing likewise occasionally occurs. An œdematous condition of the tumor may occur by which its bulk is greatly increased, and the subsidence of this may give rise to the opinion that the tumor itself is disappearing. A spontaneous disappearance is possible, however, and this is most apt to occur at the menopause, a retrograde metamorphosis of tissue occurring at that period as a consequence of the subsidence

of the menstrual function with its congestions and other accompaniments.

The *symptoms* developed by uterine fibroids are many and various, inasmuch as they embrace all those which result from a variety of disorders which they excite, such as uterine displacement, endometritis, cystic or rectal disturbances, pelvic peritonitis, etc. The most constant symptoms, however, are—excessive menstruation, or uterine hæmorrhage not connected with menstruation; profuse leucorrhœa; more or less pain through the pelvic region, and pain extending down the thighs from pressure on the crural nerves; dysmenorrhœa; irritability of the bladder and rectum. Most of these symptoms may be absent in some cases, and this is particularly true of the sub-peritoneal variety.

Diagnosis will not be difficult if the tumor be large, but if it be small or of medium size, its detection may be a matter of greater difficulty. Abdominal palpation, rectal and vaginal touch, the speculum and the uterine probe may all be required in effecting a differential diagnosis. Impacted fæces, solid ovarian tumors, pelvic abscess or hæmatocele, and displacements of the uterus may be confounded with this disease.

Treatment.—Consult the remedies mentioned on pages 580, 581 and 608. Any remedy in the Materia Medica may be suitable in these cases. The violent procedures recommended by the gynæcologists of the old school have nothing to recommend them in the way of results, and the homœopathic practitioner, by carefully choosing a remedy in strict accordance with the principles laid down by Hahnemann, may do much better, and cannot do worse in these cases, than the dominant school of medicine. The physician should enjoin upon his patient the necessity of leading a regular life, of abstaining, as much as possible, from coition and other sexual excitations, and of removing all obstruction to free circulation by wearing her clothing loosely and supported from the shoulders. Properly directed hygienic and dietetic measures, in these cases as in all others, will be found to be great aids to the homœopathic remedy.

CHAPTER XXXIV.

DISEASES OF THE OVARIES.

THE nervous centre of the female organization has been described as residing in the sexual system, of which the ovaries constitute the ultimate foci. Hence it might be expected that these organs would be subject to disorders, both nervous and inflammatory, similar to those which affect the uterus; and such in fact proves to be the case, notwithstanding their great dissimilarity of structure. Thus, as the uterus is found subject to nervous irritability, neuralgia, acute and chronic inflammation, displacements, ulcerations both benign and malignant, dropsy, tumors and other forms of structural disorganization, so the ovaries are in like manner liable to nervous irritation, ovarialgia, inflammations, displacements, tumors, dropsies, and a great variety of organic degenerations.

These disorders of the ovaries, even while presenting no apparent change of structure, exert a controlling influence upon the other portions of the sexual system, and so upon the entire constitution. Some of the most important of these disorders, being comparatively obscure, are liable to be overlooked in the consideration of more obvious derangements of which they are still the efficient causes. By reason of their situation the ovaries are less exposed than the uterus to external injury, but from being as it were the centres of the entire sexual system, these structures are liable to have concentrated in them all the morbid influences arising from functional obstruction in the dependent organs. And the fact that the ovaries are thus exposed to disorders reflected from other parts of the generative apparatus, in addition to those which may arise from their own functional derangement and structural disorganization, shows the primary importance of a careful study of all ovarian disorders, not only by themselves, but still more especially in their connection with morbid conditions of other organs. In the ovaries are implanted the seeds of life and of death. And these latter may destroy the impregnated ova while yet contained in the Graafian vesicles; cause the product of conception to be blighted in the womb, resulting in a molar instead of a true pregnancy; produce abortion at three months, a still-born child at full term; or finally destroy life at any period short of the normal three score years and ten.

Some of the forms of ovarian disorder are very common and important, although not necessarily very obvious; these will be fully described. Others, which are rare, will be briefly mentioned, so that they may be recognized when they do appear. In either case a careful study of all the attendant symptoms will be equally essential in order to make a proper prescription. Nor in many cases will the pathological details or diagnosis greatly aid in making such a prescription. But the homœopathic physician needs to become familiar with the *possible forms and terminations* of such disorders, in order to know how to examine such cases and to anticipate their natural course. And nowhere is the superior advantage of the homœopathic practice more obvious than in the anticipative treatment of forms of disease so obscure, so deep-seated and so formidable as are many of those to which the ovaries are liable. The single fact that *ovarian tumors* seldom or never appear in persons who have been brought up under homœopathic treatment at once illustrates and confirms this statement.

The *Fallopian tubes* no doubt very strongly sympathize with the uterus and the ovaries in their disordered conditions, but we have not deemed it necessary to make any particular mention of the various morbid conditions to which these organs are liable, partly from the difficulty of distinguishing any separate affections of these tubes, partly from the fact that those disorders which attack them from sympathetic connection with other organs will be most readily removed by treatment directed (in general) to the primary seat of disorder, and partly from the fact that all the symptoms must in any event be considered in prescribing for these disorders. And this totality of the symptoms may be just as truly and completely arrived at in these cases whether we pay special attention to the Fallopian tubes or not.

Ovarian Irritation.

Ovarian irritation is the analogue of irritability of the uterus. By some authors this affection has been termed *sub-acute ovaritis*, but we think without sufficient reason, since, as will be seen from the description, the symptoms are not inflammatory, but purely nervous, and, as already intimated, ovarian irritation may be either the cause, the primary indication or the consequence of severe disorder of some other organ of the sexual system. It may appear in women of all ages between the commencement and cessation of menstruation. Principally an affection of the unimpregnated female, it is most frequent in

those of a delicate nervous temperament, although by no means confined to them.

Symptoms.—A certain sense of uneasiness, which may become a very severe pain, in one or both iliac or inguinal regions, but most frequently in the left, forms one of the chief characteristics of this disorder. This pain may be either a dull aching or a more acute sensation; it may appear in paroxysms, especially after fatigue or over-exertion; it may be aggravated by gentle pressure, but is sometimes capable of being relieved by severe pressure, and may entirely disappear in a state of rest, leaving no evidence of its previous existence. "The pain is much more severe than in chronic inflammation of the ovarian tissues. It is indeed often intense, comes on in paroxysms, is seldom aggravated, but is often moderated, by firm pressure from a hand, a bandage or abdominal supporters constantly worn. It extends to the groin, to the front and inside of the thigh, and sometimes is evidently connected with pain in the back. It is unaccompanied by any enlargement which can be discovered by an external or internal examination. The patient has no fever (inflammatory or hectic), is often not emaciated or anæmic, and frequently, as regards her organic life, is perfectly well, with plenty of rich blood, strength and physical development. The pain may be very persistent for days, months and years, without any local or general change ensuing. In many patients brought to my care the antiphlogistic treatment had been perseveringly and repeatedly resorted to, in all its modifications, by rest, leeches, fomentations, by blisters and other revulsives, and had entirely failed to afford any permanent relief, but had rather aggravated the sufferings by debilitating the patient, and thus rendering her nerves more sensitive and her suffering greater."—*Hodge.* "When the irritation is great it may be extended to the bladder, giving rise to a desire to evacuate its contents frequently, and causing great pain in doing so. Hysterical paroxysms are by no means unfrequent. In two of the most violent cases of hysteria that I have seen for some time there was extreme tenderness of the region of the left ovary, and pressure there aggravated the hysterical paroxysms."—*Churchill.*

These sufferings from ovarian irritation are unaccompanied by any sympathetic pain in the breasts or fever, as is the case in actual inflammation of the ovaries. "Should the skin on being lifted give great pain, it cannot depend on a deep-seated lesion; irregular variations and the complete subsidence of pain point to neuralgia (ovarialgia)."—*Tilt.* We have given these fragmentary descriptions of this affection

from different authors in order to distinguish it from *ovaritis* (ever sub-acute), and as containing pretty nearly all the symptoms by which it is characterized.

Various forms of disorder of the female organism appear in connection with ovarian irritation, either as its causes or as its consequences. These we will indicate without attempting to distinguish the former from the latter. Nor indeed would it be essential to make this distinction, even if it were always practicable, since we must always prescribe for the totality of the symptoms present.

Causes and Connections.—Ovarian irritation scarcely ever appears entirely alone; usually it is accompanied by a corresponding irritability of the uterus, or by some other morbid condition to which it either gives rise or by which it is itself caused. In many cases it is impossible to determine what are the exact relations, as primary or secondary, which these various and concomitant affections bear to each other. Nor indeed is it essential, for on the one hand they are all alike caused no doubt by some profound constitutional dyscrasia, and on the other hand they are all alike to be taken into consideration in our prescriptions. And in either case the symptoms present, as in displacements of the ovaries, and the conditions of aggravation, as worse from motion, will sufficiently indicate the requisite hygienic directions.

A certain amount of ovarian irritation is frequently found in connection with amenorrhœa. The absence of the menses may be due to the same morbid condition of the ovaries that constitutes the irritability itself, or the irritation may be the result of a sudden suppression of the menstrual flux; or other deep-seated and constitutional causes may at the same time occasion an irregularity or total absence of the menstrual discharge, and an irritable state of the ovaries and other sexual organs. The sudden suppression of the menses, as from cold, will almost necessarily result either in irritation or in acute inflammation of the ovaries. This condition is not very different from that in which there is a deficiency of action from some latent dyscrasia or organic imperfection in the ovaries. Here the *ovarian nisus* is incapable of effecting its normal development, but only produces an irritable condition of the ovaries themselves; for it must always be borne in mind that as organic inflammation is the result of congestions or obstructions of the arterial or venous blood-vessels, so nervous irritation is the result of suppressed, imperfect or excessive functional action. In dysmenorrhœa there is always more or less irritation of the ovaries, and this general irritability will be

found to be greatly aggravated at the period of the menstrual nisus. The importance of carefully observing the morbid conditions (irritation, "congestion") of the ovaries, even in their incipient stage, on account of their strong disposition to lead to serious disorder, is well expressed by Dr. Duncan: "The propriety of attending seriously to the symptoms of congestion (irritation) of one or of both ovaries, as rendered evident by thrilling pain a little above the centre of Poupart's ligament, accompanied by tenderness on pressure and increased by the erect posture, ought to be strongly insisted upon. Whether the pain be constant or intermittent, returning at or exacerbated during the monthly crisis, accompanied by menorrhagia or co-existing with amenorrhœa and chlorosis, it should receive our urgent consideration; for when an organ has been congested for any length of time such a state is difficult of eradication; morbid changes rapidly occur and irremediable mischiefs result."

Menorrhagia will sooner or later induce ovarian irritation, in consequence of the nervous weakness of the sexual organs and of the whole system which follows such exhausting discharges. In all the abnormal varieties of menstruation—in profuse as well as in suppressed menstruation—the ovaries are often the organs most severely affected. And even where the profuse flow originates in a morbid condition of these organs, the reflex influence of such flow is capable of greatly aggravating the original morbid condition. In some instances ovarian irritation seems to be the result of erosion or congestion of the cervix uteri; in others the irritability appears only on the repression of such organic diseases by the barbarous surgical treatment of the allopathic school.

The relation of amenorrhœa to ovarian irritation has already been explained; and in those forms of dysmenorrhœa which are due to imperfect or difficult ovulation it is easy to see that the ovaries must be in an irritable condition. Thus, the entire absence of sexual intercourse, its *imperfect performance*, or excessive indulgence in coition may, in different ways, lead to the same state of ovarian irritation: and in many cases of sterility the only assignable cause will be found in a similar irritability of the ovaries. Hysteria is a no less invariable attendant upon this form of irritation, but it must be regarded rather as the consequence than as the cause of the irritability, since, as already stated in a previous chapter, *hysterical paroxysms* may sometimes be immediately produced by pressure of the fingers upon the ovaries. For treatment of *Ovarian Irritation* see remedies for Inflammation of the Ovaries.

Acute Ovaritis.

Acute ovaritis may be idiopathic or puerperal, according as it arises directly from local or constitutional influences peculiar to the ovaries, or results from peritoneal inflammation succeeding to abortion or parturition.

Description and Symptoms.—Idiopathic ovaritis is comparatively rare, except where it is the consequence of external injury. It is most apt to occur just previous to, during, or immediately after the menses. The ovaries themselves swell to three or four times their natural size, and their peritoneal covering usually becomes tender and inflamed. Scattered through the substance of the inflamed ovaries will be found purulent matter, contained in cysts which have been supposed to be the Graafian cells filled with pus of their own secreting. The patient suffers with severe, deep-seated pain in the pelvic cavity; the pain is accompanied by a burning sensation, and is made much worse by motion.

If the peritoneal covering becomes involved, the pain is rendered much more acute and lancinating, aggravated by pressure and by suddenly assuming the upright position, while the former tenderness on pressure, instead of being confined to the ovarian regions, will be found to have extended over the whole surface of the abdomen. In the severer forms of ovaritis the fever and other symptoms will greatly resemble those constituting peritonitis; "the skin is hot, the pulse quick and concentrated, the stomach becomes disordered, and nausea and vomiting occur." The inflammation usually does thus extend more or less over the adjacent peritoneal membranes, causing dysuria and very frequent and painful micturition, or the inflammation may be directed more posteriorly, and the rectum rather than the bladder become principally affected. In this latter case there may be frequent and ineffectual calls to evacuate the bowel, even with distressing tenesmus. "In the earlier stages of idiopathic ovaritis, nausea, sickness, and sometimes constipation, are frequent accompaniments, depending at first on the irritation of the visceral peritoneum and on the temporary paralysis of the muscular coat of the intestines. When the tumor has increased and rests on the rectum, the patient is troubled by a more constant constipation and by tenesmus. The pressure on the rectum is sometimes so great that the fæces are moulded into the form of a ribbon. Sometimes constipation is so great that the case is said to be one of ileus."—*Tilt.*

Acute ovaritis may give rise to nymphomania; "the mind is more

evidently affected in the sanguine, the irritable and the plethoric; the desires are inordinately excited, so as almost to amount to uteromania." But this exaltation of the sexual feeling can only arise in the earlier stages of the ovarian inflammation; and on the other hand "inflammation of the ovary decidedly occurs not only without the slightest approach to nymphomania, but it is frequently attended by a directly opposite state of feeling on the part of the patient."—*Löwenardt.*

Diagnosis.—In inflammation and in irritation of the ovaries an examination per rectum may be found requisite. "Without the aid of an examination per rectum it would be exceedingly difficult to form a certain diagnosis; the finger per anum easily reaches to the side of the uterus, *where the swollen and generally painful ovary may be distinctly felt.* Examination per vaginam leads to little or no certain results." And by such exploration per anum ovaritis may be distinguished from all other affections, because in no other affection is the ovary necessarily enlarged. A careful study of all the symptoms and conditions will remove any remaining obscurity in these cases. The history of the case, the previous condition of the patient, the nature of the pain, as sharp, lancinating, aggravated by motion, will all aid to determine the origin and extent of the ovarian affection. This must also be distinguished from simple ovarian irritation by that symptom of aggravation on pressure which is common in acute inflammation, but not in nervous or neuralgic conditions.

Termination.—The natural course of ovaritis, like that of other acute inflammations, is to terminate in suppuration unless its progress is arrested. In the latter case, whether the result be brought about by art or by unaided nature, the termination is in resolution. This is but another name for the subsidence of the inflammation itself. But a partial resolution or subsidence of the more violent inflammatory symptoms may be supposed to have taken place where the *chronic* ovaritis replaces the *acute.* Here we have the commencement of an *ovarian tumor*, for the enlargement of the ovary which appeared under the acute form of inflammation may not only continue, but even increase more and more under the chronic form.

Where suppuration occurs as the result of acute ovaritis, the pus is generally diffused throughout the substance of the ovary. This pus—whose formation may be indicated by rigors, softness of the pulse and mitigation of the general symptoms, with an increased sense of local weight and throbbing—may be reabsorbed into the system, and thus a form of resolution may succeed even after suppuration; or the

abscess may burst and discharge its contents, either externally through the vagina, into the intestine, into the bladder or into the cavity of the peritoneum. The discharge of the matter through the vagina is the most favorable of all, whether it be transmitted through the Fallopian tubes and uterus, or, as is more frequently the case, directly into the vagina itself. The discharge of the product of ovarian suppuration through an intestinal or a vesical opening may result favorably or unfavorably, according to the other circumstances of the case. But the effusion of ovarian pus in quantity, as of any other purulent matters, into the peritoneum, is almost necessarily fatal. In many milder cases of ovaritis, in which no structural disorganization, as suppuration or tumor, appears, the organ may none the less effectually become incapable of ovulation by the condensation of its tissues, or adhesions may occur which may indirectly, but no less certainly, occasion sterility.

Causes.—Idiopathic ovaritis may result from external injury, and it has been known to follow sudden suppression of the menstruation. It has also supervened on the suppression of gonorrhœa by astringent injections, and it has occasionally occurred in connection with variola and in pneumonia. "A cold taken during menstruation, the suppression of the courses, coitus during or immediately after this epoch, the use of violent emenagogues, pediluvia or hot baths at the same period, are the principal causes likely to produce ovaritis in the absence of the gravid or puerperal state."—*Scanzoni.*

Puerperal Ovaritis is much more common, and is often merely an extension of inflammation from the uterus or broad ligaments to the ovaries. As this is rather the consequence of another morbid condition, of which it forms a complication, we refer the reader to Puerperal Peritonitis for a fuller description.

Chronic Ovaritis.

Chronic ovaritis, as already explained, is often but the continuation of the acute in a less active form. In other instances it is the result of a corresponding inflammation of the uterus and its appendages, or it may arise, as it were, originally and spontaneously in the individual follicles. In either case there is more or less enlargement of these organs, their contour becomes irregular, their surface roughened and their entire substance indurated. This enlargement and induration usually affect but one of the ovaries in the first instance, the other retaining its natural size, or only becoming affected subsequently. The enlarged ovary remains within the pelvis, either freely movable

or adherent, until its increasing size causes it (if movable) to pass into the abdomen entirely, or to extend its growth in the same direction, where, from the formation of false membranes, adhesions have bound the original tumor within the pelvic cavity. Having risen up into the abdomen, the enlarged ovary may still remain freely movable, or become fixed by means of adhesions to the adjoining viscera, or by completely occupying the cavity of the abdomen itself. In this general manner do what are called ovarian tumors spring from chronic inflammation of the ovaries.

The *symptoms* of chronic inflammation of the ovaries, except in those cases which follow the acute form, are not very strongly marked. The pain, which in acute ovaritis had been very severe, gives place to a sensation rather disagreeable than painful. There are a variety of sufferings within the pelvic region which, *in default of any other cause*, may be safely attributed to chronic ovaritis. Such are "frequent need of urinating, painful constrictions of the vagina, uterine colics, a very painful tenesmus, together with the formation of hæmorrhoidal tumors." The patient complains of an inconvenient weight in the diseased spot, which increases when touched, when walking, by remaining too long standing, by coitus, and especially at the menstrual period. Frequently we meet with various disorders in connection with the menstruation, without our being able always to comprehend why the courses are sometimes nearly or quite suppressed, while at other times they are much too abundant; as the disease very often affects one ovary alone, the courses are not necessarily accompanied every time by dysmenorrhœal phenomena; we even see the catamenial flow occur two or three times without particularly painful sensations, which suggests the inference that the matured ovum at these periods belongs to the healthy ovary. At other times each menstrual period is accompanied by a violent dysmenorrhœa, and then either both ovaries are diseased or the ovulation affects in a high degree the diseased organ.—*Scanzoni.*

The pain, which is either limited to the region of the ovaries or radiates from thence, which has continued for some time, and which is aggravated either before or during the menstrual period, will lead to the belief that there may be chronic inflammation of one or both ovaries; and this belief will be strengthened if we find the vaginal cul-de-sac painful to the touch on the affected side.

Chronic ovaritis, whether it follow acute inflammation of the ovaries or become imperceptibly developed from some external injury, constitutional dyscrasia, or even from excesses in sexual inter-

course or abuse of the sexual organs—as in females who lead vicious lives or indulge in secret vice—is at the same time accompanied with enlargement, and naturally tends to *induration*, softening or other structural degeneration.

Treatment of Irritation and Inflammation of the Ovaries.

In acute and in chronic ovaritis rest is of great importance, and is especially demanded during the menstrual period. Severe exercise or fatiguing occupations should be avoided, and all influences calculated to depress the patient, either mentally or physically, should be removed.

Remedies which act especially upon the Ovaries.

1. Apis, Canth., Staph., Thuya. 2 Asaf., Aur., Bry., Carb. an., Chin., Lach., Lyc., Plat., Ran. bulb., Sec. corn., Sep., Zinc. 3. Acon., Ambra., Ant. cr., Ars., Bell., Carb. veg., Chel., Coloc., Con., Graph., Hep., Ignat., Merc. sol., Mez., Nitr. ac., Nux vom., Ran. scel., Sulph.

Aconite. Will be indicated where the patient has been exposed to dry, cold air, and has been so chilled through as to develop a real synochal fever, or in cases in which this inflammation has resulted from a fright.

Ambra g. Stitches in the ovarian region when drawing in the abdomen or pressing upon it. Discharge of bluish-white menses from the vagina. During urination there is a burning, smarting itching and titillation of the vulva and urethra.

Antim. crud. Nausea and vomiting; white tongue; tenderness over the ovarian region.

Apis m. Stinging pains in the ovaries. Aggravation after sexual intercourse. Enlargement of the right ovary, and pain in the left pectoral region, with cough. There is evidently a mutual sympathy between the ovaries and the lungs. Especially for the right ovary.

Arsen. a. Intense burning or tensive pain in the ovary, with great restlessness, some relief being afforded by constantly moving the feet. Thirst, with drinking little and very often.

Aurum. Much depression of spirits. Her mind dwells constantly on suicide.

Belladonna. The right ovary is much enlarged, and with every menstrual period the pressure downward was so great, as if everything would be forced out of the vulva, that she was compelled to

keep her bed for several days. This case was entirely cured in the course of a year with but three doses of Belladonna.

Bryonia. Stitching pains in the ovaries on taking a deep inspiration. The pains are made worse by motion. She can hardly bear the least touch on the affected parts.

Cantharis. Much tenderness and burning in the ovarian regions. Dysuria; cutting burning in passing only a drop or two, which is often bloody, or complete strangury. This remedy is very often indicated in this complaint.

China. In cases where profuse hæmorrhages or too frequent sexual intercourse have produced the attack of inflammation. She can hardly bear the least touch upon the affected parts.

Cimicifuga. Inflammation of the ovaries, with irritable uterus; hysterical symptoms and rheumatism; also with suppressed, painful or profuse menstruation; distress and dullness of the head; trembling; sinking at the stomach; frequent calls to urinate.

Colocynth. Intense boring or tensive pain in the ovary, causing her to draw up double, with great restlessness.

Conium. Induration and enlargement of the ovary, attended with nausea, vomiting, eructations of wind and expectoration of phlegm; lancinating pains; acrid, white and slimy leucorrhœa; labor-like contractions; pains in the iliac regions.

Graphites. The inflammation is aggravated by every cold she takes, or from getting her feet damp. Her menses delay. Morning sickness during the menses. Itching blotches on the skin here and there, oozing a glutinous fluid.

Hepar. When suppuration is feared, and other remedies have failed, Hepar may prove to be the medicine, if no other is more strongly indicated.

Ignatia. In cases where the disease has seemed to be developed from disappointed affection. There is involuntary sighing, great despondency, and weak, empty feeling at the pit of the stomach.

Lachesis. If pus has already formed, Lachesis may be the most appropriate remedy to promote its escape externally or through the intestines. The right ovary is affected.

Lycopodium. Cutting or shooting pain, extending from the right to the left, across the ovary; worse after four P. M., better after eight or nine in the evening.

Nux vom. When the disease appears to have been occasioned by rich living, highly seasoned food, stimulating drinks, or by a too sedentary life.

Palladium. The right ovary is swollen and sore on pressure, with bearing-down pains; heavy weight in the pelvis—worse when standing, better when lying on the left side.

Platina. In cases where the sexual passion is altogether too strong, as an attendant condition. The pain in the region of the ovary is of a burning character, occurring in paroxysms, with stitches in the forehead. Hysterical condition strongly marked. Has proved curative after the pus has been discharged under Lachesis.

Ranun. bulb. In chronic cases where rough, windy weather excites the symptoms.

Staphysagria. In many cases, particularly where the mind has been dwelling too much on sexual subjects as an exciting cause. Very sensitive to mental and physical impressions. Very sharp shooting pains in the ovary, which is exquisitely sensitive to pressure. Pains extending down into the crural region and thighs.

Thuya oc. In cases where the left ovary is more particularly affected. The sufferings are much increased at every menstrual period; they even become almost intolerable. The pain extends all through the left iliac region into the groin, and sometimes into the left leg; the pain is sometimes burning. Sometimes the pain is excited by walking or riding, and becomes so severe that she must lie down.

Zinc. In chronic cases; boring pain in the left ovary, causing her to press on the part continually; but the pain is entirely relieved only during the flow of the menses, and it returns with the same violence at the expiration of the menstrual period.

Ovarian Tumors.

Ovarian tumors are by no means uncommon, and may be divided into three general classes—viz., *Fluid Tumors*, *Solid Tumors* and *Composite Tumors*.

Solid Ovarian Tumors.

Solid tumors comprise those the structure of which is solid, there being little or no fluid matter in their composition. They are of several varieties, and are either external and attached to the ovary, or imbedded within its substance. They are similar in situation, structure and variety to tumors of the uterus, and often occur in the ovaries at the same time that they do in the womb, but are less intensely painful. The solid ovarian tumors of a non-malignant character are comparatively rare; they may be quite small, or vary from the size

of a goose's egg to that of a man's head. One of this kind, mentioned by Scanzoni—which, however, gave some traces of a cancerous nature—was found to weigh nineteen pounds, the patient having died of Bright's disease. In their general appearance these tumors are correctly described in the words of Dr. Baillie: "The ovarium is much enlarged in size, and consists of a very solid substance, intersected by membranes which run in various directions. It resembles in its texture the tumors which grow from the outside of the uterus, and I believe has very little tendency to inflame or suppurate."

In many instances the induration partakes of the nature of an *enchondroma*, in which the sub-peritoneal fibrous membrane of the ovary itself assumes an osseous or cartilaginous hardness. Thus, in two examples mentioned by Kiwisch: "Once these cartilaginous concretions surrounded the ovary in the form of numerous plates or of rounded protuberances, more or less large, which gave to the entire organ an aspect altogether tuberous. At another time the right ovary was entirely transformed into a tumor of the size of the fist, surrounded with numerous false membranes, whose exterior layers contained large, hard, cartilaginous nodules, while the interior of the tumor resembled a cartilaginous hyaline mass of very great hardness."

Very rarely the induration partakes of the *calcareous* or *cretaceous* nature, or from the presence of a peculiar dyscrasia in the system, which may be termed tuberculous, *tubercles* may be deposited in the substance of the enlarged, hardened and inflamed ovary, as in pulmonary tuberculosis. In such cases the adjacent organs will also show traces of similar tuberculous deposits. And thus, by almost insensible gradations, the non-malignant may be seen to run into the malignant form of ovarian induration. The reciprocal relation of the constitutional dyscrasia which produces tubercles to that which results in genuine cancer has already been explained in a previous chapter, on Cancer of the Uterus, to which the reader is here referred.

The *diagnosis* of these solid tumors of the ovary will be assisted by examination per rectum, by which such a tumor can be distinguished from tumor of the uterus, and by the consideration of the general health of the patient, and the less poignant and lancinating character of the pains, by which such a tumor may be distinguished from cancer of the ovary. But this is of consequence rather for the comfort and encouragement of the patient than for our own guidance in prescribing, since the medicine must always be selected from a careful study

of the totality of the symptoms and conditions, never from our pathological theories or conclusions. The symptoms will surely lead us right, while our pathological theories, *by persuading us to generalize instead of individualizing*, will assuredly preclude us from the success we might attain.

Composite Tumors of the Ovary.

In this class of ovarian tumors are included all those the make up of which is both solid and fluid. In some of these cases there is a preponderance of either the fluid or solid element, which makes it difficult to draw a line of distinction. Thomas describes four varieties of these growths—viz., *Cysto-adenoma*, *Cysto-fibroma*, *Cysto-sarcoma* and *Cysto-carcinoma*. These names are a key as it were to the quality and composition of the tumors themselves.

The most common way in which tumors of the composite class are produced is by a solid tumor forming cysts within its substance or by undergoing cystic degeneration.

Cysto-sarcoma is the form of composite tumor most frequently met with. "By cysto-sarcomata," says Lücke, "those large tumors are especially meant which consist of solid masses, papillary proliferations and numerous closed and open cavities, such as are found in the mammæ, ovary and testicle."—*Thomas.*

Fluid Tumors of the Ovary—Ovarian Dropsy.

The greater number of ovarian tumors are fluid in their nature. And although in all cases the contained fluids are encysted, not diffused, there are several distinct forms of such tumors. Thus, there are simple *serous cysts*, which are merely attached to the surface of the ovary; tumors which consist in *dilatations* and *dropsies of the Fallopian tubes;* dropsies of the ovaries, which consist of *unilocular*, *multilocular* or *multiple cysts*. It is well to understand these various forms, although it may not always be necessary or possible to distinguish them in the living subject, and also to know that they may be complicated with more malignant forms of disease. The *unilocular tumor* consists of a single cyst developed within the ovary, which may become of enormous size. It does not usually form adhesions to the abdominal viscera, and is for that and other reasons more amenable to treatment than are the other varieties. *Multilocular tumors* consist of several sacs, which may be developed from a unilocular cyst. These various sacs do not communicate with each other except in case of rupture of their walls. *Multiple tumors* consist of a number of inde-

pendently developed cysts, growing side by side, contained within one envelope and constituting but one tumor.

The encysted dropsy of the ovary, either consisting of a single greatly enlarged cyst or of several smaller ones, is by far the most common form of ovarian tumor. "This consists of an enlargement of one or more of the vesicles of De Graaf, the coats of which are thickened, greatly dilated, and become filled with a fluid, while the intermediate structure becomes atrophied as the vesicle or vesicles enlarge, until the fibrous tunic of the ovarium, covered by the peritoneum, forms the boundary of the tumor. When the principal cyst is formed of the entire ovarium, it often happens that the vesicles, having partaken of the morbid disposition, form a series of smaller cysts or cells, which are developed within the parent cyst, and occasionally communicate with each other by considerable openings, the tumor attaining an immense size, so as to occupy almost the whole abdomen. The thickness of the parietes of the cysts differs much; they are often as thin as a bladder, but at other times of a substance as thick as the hand."—*Leadam.* "If there be a great variety in the size of ovarian tumors, in the density of their external coverings and in the nature of their contents, there is scarcely less diversity in the number of the cells and in the thickness of the septa which separate them. In most of these compound ovarian dropsies the number of cysts is very considerable, as the larger cells have series of smaller ones developed and in the course of growth on their internal surface, so that when the disease has attained great bulk this creation of subordinate cysts is almost interminable."—*Ashwell.*

These tumors may vary from the size of a fist to that of a mass weighing a hundred pounds. "The fluid secreted within the cysts may be serous, like that of ordinary dropsy, or mixed with slimy matter, or it may be a thick, ropy fluid or gelatinous; different cysts in the same tumor will sometimes contain different sorts of fluid. Pus is occasionally found in one or more of the cysts, mingled with the other fluid, a consequence of inflammation having occurred in the cyst." The fluid contained in multilocular and multiple ovarian tumors is not generally so clear as that of the simple or unilocular variety. It is often as tenacious as honey or white of egg—so thick, indeed, that it will not flow through a large canula, and may assume very dark hues. At times it is colored by cholesterine, blood or pus, and is brown, red or like coffee-grounds.

The multiple cysts, as in multilocular cystic dropsy, are said by a late authority to depend on a particular specific alteration of the tissue

which constitutes the normal parenchyma of the ovary. Some of them are filled with similar, some with different, substances. Thus there may be a purely serous liquid, or one mingled with blood, resulting from the rupture of interior vessels. In what are called composite cysts, in some rare cases, but usually in a few isolated cavities only, we find a mass of fat, of hairs, of cartilage, bones or teeth.

Ovarian dropsies occur more frequently in single than in married women, and in the sterile rather than in the parturient of the latter class. This form of disease never appears before puberty; it is most apt to occur in the middle age, when the generative organs are in full activity. Usually but one ovary is at first or at all affected, even in cases in which the tumor occupies the entire cavity of the abdomen. The other ovary may have become atrophied by compression or the superior influence of the morbid processes going on around it. The right ovary is more frequently affected than the left.

Symptoms.—During the first few months, or while the dropsical tumor continues in the cavity of the pelvis, the symptoms and sensations are not to be distinguished from those occasioned by a more solid ovarian tumor. Its weight and size occasion uneasy, dragging, bearing-down sensations in the pelvis, or more or less positively painful affections of the bladder and rectum. Upon vaginal examination the tumor may be discovered between the vagina and rectum, and if the parietes be thin fluctuations may be detected. A similar exploration *per rectum* may be requisite fully to determine the nature and relations of the tumor, and to distinguish it from retroversion of the womb. After the tumor has passed up from within the pelvic cavity, the bearing-down sensation, the pressure upon the rectum and bladder, and consequent retention of fæces and urine, will be relieved. The disturbance of the organic action of the system will be shown higher up. The position and free movement of the intestines, stomach, diaphragm and other organs will be so interfered with, as the tumor increases in size, as to cause a great variety of nervous sufferings and functional derangements, such as palpitation of the heart, dyspnœa, dyspepsia, heartburn, etc. The gradual but constant advance of the tumor, its slow but steady growth, even when apparently the normal quantity of urine is discharged, indicate the nature of the case, independent of the fluctuation, which if present is of course a positive indication, while its absence may arise from the excessive thickness both of the external parietes of the tumor and of the intermediate septa. There may be considerable fever, espe-

cially in the evening, with much thirst, or both fever and thirst may be comparatively slight. "In the course of the disease the patient may have pains in the belly, with fever, indicating inflammation of part of the tumor, which may terminate in suppuration and produce hectic fever; or the attack may be more acute, causing vomiting, tenderness of the belly and high fever, proving fatal in a short time; or there may be severe pain, lasting for a shorter period, with or without temporary exhaustion, and these paroxysms may be frequently repeated; but in many cases these acute symptoms are absent, and little distress is felt until the tumor acquires a size so great as to obstruct respiration and cause a painful sense of distension. By this time the constitution becomes broken, and dropsical effusions are (elsewhere) produced. Then the abdominal coverings are sometimes so tender that they cannot bear pressure, and the emaciated patient, worn out with restless nights, feverishness and want of appetite, pain and dyspnœa, expires."—*Burns.*

The *causes* of ovarian dropsy are not so very definitely stated, except that they may arise from a great variety of influences *in persons of a general dropsical diathesis.* These are stated by Leadam to be injury during parturition, blows, falls, strains, frights, sudden applications of cold, undue excitement, etc. Hence in general, next to a careful consideration of the constitution, symptoms and indications, it may be important to bear in mind those things which may have resulted in such abnormal developments; for so powerful is the influence of the mind over the body that, even in structural disorders which have thus resulted from such influences as terror and fright, but little progress will be made toward a cure so long as we neglect to take such circumstances into consideration.

Ovarian dropsies may also arise in connection with suppression of the menses, as is the case with all forms of ovarian tumors. And in the former, as in the latter case, it may not always be possible to determine which is the primary and which the secondary affection, at least where both ovaries are at the same time affected, which, however, is not common. In ordinary instances one ovary will become diseased, and the other still perform its function of ovulation, and conception itself may result. This may be the case until the larger size of the ovarian tumor interferes with the proper action of the other ovary.

Complications.—Dropsies of the ovaries are very often complicated with malignant disease, either of the scirrhous or of the medullary or colloid variety, and during life it is sometimes impossible to distin-

guish between those which are simple and those which are thus seriously complicated. In some such obscure cases nothing but a careful attention to the constitutional indications and symptoms will guide the physician aright. He may know of no remedies capable of curing the form of dropsical tumor before him, but he may be able to select remedies which shall greatly benefit, and even finally cure, his patient. Ascites, or even hydrothorax and general anasarca, may become complications of ovarian dropsy, especially in its advanced stages, thus greatly aggravating the sufferings of the patient, and hastening the fatal result. Inflammation may arise in the dropsical tumor, which may lead to suppuration and a fatal termination, especially after the operation of paracentesis has been performed.

Diagnosis.—It is important, though not always easy, to be able to distinguish dropsical from other ovarian tumors, particularly with reference to prognosis.

From pregnancy inter-pelvic ovarian dropsy may be distinguished by internal examination, by means of which this tumor may be separately felt apart from the fundus uteri. And in a similar manner, by examination per rectum, as well as per vaginam, this dropsy, while yet within the pelvic cavity, may be distinguished from dropsy of the Fallopian tubes. From retroversion of the uterus it may be distinguished by its slow growth, as compared with the frequent suddenly formed tumor which arises from this displacement of the uterus, by the greater mildness of the symptoms, the bowel not being at once affected, and by examination per rectum.

After the dropsical tumor has so increased in size as to have ascended into the abdomen, it may be distinguished from pregnancy by auscultation; by its being one-sided sometimes; by examination per rectum and per vaginam showing the uterus not to be enlarged. In those instances in which pregnancy does exist in connection with ovarian dropsy, it may not be possible to determine the facts of the case until the ear can catch the sound of the fœtal circulation, and even then there may be some obscurity. Still, even here the constitutional affections, the sensational symptoms, will lead infallibly to the right remedies, and thus the very best that can be done will be done. From ascites ovarian dropsy may be distinguished by the well-defined form of the tumor; by its original or permanent inclination to one side; by its maintaining its situation even while the patient is in the recumbent position; by the more obscure fluctuations; by examinations per rectum and per vaginam, which will also enable it to be distinguished from dropsy of the uterus; and by the absence of œdema

of the feet and ankles, which almost invariably attends ascites, but which is less apt to accompany encysted dropsy, except in the last stages. The constitutional symptoms are less strongly marked in this encysted form of dropsy than in ascites. From solid ovarian tumors ovarian dropsies are to be distinguished by the fluctuation and by their more rapid growth. It must be borne in mind, however, that there are cases of true ovarian dropsy which come on very slowly, which may remain dormant and stationary for a number of years.

The *prognosis* in all cases of ovarian tumors, whether solid or fluid, since the great advancement in the true art of healing that has been made within the past few years, has been made much more favorable. The profession has come to realize that all such growths are of dynamic origin, and that the persistent use of a homœopathic remedy to the particular case in question will certainly so counteract the diseased condition as to make the tumor disappear. Actual experience demonstrates this theory, and proves it to be practically true in nearly all cases where the Art of Homœopathy is skillfully applied according to the rules of the master. This advancement of the healing art brings good cheer to many a family whose mother, sister or very dear friend has an almost mortal fear of the knife. Even those tumors that seem to develop at the change of life prove to be amenable to our treatment. At the present day no homœopathic physician ever thinks of an operation for these various growths, called tumors, till the very best skill and advice in our ranks have been obtained for reducing the same by careful and persistent medication by the law of similars.

Treatment of Ovarian Tumors.

Under this head may be considered both the internal medication and operative interference. The latter may be more readily disposed of first.

Operations for ovarian tumors are of two kinds—those which are intended to entirely remove the disease by extirpation of the tumor itself, and those which attempt merely to relieve the patient by drawing off the accumulated fluids.

Tapping and Drainage.—Tapping is resorted to in some cases of ovarian cystic tumor for relief of the patient, but not with the expectation of obtaining a radical cure of the disease. It is especially indicated in unilocular cysts in which fluctuation can be distinctly felt, and in which the patient experiences a great deal of suffering in locomotion and respiration from the large quantity of water accumulated in the tumor. "It should not, as a general rule, be performed so long as the patient is comparatively comfortable, experience having shown

that when it has once been done it will usually have to be done soon again."

Although comparatively simple, this operation should only be undertaken with the proper precautions. The bladder should previously be evacuated, in order as much as possible to avoid the danger of puncturing this organ. The patient may be placed on her side near the edge of the bed, or more conveniently, in some cases where it is possible, sitting on the edge of the bed. The abdomen should be supported by a bandage broad enough to cover the space between the superior border of the mons veneris and the inferior margin of the epigastrium, but not too broad, since it might thus impede the respiration. The bandage should be divided at each end, to within a few inches of its centre, into three or four strips, which are to be interlaced as they cross each other behind. An assistant is to be placed on each side of the patient—the one on the left side holding in his hands the extremities of the bandage which are passed from the right side (behind) to the left; the one on the right side holding in his hands the extremities which are passed from the left side (behind) to the right. In this manner firm and uniform pressure may be exerted upon the abdomen, which will at the same time promote the discharge of the fluid and sustain the patient, preventing the feeling of faintness which would otherwise follow from the sudden deprivation of the accustomed pressure of the tumor on the internal organs.

Preparation having thus been made to protect and sustain the patient, a couple of basins should be at hand to receive the fluid as it flows from the opening, and buckets, or even a tub, should be placed convenient for emptying the basins. It will be found best to have two basins, one to replace the other as it is being emptied. A third assistant will be useful to attend to these. Should the patient show signs of faintness or dyspnœa, the flow may be checked by placing the finger upon the canula until she feels better.

All things being ready, the exact point for introducing the instrument is determined and marked by a slit in the bandage. The instrument is the trocar. "Holding this firmly in the right hand, with the thumb and index finger resting upon the canula, the surgeon plunges it into the linea alba, about three inches above the pubis, and by a steady forcible pressure pushes it through the abdominal walls." "When the tumor occupies the side of the abdomen, care must be taken to puncture it external to the course of the epigastric artery, otherwise this vessel might be wounded and the patient die of hæmorrhage. When the tapping is performed in the *multilocular* variety of

dropsy, the puncture should be made in the most prominent and fluctuating part of the tumor. If one cyst does not yield the requisite supply, another is opened, an eye being always had to the situation of the epigastric artery."—*Gross.*

It is well to introduce the trocar with the handle a little depressed and the point looking upward; thus the superior integument will form a sort of valvular covering over the wound and tend to prevent the intrusion of air.

The subsequent treatment requires that the patient remain quiet to prevent peritoneal inflammation, the abdomen being firmly compressed by means of a thickly-folded cloth and a broad bandage. Some cases are reported in which this operation has been repeatedly performed, on each occasion drawing off as much of the fluid as would readily flow, sometimes three or four pails full, and this during a course of years. But this constant drain upon the system sooner or later wears it out, and the patient finally perishes of exhaustion.

Ovariotomy.—The operation for the removal of ovarian tumors has of late years been very successfully performed by many men who have become famous for skill as ovariotomists. The results warrant a resort to the operation where other measures have failed. For a description of this operation and the method of performing it, together with a more perfect and complete account of the various forms of ovarian tumors, we refer the reader to the recently published works of Atlee, Peaslee, Thomas and Wells.

The following remedies are recommended in the treatment of ovarian tumors. The practitioner should select his remedy with the greatest care in these cases, keeping before him always the possibility of effecting a cure by medicinal means alone, and leaving operative interference as a *dernier resort.*

Apis mel. Stinging pains, like bee-stings; sometimes lancinating pains. Absence of thirst. Scanty urine. The dropsical effusion may be trifling and merely local, or the patient may be completely anasarcous and enormously swollen; the skin is usually white and almost transparent. The bowels are often very costive, with large, hard, difficult passages, which Apis also cures.

Arnica m. If developed from a bruise, the Arnica symptoms remaining, a sore, bruised sensation.

Arsenicum alb. The tumor may be large or small, and is accompanied with a general anasarcous condition and pale, wax-like skin.

Burning pains in the tumor. Water lies heavily and cold upon the stomach when drunk.

Belladonna. The pains coming and going suddenly. Downward pressure, as if all would issue through the genital organs.

China. If the tumor can be traced as a consequence of loss of animal fluids.

Conium. Much nausea and vomiting. Vertigo whilst in a recumbent position, particularly on attempting to turn over. The urine intermits in its flow.

Graphites. She has itching blotches here and there over her person. Getting her feet a little damp aggravates her sufferings. Obstinate constipation of large, knotty fæces, with varices.

Iodium. In women of decidedly scrofulous diathesis. Leucorrhœa, which excoriates the flesh, and even corrodes the patient's clothing.

Lachesis. Especially in cases where the left ovary was first affected, with tendency toward the right. Worse after sleeping. The pain is often relieved by a discharge of blood from the vagina.

Lycopodium. The right ovary is first affected, and inclines to the left. Aggravation after four o'clock P. M. Much borborygmus, particularly in the left hypochondrium. An abundance of red sand in the urine. Much pain in the back before urinating, which is relieved as soon as the urine flows.

Zinc. The sufferings are entirely relieved during the catamenial flow. A sensation as of boring in the tumor, which requires pressure and shaking of the part for relief.

Study also APOCYNUM CANN., EUPATORIUM PURP., HYDRASTIS and SEPIA, and the remedies mentioned under *Cancer of the Ovaries.*

CANCER OF THE OVARIES.

The malignant and the non-malignant may be stated to comprehend all the varieties of solid ovarian tumors; of these the latter—principally fibrous tumors—have just been described; the various forms of scirrhus, cancer and fungus hæmatodes make up the former.

Fibrous cancer, or true scirrhus, more properly belongs to the class of solid tumors of the ovaries. This form of ovarian cancer is usually very moderate in size, very slow in its growth and development, and as a primary affection comparatively rare in its occurrence. The more frequent form of cancer of the ovaries, however, is not the scirrhous, but the cerebriform variety, the cysto-carcinoma which appears in connection with encysted rather than with solid ovarian

tumors. Both varieties, for the sake of simplicity and conciseness, will be considered in the present section.

Cancer of the ovaries is less common than that of the breasts, and not nearly as frequent as cancer of the uterus. It appears to attack principally unmarried women at the middle period of life, while cancer of the uterus more frequently occurs in those of a more advanced age.

Scirrhus of the ovary presents the characteristic stony hardness of this affection in general; it is uneven in its surface and nearly homogeneous in its substance. Its coexistence with cancer of other organs, especially in the breast, greatly aids in determining the nature of the difficulty. In other respects the reader is referred to the symptoms as described under cancer of the uterus. The examination per rectum will enable the tumor to be distinguished from that of the uterus.

The more common form of ovarian cancer is the *cerebriform*, which is also much more rapid in its growth. "We have the ovaries or Graafian vesicles swelled out into cysts whose walls are like scirrhus, or we have them converted into those bags of gelatiniform substance which have obtained the name of colloid. We see also here those proliferous cystic growths classed by some authors among the non-malignant tumors, but which are, I believe, true cancer. It appears from the results of operation that the diagnosis of these tumors from the simple cystic formations is very difficult, and also that very unfavorable results have ensued whenever the ovarian tumor which has been removed proved to be cancerous."—*Cooke*. It is desirable, however, as above stated, to be able to distinguish at as early a period as possible scirrhus from an ordinary and comparatively innocuous induration; and so also to distinguish a fibrous from a cerebriform or colloid cancer of the ovary, since, while the former may occupy years in its development, and even then attain to but a moderate size, the latter runs a very rapid course, and may acquire an enormous volume in a few months.

As fibrous cancer of the ovary may become a softened, ulcerated cancer, so these two forms of the cancerous affection either present at different periods of their development great differences of consistence, or they combine in one and the same tumor, and at the same time, the most opposite constituents. An ovarian tumor was dissected by Veter weighing fifty-six pounds, and of a consistence almost cartilaginous; in three parts, however, it was softened, and resembled the substance of the brain. The encephaloid substance was more distinctly characterized in a case of enormous cancer of seventy-five pounds weight,

which occupied the left ovarium, and contained within a fibrous and a fleshy mass and a fatty tissue. It is this encephaloid disease which has been termed *cephaloma* when it is whitish, and *hæmatoma* when it is vesicular and saturated with blood; the same that by others has been denominated malignant or fungoid tumor of the ovarium.* A similar fungous or cancerous *cauliflower excrescence* has been described, in which, in connection with dropsy, both ovaries were changed into a mass infinitely ramified with vessels in its substance and granulous at its surface.

Many forms of encysted dropsy of the ovaries are attended with cancerous affections; here we find colloid cancer, medullary cancer, and what, for more exact definition, are termed *cysto-sarcomata*. For a more thorough and complete view of the various structural disorders of these organs the reader is referred to the works of modern gynæcologists.

Symptoms.—Ovarian cancers are less painful than the uterine, but the pain is of the same lancinating character; menstruation may continue so long as the disease is confined to one ovary, but it will necessarily fail when both organs become involved. Conception has been known to take place in persons laboring under malignant disease of one ovary. From their situation in connection with the rectum and bladder, the enlarged ovaries must of course occasion more or less irritation and disturbance of both these organs. And in fact the most painful symptoms which arise in connection with ovarian cancer are those which occur either from its thus involving other and more sensitive organs, or from its escape into the abdomen and subsequent softening, involving all the surrounding peritoneal membranes in this distressing inflammation. "These diseases frequently lead to a rapidly fatal termination, and are accompanied by that extreme sense of debility and bloodless appearance of the body so characteristic of malignant disease." "The malignant form of the disease may be recognized, during life, by the want of nutrition, the broken health of the patient, the unceasing and rapid growth of the tumor, the simultaneous enlargement of glands in other parts of the body, and the occasional recurrence of lancinating pains in the parts. The latter symptom is not constant. The pulse is quick and feeble, and as the disease proceeds there is hectic fever, and often aphthæ in the mouth, with an inexpressible sense of debility."—*Boivin and Duges.*

Diagnosis.—"*From ovarian dropsy* both scirrhus and encephaloid may be distinguished by their greater hardness and compactness, by

* Boivin and Duges, page 479.

the absence of fluctuation generally, and by their lobulated, tuberous surface.

"From *pregnancy*, by the hard, lobulated surface, and by the absence of the audible signs of pregnancy.

"From *fibrous tumors of the uterus*, by their greater size; by their not being pediculated, but more movable, at least during the early stages, and in an advanced stage by the lancinating pain and constitutional distress.

"*Scirrhus* is of slow growth, gives rise to mechanical symptoms, and to disturbance or irregularity of the catamenia, but to no pain or constitutional suffering. Encephaloid disease, or fungus hæmatodes, on the contrary, gives rise to fever, emaciation, and other constitutional symptoms."—*Churchill.*

For other constitutional symptoms and affections see Cancer of the Uterus, since cancer either in the uterus or in the ovary must affect the system in a very similar manner.

Treatment.—For the treatment of cancer of the ovary consult the treatment under Ovarian Tumors and Cancer of the Uterus.

Mammary Cancer—Cancer of the Breast.

There are many forms of tumors occurring in the mammæ, some of which are mild or innocuous, some malignant, apparently from their outset, and some, after remaining stationary and harmless for a long course of years, are capable of suddenly assuming a malignant form and character. This latter circumstance is owing no doubt to the fact that in such cases the tumor becomes the representative of a more depraved or of a cachectic condition of the system. And as in a former chapter we have seen the reciprocal relation of the tuberculous to the cancerous diathesis in different members of the same family, so here we see how at different stages of the same life the constitutional miasm may assume a more malignant form.

Of the actual cancerous affections of the female system the breast becomes the seat of development of by far the larger number. And the cancers of the breast—either those originally so appearing or those subsequently so becoming—are almost all of the scirrhous variety, and they all occur after the accession of the period of puberty. But before proceeding to the description of mammary cancers it will be proper to mention two or three forms of tumor which resemble such cancers, especially in their initial stages.

These are glandular engorgements, "which have received the name of *adenoid tumors* or *adenocele*. Commencing as a small almond-

shaped tumor very loosely attached to the surrounding tissue, and gliding with great freedom under the skin when pressed by the fingers, it may grow to the size of a duck's egg or even larger. It is seldom solitary, never attaches itself to the skin, and within my experience never suppurates so long as it remains simply an adenocele. This tumor is observed more generally in the mammæ of unmarried females."—*Cooke.* These tumors, or glandular enlargements and indurations, are supposed to be of a scrofulous (tuberculous) nature, an external development of what might have become pulmonary tuberculosis. Some cases of tumors of this form are believed to depend upon uterine irritation or sexual excitement, and to be only capable of being removed by the removal of the exciting cause. Other cases of adenoid tumors of the mammæ are those which may remain for many years painless and innocent, and finally assume a cancerous form. "It need not be denied that cancerous growths may occur in tumors that were previously of an innocent kind."—*Paget.* This is to be accounted for from the fact that phthisical parents beget cancerous offspring, and cancerous parents have phthisical children—hence tumors of long standing, having none of the characteristics pertaining to cancer, may suddenly assume an active cancerous condition. These statements are made particularly to show the importance of being guided in all our prescriptions for such tumors *not by our diagnosis* as to their being cancerous or otherwise, but by the symptoms present.

Still another class of tumors of the female breast is to be found in those which arise from external injury. "A blow upon the soft tissues of the female breast may result in a diffused hypertrophy of the gland and neighboring structures, or in a circumscribed tumor which obtains considerable hardness, and is attended with great pain, or in the development of cancer," the result in either case being determined by the *internal condition* of the various systems, which are all alike externally affected by the same exciting cause. Thus, unless one has in her constitution either the cancerous dyscrasia itself or its complement, the tuberculous diathesis, no cancer can result from an external injury, however severe.

The various forms of non-malignant tumors of the mammæ hitherto mentioned are indurated, solid. But there are others, which may become cancerous or not, which are properly termed *cysts in the mammæ.* These arise from the distension of one of the lactiferous tubes of which the gland is composed. "When fully developed this cystic tumor is so tense as to give rise to some doubt whether it be a solid

or a fluid body." They may occur singly or in numerous clusters. In the former case, they are declared by Cooke to be innocent and curable; in the latter, they may be either innocent or malignant.

The cancers of the female breast have already been stated to be almost entirely of the scirrhous variety. The medullary form of mammary cancer is so rare that it is sufficient to state that it sometimes does occur. Scirrhus of the breast has been divided into three general classes:

I. *Scirrhus proper:* a hard tumor which is felt beneath the skin, generally movable, but in an advanced stage attached to the pectoral muscle as well as to the skin, very heavy and incompressible, and attended with severe stabbing pain. These tumors may be reabsorbed or become open ulcerated cancers.

II. *Scirrhus with cysts—cysto-scirrhus:* a cancerous tumor having an indurated base, in which cysts have been developed. This variety in some instances appears to be but a further development of the former.

III. *Cuirass-form scirrhus:* tegumentary scirrhus, which involves both the skin and the gland, binding the whole down by a hard, brawny, almost iron clasp, to the ribs themselves. This peculiar induration of the skin frequently extends over the thorax, creeping gradually round to the back, and anteriorly across the sternum to the other breast. It is the least manageable of all the forms of scirrhus, and never at any time admits of operation with the slightest prospect of delaying its progress. It is in this form of scirrhus principally that we have those nodules or tubercles which are sometimes seen upon the surface of the breast, and indicate generally the hopeless nature of the case; but these tubercles do also appear in the advanced stages of the other forms of scirrhus, and especially when the disease returns after an operation.—*Cooke.*

The history of the case, the relation of the tumor to the adjacent parts as first movable, then fixed, the extreme, stony hardness of the tumor itself, and the stabbing, lancinating character of the pains, will enable the physician to give a qualified, guarded diagnosis, even in the earlier stages of the disease, and to express the hope that the tumor may be prevented from assuming the form of ulcerated cancer; and that, if it is not entirely dissipated by the exhibition of the appropriate remedy homœopathic to the whole case, it may at least be arrested in its progress, and its further development finally prevented.

With regard to the operation for the removal of cancer, we may now state that the results of surgery go far to confirm the principles

adopted in this book and which are common to the homœopathic school. The extirpation of the tumor, so far from removing the disease, does but result in most cases in its more rapidly fatal development. All those cases in which the surgeon would dare to operate afford still greater prospect of a radical cure from the use of the homœopathic remedies. And finally, if these remedies fail to arrest the progress of the disease entirely, they can greatly retard its advance, and at the same time do much toward relieving the intense pains which characterize almost every form of cancerous affection.

Treatment.—Study the following remedies, and also the others mentioned under Uterine Cancer and Ovarian Tumors.

Apis m. Indurations. Scirrhus or open cancers, attended with "*stinging burning*" pains.

Arnica m. Should be employed immediately after a contusion, or, should this not be found sufficient, *Conium* will most probably be found to be the remedy.

Arsen. a. Burning like fire. Putrid exhalations. Waxy paleness, and great debility from the cancerous affection. Great loss of flesh. The pains are relieved by motion.

Asterias rubens. Cures cancers, particularly of the left breast. "Feeling as if the left breast were drawn inward." "Drawing pain in the breast." "Swelling and distension of the breasts, as if before the menses."

Belladonna. Red streaks, like radii, extend from the scirrhous induration or ulcer. The pains come on suddenly, and finally disappear with equal suddenness. They are aggravated by motion or the least jar.

Bryonia. Where there is a tensive burning and tearing pain, aggravated by moving the limb of the affected side. She feels generally better on keeping still.

Calcarea carb. In leucophlegmatic constitutions. The cancer is very sensitive and painful to the touch.

Calcarea oxalata. Cancer of the left breast, with intense agonizing pain.

Carbo an. Burning and tearing pains; dyspnœa and anxiety; low-spirited and desponding. Faint, empty sensation at the pit of the stomach.

Cham. Induration, with drawing tearing; painful to the touch—she feels as though she could not possibly bear the least touch. She becomes almost furious about the pain; she cannot bear her clothes

to touch the part affected. The pains are aggravated in the open air and at night.

Clematis e. Cancer in the mammæ, painful only on being touched.

Colocynth. Will be found indicated in some cases of very painful cancer.

Conium m. Is particularly indicated in cases developed by means of an injury, or if aggravated at every menstrual period. Pricking, stinging pains. She is roused from her sleep with pain.

Creasote. The whole mammary gland is hard, bluish-red and covered with little scurfy protuberances, from which blood oozes out whenever the scurf is removed.

Graphites. If developed from old cicatrices formed from repeated abscesses in the mammæ.

Hepar s. c. Cancer of the breast, with stinging, burning of the edges, and smell of old cheese. Little pimples or smooth ulcers surrounding the scirrhus or principal ulceration.

Lachesis. The cancer has a bluish or dark-red base, interspersed with black streaks of coagulated or decomposed blood.

Lycopodium. Hard, burning nodosities in the mammæ. Study the constitutional symptoms of this important remedy.

Mercurius. The cancer has a sore pain, a sort of raw feeling.

Nitric acid. Hard knots in the mammæ, particularly of mercurialized women.

Phosphorus. Inflamed indurations, very painful, much aggravated by exposure to the air. Stitching pains striking through the part affected. Tall, slim, phthisical females.

Pulsatilla. May be indicated in all lumps occurring in the breasts of young girls. They are sometimes very painful, and often affect the arm of the corresponding side.

Sepia. Is a powerful remedy in these affections. The urine is putrid, and deposits a sediment like clay burnt on the chamber. Painful sensation of emptiness in the pit of the stomach; yellow spots in the face; burning pain in the cancer.

Sulphur. The constitutional symptoms are strong in this direction; flushes of heat; burning in the soles of the feet; heat on the crown of the head; weak, faint spells. Weak and unusually hungry from eleven to twelve A. M.

HYDRASTIS, PHYTOLACCA, GALIUM APER., HAMAMELIS, CHIMAPHILA, CISTUS CAN., and the IODIDES OF ARSENIC AND LIME, have likewise been recommended.

CHAPTER XXXV.

DISEASES OF INFANTS AND CHILDREN.

Physiology and Lesions of Infantile Nutrition.

THE most remarkable circumstance connected with the young infant is its rapid growth. In comparison with the very great activity of its nutrition in a state of health, most of its other functions seem nearly dormant. And it follows that most of the disorders of infancy are either direct lesions of nutrition or the consequences of such lesions.

A brief notice of the normal physiological growth and development of the infant will prepare the way for a more intelligible account of the disorders which are but deviations from such growth, and at the same time afford opportunity for explaining the causes of such deviations. Just after the birth of her child, and before the secretion and flow of milk sufficient to nourish the babe, the mother is in a condition of temporary rest. The same is true of the corresponding period in the life of the babe. Before birth it had been nourished directly through the sanguineous circulation of the mother. After its birth comes that brief interval of repose in which its system may be supposed to consume all the last remaining elements supplied through the mother's veins. To this succeeds a state of hunger, in which the system becomes prepared to receive its necessary food in a form entirely new and by means of an organization equally different and distinct.

The mother's milk is the simplest and most nourishing form of food, and one that requires to undergo the least possible change in order to be capable of assimilation by the child. The milk contains all the elements which enter into the composition of the blood, and of course into the construction of the body. "It is very interesting to observe that milk contains the three classes of principles which are required for human food—the albuminous, the oleaginous and the saccharine; and it is the only secreted fluid in which all these exist to any considerable amount. It is therefore the food most perfectly adapted for the young animal, and is the only single article supplied by nature in which such a combination exists."—*Carpenter.* In maternal lactation the milk is freshly prepared as needed, and imparted to the babe from time to time in small quantities, and under the beneficent influence of physical and moral circumstances which in a

remarkable manner tend to promote its kindly reception into the infant's system, its grateful assimilation, and the consequent exceedingly rapid growth and development of the infant itself. For the animal heat of the mother's body imparted to the babe in her arms is not more necessary and more grateful to the infant's physical system than is the moral influence of the cherishing kindness and tender affection of the mother's love essential to the whole spiritual, intellectual and physical growth of her offspring. The grosser material life of the babe is indeed sustained by the abundant supply of milk which it receives from the maternal fountain; yet even this material supply will be found to have been deprived of a large part of its efficient vitalizing force when it loses the indwelling spirit of the mother's love, of which it naturally forms the material body, and of which in great part it constitutes the medium of communication between the mother and her child. This in some measure accounts for the great mortality of those who are attempted to be brought up by hand instead of being nursed by their own mothers, as intended by nature. "The infant whose mother refuses to perform toward it a mother's part, or who by accident, disease or death is deprived of the food that nature destined for it, too often languishes and dies. Such children you may often see with no fat to give plumpness to their limbs, no red particles in their blood to impart a healthy hue to their skin, their face wearing in infancy the lineaments of age, their voice a constant wail, their whole aspect an embodiment of woe. But give to such children the food that nature destined for them, and if the remedy do not come all too late to save them the mournful cry will cease, the face will assume a look of content, by degrees the features of infancy will disclose themselves, the limbs will grow round, the skin pure red and white; and when at length we hear the merry laugh of babyhood, it seems almost as if the little sufferer of some weeks before must have been a changeling, and this the real child brought back from fairy-land." *

The mortality of infants in foundling hospitals is vastly greater than that of those who, although deprived of their natural mothers, are still brought up in private families. And yet these extreme cases will serve all the more plainly to show the mischievous results produced by a violation of the laws of nature in this most important respect. The following statement of the course pursued and results obtained in the three principal foundling hospitals of France, compared with the subsequent statement of the almost universal mortality

* West, *Diseases of Children.*

in the largest foundling hospital in America, will fully explain itself. At Lyons each infant on its reception is given into the charge of a wet-nurse, and its stay in the hospital does not exceed a very few days, after which it is sent to be nursed in the country. At Rheims the stay of the infant in the hospital is equally short, but neither while there nor afterward when at nurse in the country is it brought up at the breast. At Paris the stay of the children in the hospital is often very much longer, but they are usually, though not invariably, suckled by wet-nurses. The mortality under one year of the children admitted into these institutions is, at Lyons, 33.7 per cent.; at Paris, 50.3 per cent.; at Rheims, 63.9 per cent. At the Foundling Hospital on Blackwell's Island, New York, the pastor in charge states "that of the five hundred motherless infants that he had baptized within the two years preceding January, 1867, only about twenty-five were living, most of the balance having been returned dead within about twenty days after their admission. Their food was cow's milk only. On the first of November the same reverend gentleman informed me that he had baptized one hundred and sixty since the first of March, of whom only six remained living, the most of them having died within twenty days after arriving at the hospital." * These children were fed upon milk obtained from cows kept and fed upon the island.

Other unfavorable influences—of the sea air, the cold and damp east winds, in addition to the usual unhealthy circumstances inseparable from extensive hospital establishments—must have contributed very largely to the production of this almost universal and unprecedented mortality. Still, the remarkable and very early fatality itself, after making all due allowance, deserves attention in part from its relation to the comparative viability of infants brought up at the breast and by hand, and in part from its relation to the quality of the food best adapted to support life in these little ones when they cannot be nursed. And the question becomes a very practical and important one in many cases in which the poor health or the unsound constitution of the mother gives reason to conclude that if the child's life can be preserved in its tender months by other means, its whole constitution and future health may be very much benefited by the same method. But this will be again considered subsequently; and yet it may be proper to remark here that, even in those cases in which it may be impossible or inexpedient for the mother to nurse her child entirely, it is still very important for her to suckle her child for a while, however short the time in which she may be able to do so, and

* *Hahnemannian Monthly*, vol. ii., p. 357.

that her own milk should be the babe's only food during this period. Although this is contrary to the opinion commonly entertained among the people, the young infant will thus obtain a start in life in the right direction, and be better able to be nourished by other food should that subsequently become inevitable. Just as the mother's milk is found to adapt itself to the changing condition of the babe as it becomes older and stronger, so during the first few days after the infant's birth the colostrum possesses peculiar qualities, and not merely abounds in fatty, saccharine and albuminous material, but presents its caseine in a more easily assimilable form than subsequently. So delicate and peculiar are the digestive organs of the young infant, and so especially adapted is the mother's milk to their comparatively feeble digestion, that it becomes no easy task to provide a substitute which shall in like manner be constantly suited to the varying conditions and wants of the infant's daily growth.

But since there will always be cases, owing to the sickness or death of the mother, or to her inability to nurse her children from other causes, in which it will also be impossible to procure a wet-nurse, and in which, therefore, it becomes necessary to provide the next best substitute, particular directions for this purpose will now be given. The milk of cows is the most accessible, and in many instances forms the only substitute which can be procured.* But since the proportion of caseine or cheesy matter is larger in this, while there is less sugar and generally less fatty matter than in breast milk, it becomes necessary to alter this in order to adapt it to the stomachs of infants, especially of those quite recently born. For this purpose should be chosen the milk of a perfectly healthy cow, one that is fed upon her natural diet of hay or grass and pure water alone; a "new milch cow" is best.

* The following table, from the most reliable authorities, will show the composition of several kinds of milk:

Constituents.	Cow.	Ass.	Goat.	Ewe.	Woman.
Water	86.28	91.65	86.50	85.62	89.20
Butter	4.38	0.11	3.32	4.20	2.60
Sugar of Milk	5.27	6.08	5.28	5.00	6.00
Caseine	3.80	1.82	4.32	4.50	2.00
Various Salts	0.27	0.34	0.58	0.68	0.20
Total	100.00	100.00	100.00	100.00	100.00

As the mean of eighty-nine analyses of human milk, MM. Vernois and Becquerel obtained the following result: Water, 889.08; solid matters, 110.92. These solid constituents are composed of—sugar, 43.64; caseine and extractive matter, 39.24; butter, 26.66; incombustible salts, 1.38; total, 110.92.

This milk should be allowed to stand from two to four hours after being drawn from the cow; then the top part only, being the richest in fatty matter, should be dipped off and diluted with an equal part of pure warm water; the whole to be sweetened with pure white sugar, *or sugar of milk*,* till its taste in this respect resembles mother's milk. By this process the proportion of cheesy matter is diminished, the butter and saccharine qualities increased, and a very excellent imitation of human milk obtained. Care should always be taken to present the infant's food at the proper temperature; this should be as nearly as possible the same as that of the mother's milk; and a thermometer will be found very useful in enabling the food to be given always at a uniform and healthy temperature. No less important is it to prepare the food often enough to secure it from becoming soured in the least, either before or after it is consumed, for rancid milk is even more destructive to these little ones than is putrefying food to adults. And if the *sugar of milk* be employed to sweeten the infant food instead of common cane-sugar, it will be very much less capable of becoming sour in the child's stomach, and of thus inducing serious gastric and intestinal irritation. The utmost care is requisite in order to keep the nursing bottle and other utensils used in artificial nursing in a perfectly sweet and cleanly condition. The life of the infant may depend upon this apparently trivial matter.

As the child grows older the proportion of water may be gradually diminished. As the child becomes still older and the teeth become more developed, some portion of good, well-risen domestic bread may be added to the milk.

By carefully pursuing the course here pointed out, the new-born babe may be fed without fatally deranging its digestive organs before it has acquired any strength of its own for assimilating suitable food; and its food can be made gradually more hearty in order to comply with the increasing demands of its daily growth, and thus prevent it from becoming atrophied by starvation or diseased from want of nutriment of the proper kind. For these reasons also it becomes always the first duty of the nursing mother to take care of herself, in order that she may maintain her own system in a state suitable for sustaining the young and tender life which is dependent upon her. This, indeed, unassisted nature teaches in general; our art simply requires that we see to it that such persons live on a plain, nutritious

* Every homœopathic physician should furnish to his friends this invaluable article, and persuade them always to employ it in preparing food for infants, since, *from being far less likely to become rancid*, it is found to be immeasurably superior.

diet, make use of no unsuitable or highly-seasoned food, and in all other respects observe all the hygienic rules which belong to the period of lactation.

Infants at the breast require food sufficient in quantity, as well as to receive it at short intervals. When the milk is secreted very abundantly, as is often the case, the child overloads its stomach; the excess is rejected by vomiting, or rather by regurgitation, with little effort and no distress. But if the flow of milk is scanty, the child worries the breast in vain, and is always unsatisfied. The milk also varies in quality in different women, as well as in quantity, and in the same mother under different circumstances and conditions. Some slight modification of the healthy standard of the milk can be borne, for a while at least, without any immediate and apparent alteration in the child's health. But let this change be more strongly marked, and the child's health will begin to fail at once; its life may be exhausted in a few hours by convulsions, or almost instantly destroyed by nervous "shock," as in cases of sudden and violent emotion on the part of the mother. These violent emotions, which sometimes prove so suddenly fatal to the infant at the breast, are evidently conveyed into its delicate system with all their deadly force through the milk which passes so rapidly into its circulation and poisons its blood.

Antipsoric Prophylactic Treatment.

From the treatise of Dr. Leadam we quote the following excellent remarks on the antipsoric prophylactic treatment of infants: "Dr. Gastier of Paris has entered largely into the subject of the prophylactic treatment of children, with the view of preventing the hereditary dyscrasia which come under the denomination of psora. He has also declared that the vaccine virus does not usually take effect in those subjects whose constitutions have been acted upon by this treatment, and that they are, *a fortiori*, unsusceptible of the small-pox. (With the greatest respect for the prophylactic treatment here recommended, we still doubt whether it can be depended upon to do all that Dr. Gastier here claims for it.) This may be open to dispute, but experience alone can decide the question. If observation should confirm it, it will evidence a renovating and conservative power in the homœopathic remedies which Hahnemann himself could scarcely have dreamt of.

"The plan recommended by those who have paid particular attention to the subject is to administer to the infant, soon after birth, two globules of a high dynamization of *Sulphur*^{200}, by placing them on

the tongue, and to repeat the same dose at the end of four or five weeks if no morbid symptoms demand any other medicine. After this, at about the third month, a similar dose of *Calcarea* is to be given, which has the advantage of facilitating in a surpassing manner the development of the teeth. Under this treatment the infant expands and thrives with a physical and moral energy which indicates health, while the root of much bitterness has been destroyed by the prophylactic treatment above-named." In addition to the recommendation of *Sulphur* by Dr. Gastier, or rather in place of it, in certain cases we advise to use a high preparation of the remedy which is the exact homœopathic simile to the psoric miasm of the parent where any particular indication of this kind can be derived from either parent. And this we think can be done in many instances; *Calcarea* in some cases, in others *Arsenicum*, in others *Graphites*, will be found in affinity with the constitution of the parent, *and a single dose of the very highest preparation of the remedy*, given to the infant, will exert a beneficial influence in rendering much less violent and dangerous all the subsequent illnesses to which children and youth are necessarily exposed.

Atrophy of Infants—Marasmus.

The atrophy of infants is the very opposite to their healthy nutrition, and consists in a general marasmus or wasting away of the entire system. This condition may result either from the unhealthy or unsuitable character of the food with which they are supplied, or from their own inability to assimilate it on account of some inherent hereditary disease. In reference to each case, therefore, it is very important to distinguish as to which of these two classes it belongs. In the previous section on nutrition full directions were given respecting the mother's and nurse's milk, and their substitutes when the natural sources failed; and in the present section our remarks will principally apply to those cases in which infants become gradually atrophied from actual inability to digest and assimilate the most suitable food that can be provided for them, whether this be that furnished by their own mothers, by nurses, or, in default of both of these, such artificially prepared food as has previously been recommended.

The nature of the difficulty will be best understood by reference to some extreme cases, such as have already been referred to. Infants are sometimes born into the world in a remarkably wrinkled, withered and shriveled condition, in whom the process of atrophic

degeneration, even before their birth, seems already to have become far advanced. Such babes never increase in weight, but rather constantly decrease till they die—in the course of from two or three days to as many months. Some—it might perhaps be safely said, all—these cases are the victims of a profound scrofulous, syphilitic or other malignant dyscrasia, which so materially affects the organism that the function of the assimilation of food is never developed into activity. These helpless beings pine in wretchedness as long as their meagre bodies can supply the substance for their own support, and then they perish, as many others do even before birth, from congenital lesion of nutrition.

In other cases the atrophy, infantile marasmus or wasting away appears after the child has begun to thrive. In these the symptoms are various; sometimes the food is rejected as soon as swallowed, or presently after; sometimes it passes from the bowels in an undigested condition; and sometimes there is diarrhœa with whitish-colored stools, indicating deficient action of the liver. But in all cases of infantile atrophy the child is restless, peevish, fretful, crying, as if continually distressed, and always growing thinner and thinner, whatever the other symptoms may be.

In some instances the mischief may be occasioned by the severe derangement of the digestive apparatus incidental to dentition. Here the loss of sleep and the exhaustion of the nervous forces inseparable from difficult and painful dentition cannot but weaken the stomach. Thus, the food is in part rejected; in part it becomes sour and curdled, and thus by its very presence and influence adds to the original gastric irritation; and finally, in an imperfectly prepared condition it is transferred to the intestines, only to extend the same distressing irritability throughout their entire tract. The indigestion, thus commenced in the stomach and continued through the intestines, becomes in the next stage of physiological disorder a non-assimilation, and confirmed atrophy is the necessary consequence. In other cases the seat of the difficulty may be an original disorder in some portion of the digestive apparatus, such, for example, as enlargement and induration of the mesenteric glands. This is the most common form of atrophy in scrofulous children. And even where this constitutional miasm is not present in sufficient force to develop such disease of its own accord, the irritation occasioned by diarrhœa from indigestion, or by worms, or by the destructive effects of calomel, may combine to give rise to such tuberculous affection of these glands as shall become an actual *phthisis intestinalis*, or fatal consumption of the bowels.

The following are given by Leadam as the principal symptoms which precede or accompany atrophy: "Frequent belly-ache, with irregular bowels, the motions being too frequent and variegated, or clay-colored and watery; acid odor, not only of the evacuations, but also of the breath and perspiration; fickle appetite and much thirst; the urine often turbid and white; the child is fretful or quite sullen and indifferent, less playful than usual, and cries peevishly. The countenance changes color frequently, and the tongue is creamy or morbidly clean and red. There is swelling and hardness of the belly, with emaciation; sometimes irregular small tumors are to be felt through the parietes of the abdomen; the skin becomes shriveled, the complexion earthy, the appetite voracious; diarrhœa supervenes, if it has not existed throughout; there is slow, continued or remittent fever, augmenting toward evening, with flushing of the cheeks, a hot, dry skin and incessant cough, extreme restlessness, increasing debility, and finally hectic. In this form of scrofulosis the bowels and the secretions poured into them require to be regulated, not by purgatives, however, but by remedies which are consonant with the general state of the patient."

The irritation occasioned by dentition is peculiarly apt to develop the morbid enlargement of the glands just described, in which the little sufferer emaciates just in proportion as its abdomen grows larger and its appetite more voracious. This affection, usually termed *tabes mesenterica*, is indeed hardly ever fully developed in the first few months of infant life; still, the foundation is early laid for it in the profound debility resulting from insufficient food, and still more from injudicious nourishment, from the close, foul air so common in the sleeping rooms in cities, and even in the country, and from the deprivation of light. "Children confined in badly-lighted and ill-ventilated apartments are uniformly unhealthy; so those brought up by hand in a city seldom do well; in the country their chance of living and thriving is much greater, because the purity of the air renders their digestive powers more vigorous." *

Treatment.—In the treatment of cases of atrophy or failure of nutrition the very first indication will of course be to seek the special cause of the difficulty; and if there is anything about the diet, regimen and care of the child itself, or anything in its habitation and surroundings, which seems capable of exerting an injurious influence, this must be amended first of all. Thus removing, so far as possible, all the external causes of the marasmus, we shall the more readily

* Warren, *On Scrofula.*

succeed in promoting that recovery of the little patient which might otherwise defy all our skill. Where the cause of the malady appears in the quality of the food—whether it be that of the mother, of the nurse, or some artificial substitute and preparation of cow's milk—such change should be advised as will secure the most healthy nourishment possible in the circumstances. Sometimes the mother's milk is unwholesome, the milk of a particular cow may disagree, or the milk served by the milkmen in the large towns may be, and indeed often is, adulterated with lime or soda. The long-continued use of any of these unhealthy articles of food cannot fail to develop, sooner or later, what may easily become fatal disorder of the digestive apparatus. Nor is the artificial food at all improved by mixing lime-water in the diet, as is sometimes done in hospitals for foundling infants, for wherever this course is long pursued the little ones will all die. In fact, observation shows in this case just what the homœopath would predict—that these calcareous additions to the food, while they may indeed render the stomachs of the infants more tolerant of it, do but cause still severer disorders in the bowels—just such disorders as the homœopath is accustomed to cure with the dynamized preparation of the same drug.

Finally, therefore, as a most essential adjunct to the appropriate remedy in these cases—always serious, often apparently hopeless—the utmost care should be exercised to give the little patient every possible advantage in the way of light, fresh air, suitable food, and, what is often entirely overlooked, sufficient quiet to enable it to take its natural and necessary rest undisturbed. Then the remedy should be selected with the most particular reference to all the symptoms and conditions of the child, and even with regard also to the peculiar form of psoric or scrofulous dyscrasia which it may be possible to discover in the constitution of its parents.

Æthusa cynapium. The child throws up its milk soon after nursing, *with great force, suddenly,* then falls asleep as if from exhaustion, to awaken for a fresh supply. Milk seems to not agree with the child, which is shown by colic, diarrhœa or constipation; it does not thrive. Aphthous condition of the mouth and throat.

Aloes. The child passes substances looking like jelly-cakes, sometimes small, at other times large, but they adhere together like congealed mucus; they may be green-colored or transparent.

Alumina. The child strains greatly to evacuate even a soft stool; soreness of the anus; colic; the child wastes away.

Antimonium cr. Violent and persistent vomiting, with white-coated tongue and absence of thirst.

Apis mel. Violent shrieking or screaming spells at longer or shorter intervals; no appetite; emaciation; white and wax-like skin; scanty urine; swelling of the feet and ankles, of transparent whiteness.

Argentum nit. Diarrhœa of green fœtid mucus, passing off with much flatulency.

Arnica. The infant has had a severe shock from a fall, and has not been well since; it becomes feeble and emaciated; does not sleep well, is restless, has no appetite, and is in great distress after eating.

Arsenicum. The stools are painful, offensive, and contain quantities of undigested food; there is much debility and a pale, waxy look. The child is restless, especially after midnight; it seems to be cold and chilled.

Baptisia. The infant has almost constant diarrhœa; chokes on attempting to swallow anything not very fluid; it can swallow nothing but fluids.

Belladonna. Especially suitable for precocious children having blue eyes and fair hair. The child does not sleep much, though appearing to be drowsy; it lies half sleeping and half waking; moaning; jerking of the muscles.

Benzoic acid. The urine has a strong ammoniacal odor, and leaves a dark stain on the diaper; the diarrhœic stools have an odor similar to that of the urine.

Borax. The child dreads a downward motion; is easily startled by the slightest noise; aphthæ; sleeps badly, and awakens with screams as if in affright, and clings to something as if afraid of falling.

Bryonia. The food is vomited immediately after being taken; constipation; the lips are dry and parched, and the whole mouth is dry; the child wishes to be kept at rest, and prefers the recumbent posture; it becomes worse at every hot spell.

Calcarea c. Clay-like evacuations; dry and flabby skin; enlargement and induration of the mesenteric glands. Large, open fontanelles; much perspiration about the head in large drops, which wets the pillow far around when the child is sleeping. Cough, with rattling of mucus in the bronchia. Leucophlegmatic temperament.

Chamomilla. The child must be carried all the time, for it is quiet only then. Diarrhœa, green and watery and slimy, or like chopped eggs and spinach. Odor like decayed eggs. One cheek red, the other pale.

China. Offensive, painless, undigested stools, with flatulency; abdomen distended with flatulency; the child cries when it is touched.

Cina. The child picks its nose very much; is very restless, cries and is very unamiable; it is hungry and wants food all the time; it wants to be in constant motion—to be rocked all the time when sleeping, and will not sleep without it. Nothing pleases the child for a moment.

Conium. Hardness and distension of the abdomen, with frequent sour evacuations; is worse during the night and better by day.

Creosote. Fœtid evacuations and excoriation of the mucous surfaces generally; restless and sleepless at night; the skin is wrinkled.

Ferrum. Frequent vomiting of food; stools undigested; redness of the face; the child is very pale and delicate in appearance.

Graphites. The child has moist blotches on its skin that exude a transparent glutinous fluid; chafing back of the ears; diarrhœa or constipation.

Hepar. The child has a sour smell, and white, fœtid evacuations; undigested stools; seems to be better after feeding; does not incline to play or to amuse itself in any way; does not laugh.

Iodine. A brown color of the face, and copious and papescent stools; seems to be better after eating.

Ipecacuanha. Nausea is the most predominant symptom, with frequent vomiting; fermented stools.

Lycopodium. Much commotion, rolling and rumbling in the abdomen. The child is worse after four P. M., and gets better at eight or nine in the evening. Red stain or red sand on the diaper.

Magnesia c. Green, watery, very sour-smelling diarrhœa, and great emaciation; stools of green slime, like the scum from a frog-pond.

Mercurius. Much straining at stool, which is slimy, often bloody. The child is never so well during damp weather. Enlarged glands; night-sweats.

Nux v. Constipation of large, difficult stools; no appetite; does not sleep after three or four in the morning.

Oleander. The food passes off unchanged in a remarkable degree, and very easily and almost unconsciously.

Petroleum. Emaciation, with diarrhœa by day, and none at night.

Phosphorus. Copious stools, pouring away like water from a hydrant, followed by exhaustion.

Phosph. acid. Stools yellowish and very offensive, and the child is very listless—wants nothing and cares for nothing.

Podophyllum p. Emaciation; many stools daily, all of which are natural. Diarrhœa in the morning.

Pulsatilla. The diarrhœa is worse at night; no two stools alike, they are so changeable. For a time the child seems much better, then it gets worse again without any appreciable cause. The appearance of the child changes in this manner several times during the same day, but it is usually worse toward evening, and always seems better in the open air.

Rhus t. The child always gets particularly worse after twelve o'clock at night; it has then more colic, more diarrhœa, more restlessness.

Stannum. The child is always relieved in its abdominal sufferings by pressing hard upon the abdomen, leaning upon something.

Sulphur. The child frequently awakens from sleep with screaming; great voracity; wishes to put into its mouth everything it sees; watches eagerly for everything—cups, tumblers, vessels of food; it wants to swallow everything it sees. Its passages excoriate the anus. The child jumps and starts and screams fearfully.

Indigestion.

Sour Stomach—Vomiting—Colic.—The infant, equally with the adult, is subject to attacks of indigestion, and the disorder in the one case bears a certain general similarity to that in the other, even as the same general cause is common to both. Stated in the simplest terms, this cause consists in a want of harmony between the food and the digestive force. In an infant whose stomach is perfectly healthy this *faut de rapport* may follow the introduction into it of food either too abundant in quantity or unsuitable in quality; or, on the other hand, the disorder may arise, in spite of the utmost hygienic care, from some innate pathogenetic influence which finds an easy form of development through the high physiological excitement of the digestive apparatus. Should neither of these two conditions—of digestion primarily deranged or of original dyscrasia finding vent through a digestive apparatus healthy indeed, but highly excited—be present in force, the indigestion will prove symptomatic of some other malady. The vomiting which precedes an attack of scarlatina affords an excellent illustration of this.

When the stomach is simply overloaded, or rather overfilled, it relieves itself of the excess by vomiting, and this act takes place with little effort and no suffering, the process of digestion of the still remaining food going on undisturbed. But if, on the contrary, the

indigestion arises from the unsuitable quality of the food, whether this be due to the unhealthy character of the milk of the mother or nurse, or to the imperfection of its substitutes, the mischief is not so soon arrested. In this case the food passes from the stomach into the intestines in an imperfectly prepared condition, and occasions there a still greater irritation; an intestinal indigestion always succeeds to that of the stomach. In some rare cases, but especially in the first three months, this may give rise to constipation, but diarrhœas of different kinds and of greater or less severity more commonly follow. Where the indigestion is not due to excess in nursing, and where nothing indicates an original disorder of the stomach itself, it is necessary to understand that there is something in the milk of the mother or nurse, or in the substituted food, which disagrees with the child. And besides this, it is often observed that change in the accustomed diet on the part of the mother, violent mental excitement or distressing moral emotions, the return of the menses or other temporary causes, very greatly disturbs the character of the milk and results in the sudden and severe indigestion of the babe. For such cases, arising from influences usually unforeseen and not always obvious, the physician should be on his guard; nor, whatever conclusions he may arrive at as the result of inquiries more or less direct, will it always be proper or safe to avow them. The knowledge that the child was suffering from a severe fit of anger or other passion of the mother will enable the physician to give directly to the babe—and perhaps, on some pretence of soothing her nervousness, to the mother also—such remedies as will do good. But the simple consciousness on the part of the mother that the doctor knows the exact cause of the illness of her babe will sometimes complicate the excitement, and render the case of both patients still more difficult to treat in the most successful manner. The physician must always hear and see and act with the greatest circumspection, but sometimes the less he says the greater will be the satisfaction of the parties more immediately concerned, and the more gratifying his own professional success. When the babe is thus suffering from unusual external influences conveyed through the medium of the milk from the mother's disturbed nervous system, every effort should of course be made to remove the cause as rapidly as possible, and at the same time alleviate the morbid symptoms induced in the babe itself. While in any state of undue excitement the mother should refrain from nursing her babe. Prominent causes of infantile colic are found in improper attention to cleanliness and exposure of the infant to cold. It cannot be urged with too great

force upon mothers that if they wish to have their babes in good health they must be kept most scrupulously clean; they should be enjoined to frequently look to the child's diaper, and to change it at once when soiled. A babe should never be laid down to sleep with a soiled diaper upon it, and mothers should have the importance of keeping their babies warm properly impressed upon their minds. There is no point in the hygiene of infancy more important or more neglected than this. And a proper attention to cleanliness and warmth will reduce the frequency of occurrence of infantile colic very greatly.

When indigestion, colic, constipation or diarrhœa arises from improper food in babies raised by hand—that is, from food which evidently does not agree with the child's stomach—or even from unwholesome maternal milk, the physician will frequently have to encounter many difficulties before he can select a suitable article of food that will agree with the delicate digestive apparatus of the babe. He should endeavor to make a good choice of food; and if, having done so, he find his choice to have been a mistake, he should try again, not despairingly, but remembering always that what is one baby's food may be another baby's poison.

Treatment.—**Aconite.** The infant has a dry, hot skin, is sleepless, restless, cries much, bites its fists, and suffers from green and watery diarrhœa. A dose or two of Aconite cures all these difficulties in a few days.

Æthusa. See the indications for this remedy under the head of Atrophy.

Arsenicum. The food passes undigested, the stools are offensive; much crying during and after nursing, or as soon as the child begins to take food. Emaciation; restlessness.

Baryta c. Useful in colic of dwarfish children, those who do not grow.

Belladonna. The child cries out suddenly, and after a while it ceases crying as suddenly as it began, and appears as if nothing had been the matter. Starting, with jerking of muscles; the child whines and cries a great deal.

Borax v. The child cannot bear a downward motion, not even during sleep. It cannot be put down out of the nurse's arms; it awakens and cries on the attempt being made. It has much colic and indigestion.

Bryonia. The child must evidently be kept very still in order to relieve

its colic and other sufferings. The stools are dark, dry and hard, as if burnt.

Calcarea c. In children of leucophlegmatic temperament, with large fontanelles. Profuse perspiration of the head; white chalk-like stools. Long and continued crying. Inguinal hernia seems to be the cause, which Calc. c. will remove.

Chamomilla. Very irritable and fretful—must be carried. Distress after nursing. Sleepless; starting and jerking while asleep. Stools smell like rotten eggs, and are green, chopped, or consist of white and yellow mucus.

China. Colic comes on at a certain hour every afternoon.

Cina. The child is always cross and troublesome when awake. It will not sleep unless it is kept in constant motion. It is seldom still and quiet, whether sleeping or awake.

Coffea. Great restlessness and wakefulness, with nervous excitability; much crying; hot skin.

Colocynth. The child writhes in every possible direction, doubles itself up, and seems in great distress; it cries very hard.

Dulcamara. When the child gets worse at every cool change of the weather.

Hepar. Colic, with dry, rough, pimply eruptions, that itch very much.

Ignatia. When the trouble seems to arise on account of grief of the mother or nurse.

Ipecacuanha. There is much sickness of the stomach; the more constant the nausea the more certainly will Ipecac. be indicated. Fermented stools.

Iris versicolor. Protracted nausea and frequent vomiting of sour water, the vomiting being accompanied with pain; belching up of wind from the stomach with considerable force, or profuse emission of flatulence; colic and diarrhœa, with bilious stools and sick stomach.

Jalapa. When the child is "good" all day, but screams and is restless all night.

Lycopodium. The child always cries and screams before passing water, and is relieved immediately afterward. Red sand is found in the diapers. Much rumbling and rattling in the abdomen.

Magnesia c. Very much colic, which is finally relieved by a green liquid stool. This occurs very many times day and night.

Mercurius. Much colic, which is relieved by a slimy, bloody stool, with straining.

Nux v. Much colic, with constipation. The child cries much,

draws its feet up, and then kicks them out again, etc. Its mother lives on highly-seasoned and stimulating food.

Opium. The whole trouble seems to have arisen from fright of the nurse.

Podophyllum p. An attack of colic at daylight every morning. Severe colic, causing an absolute retraction of the abdominal muscles.

Pulsatilla. The child always gets worse toward evening, and remains so till toward morning.

Rheum. Much colic, with very sour stools.

Senna. The child cries terribly, and seems full of incarcerated flatus; it even turns blue all over during its cries. Sometimes it has frequent and bloody stools.

Silicia. Colic, with difficult stools; they slip back into the rectum when nearly evacuated.

Stannum. The child's colic is relieved by pressing firmly upon its abdomen. When it is crying with colic, relief is at once obtained by carrying it with its abdomen resting upon the point of the nurse's shoulder.

Staphysagria. The child seems to be suffering from a fit of chagrin or indisposition of the nurse. Indicated in the sufferings of pot-bellied children, with much colic and humid scald-head.

Sulphur. The child has a tendency to excoriations wherever the skin is folded upon itself. Pimply eruptions filled with pus. Redness about the anus after an evacuation. This remedy very often cures the colic and derangement of the stomach of infants.

Veratrum. Terrible colic, with coldness of the forehead. Very cold feet with the colic. The sufferings cause a cold sweat to stand upon the surface, particularly upon the forehead.

Dentition.

The development of the teeth in their regular order, although a perfectly natural process, is often attended with much suffering. When dentition is slow, retarded and difficult it not only becomes of itself a serious disorder, but it involves also a long train of morbid symptoms and actual diseases, which may exhaust the patient's strength and finally destroy its life. The primary difficulty in such cases is in the nutrition; and as we often see in older children a remarkable backwardness in the development of the osseous system in general, so we often find in earlier periods of infantile life a corresponding slowness in the development of the teeth. And both these forms of imperfect development, occurring, as they often do, successively in the same

children, are to be attributed to some profound constitutional dyscrasia which affects the nutrition.

Even when the teeth are grown and cut through in the easiest and most natural manner, there is usually some constitutional excitement, which may variously manifest itself in the forms of fretfulness, worrying, restlessness, inflammation of the gums, heat about the head, and more or less general fever. Where dentition is difficult and retarded there is prolongation of all the constitutional disturbance, great aggravation of the symptoms already mentioned, and the addition to them of others still more severe, such as vomiting and diarrhœa. The still increasing debility of the system, resulting from the nervous exhaustion inseparable from so much suffering and from such derangement of the digestive function, cannot but augment the original constitutional lesion of nutrition. And unless the mischief is arrested by suitable medication the patient may sink from inanition, from colliquative diarrhœa, from hydrocephaloid, or from convulsions. And perhaps in no other morbid condition of the human system is the homœopathic practice more evidently superior than in this, where the medicines may relieve much of the nervous suffering, and prevent the injurious effects ordinarily resulting from disorders of the digestive apparatus, at the same time that they promote the growth and development of the teeth by remedying the primary and constitutional lesions of nutrition.

In order that the physician may judge of the degree of deviation from the normal standard of dentition in any given instance, we proceed to state here the mode and order of the appearance of the teeth in health. It should first be observed, however, that there are anomalous cases of dentition, but, as was previously observed with regard to the non-appearance of the menses in young women at the usual time, delay in the appearance of the teeth should not be regarded as requiring active interference unless other morbid symptoms are also present. The non-appearance of the teeth at the usual time, unless accompanied by symptoms indicative of constitutional disturbance, really furnishes less occasion for apprehension than their premature appearance would. Even in the condition of apparently perfect health, some infants begin to cut their teeth very early, even by the third month, while in others this process commences at a very much later period.

In the early months the infant's mouth is naturally dry; this dryness is relieved by frequent nursing. But usually about the fourth or fifth month a very considerable change takes place in this respect;

the mouth is now found constantly full of saliva, and the child is constantly driveling—or drooling, as it is vulgarly termed—" but no other indication appears of the approach of the teeth to the surface, except that the edge of the gums becomes broader than it was before. No further change may take place for many weeks, and it is generally near the end of the seventh month, oftener later than earlier, before the first teeth make their appearance. The middle incisors of the lower jaw are generally the first to pierce the gum; next in order appear the middle incisors of the upper jaw; then the lateral incisors of the lower. The first molars next succeed, and often without any very definite order as to whether those of the upper or of the lower jaw are first visible, though in the majority of cases the lower molars are the first to appear. The four canine teeth succeed, and lastly the four posterior molars—making in all the number of twenty deciduous teeth." There are, however, intervals of rest between the successive irruptions of teeth; thus, a period of six or eight weeks generally intervenes between the lower and the upper central incisors; the lower lateral incisors come very soon after. But a pause of three or four months may occur before the first molar teeth make their appearance; another of equal length may occur previous to the appearance of the canine teeth; and still another before the first dentition is completed by the irruption of the last molars.

In some few cases the teeth come through so readily as scarcely to disturb the infant; but more frequently indeed the mouth becomes hot and the gums look tumid, tense and shining, while the exact position of each tooth is marked some time before its appearance by the prominence of the gum; or the irruption of the teeth is preceded or accompanied by a somewhat different condition of the mouth, in which there is much heat and intense redness of the mucous membrane, an extremely copious flow of saliva, and a disposition to the formation of small aphthous ulcerations on the tongue, at the outer surface of the alveolæ or at the duplicature of the lips, though the gums themselves may not be particularly swollen and painful. Either of these states is usually attended with some degree of febrile disturbance, and apparently with considerable suffering to the infant, who is constantly fretful and peevish, or cries out occasionally as if in pain. A third morbid condition of the mouth is sometimes seen, which is usually ushered in or attended by very considerable fever and disorder of the chylopöetic viscera. The gums then become extremely hot and swollen, and unusually tender, especially over some tooth or other in particular; and in that situation we find the gum

swollen up into a kind of little tumor. Small, unhealthy ulcerations, with a sloughy appearance, often form upon the summit of the gum, and especially around any tooth which has partially pierced through it. To this affection, which is often very painful and difficult of cure, the name of *odontitis infantum* has been applied.—*West.*

As if from a common centre, almost all the various disorders peculiar to infancy and early childhood may be seen to spring from difficult dentition. Especially is this true of those lesions of nutrition already described under the head of Indigestion, Vomiting, Diarrhœa, and of some of the diseases presently to be mentioned, such as Aphthæ, Convulsions and Hydrocephalus. Thus, sooner or later, all cases of protracted dentition requiring medical assistance will be found complicated with some one or more of these forms of disease. In treating such cases, therefore, regard must be had to these consequences of the original disorder as of the one grand cause of all. All these troubles are developed in a successive series, and at whatever point of the series we are called in, then we must begin and try back, as it were, and by thus carefully attending to all the successive developments, of vomiting, diarrhœa, aphthæ, etc., seek to find the one remedy which shall remove the whole train of symptoms by reaching its original and primary cause in constitutional lesion of nutrition, and its secondary cause in the protracted and difficult dentition. And with these views it will be seen to be requisite to consult and compare the remedies advised under Diarrhœa, where that condition obtains, and those mentioned under Vomiting, Aphthæ, etc., where these conditions appear, as well as those more especially recommended at the close of this article.

A single word with reference to lancing the gums. This operation is in almost all cases unnecessarily performed, and in many it proves positively injurious. And yet it sometimes affords the most important and immediate relief. Where the gums are red and inflamed, in our opinion they never need to be lanced, but only when in their very slow growth they have changed to a dense, firm and unyielding cartilaginous formation, thick and of a whitish color, through which the teeth vainly attempt to make their way, and the irritation of the child's system threatens to destroy its life by sheer exhaustion or by inducing fatal convulsions.

Before proceeding to indicate the remedies to be employed in disorders of dentition, we remark that the tooth does not mechanically cut its way out of the gum, but its growth causes slight pressure by the crown of the tooth—a pressure which excites the absorbents to

remove the impediment. In this manner the absorbents do absolutely, when the infant is in a perfectly healthy condition, open up the way for the tooth to escape without pain or suffering. Now, the duty of the physician is so to direct the course of events that the evolution of the teeth shall become as painless as any other process of development. All the laws of health should be rigidly enforced and every prescription most carefully made, and finally, when the period of dentition fairly commences, if suffering is experienced or difficulty arises, the following remedies should be carefully and particularly studied and administered, or others whose strong characteristics present the picture of the opposite of an orderly and painless process of dentition.

The subjoined indications for the use of remedies for the disorders of dentition are taken from my paper on that subject, read before the Philadelphia County Homœopathic Medical Society, and printed in the *Hahnemannian Monthly:*

Aconite. Constant restlessness, as from distress which no change of posture or circumstance seems to relieve. The child gnaws at its fingers or fists or something else; cries, whines or frets much of the time. Its sleep is very much broken, and there are usually much heat about the head, and a dry skin, sometimes with cold hands and feet. Soon after, or whilst awaking from sleep, its cries of discomfort recommence. Accompanying this state of things, sometimes there is constipation, when the stools are hard and difficult to evacuate; more commonly there is diarrhœa, when the stools are watery and dark-colored or bloody and slimy. The child is usually very thirsty, and seems to be relieved very much by holding on to the cup containing cold water with its mouth, apparently for the purpose of cooling its gums.

Antimonium crud. When the stomach so sympathizes as to present prominent symptoms. *Tongue white; much vomiting; no thirst.* Stools composed of hard lumps and watery secretions, passing together.

Apis mel. Child screams out suddenly and sharply during sleep, more usually occurring at night. If now the child can talk, and is asked what is the matter or what hurts it, the reply generally is, "Nothing." The urine is mostly scanty, but sometimes very profuse. Sometimes there is prolonged constipation, more frequently *diarrhœa.* Red spots scattered here and there over the skin, often causing itching and restlessness; worse at night. The gum covering the developing

teeth sometimes has the appearance of a watery infusion or of a sac containing water. Painless diarrhœa, often bloody.

Arsenicum alb. The child has undigested, fœtid stools, and is emaciated; dry and shriveled skin; particularly restless after twelve at night. It has paroxysms of anguish day and night, during which it often strikes its face or head with its little hand, as though that afforded relief. It often vomits all fluids soon after swallowing them, particularly water. It will only take a sip or two of water at a time, but very often. The gum over the advancing tooth sometimes appears to be blistered, or to be filled with a dark, watery fluid. The whole scalp is occasionally covered with a dry, scaly, milk-crust, and the stools are of very light color. Sometimes the child has a very pale and waxy look, and is very weak. If constipation exists, it does not positively contraindicate Arsenicum. Apparent distress.

Belladonna. The child moans a great deal, as though the moaning caused partial relief of suffering. Violent starting or jumping of parts or of the whole body whilst sleeping or waking. If the startings occur during its waking hours it seems frightened at them, or it awakens from its sleep frightened with one of these starts. Convulsions, followed by a very sound sleep. Face and eyes red, often with dilated pupils and heat of head. Awakens from sleep with fright and staring eyes. The skin is often very hot, so as to leave a sensation of burning to the palm of the hand when removed from its surface. Aggravation every afternoon. Very hot fever at night, often lasting all night, with delirium. The stools are often composed of thin, green mucus of sour odor, and the child is often seen to shudder during stool. Sometimes the same kind of stool is involuntary. The gums are sometimes marked by numerous turgid arteries.

Borax. The child is evidently afraid of a downward motion, even during sleep. If the nurse attempts to lower it from her arms in a sleeping state it is sure to cry out and to throw up its hands as from fear. It is very sensitive to the least noise, such as the rumpling of paper, of a silk dress, or the click of a door-latch, etc. Whilst sleeping it will sometimes start, cry out and hold on to things—its nurse, for instance, or the sides of the cradle or crib—as though it were afraid of falling. Stools watery, yellow, green or brown. Aphthous condition of the gums, and so sensitive as to shrink from the least touch, even of the nipple when hungry, in many cases.

Bryonia alb. Dry, parched lips; dry mouth and constipation, the stools being dark and dry, as if burnt. The child wishes to be kept very quiet, and seems to dread to be moved. If it be raised to the

perpendicular it often vomits, seems faint, and wishes to lie back again. Vomits its nourishment soon after taking it, unchanged. It seems eager for cold water, which seems to be preferred to its usual aliment. The swollen gums are hot and dry, though pale or light red. Often diarrhœa, painful, bloody and offensive.

Calcarea carb. The child has large, open fontanelles. The head perspires during sleep, so as to wet its pillow far around. Stools large, hard and of a chalky appearance, or thin and whitish. The gums are often pale and shiny when the tooth is a long time in coming through. The child's feet are often cold and damp. The abdomen is in some cases large, and cold tumors are found about the neck. Loose, rattling cough; soft and flabby muscles. Hydrocephalus sometimes threatens. Stools often offensive.

Calcarea phos. Peevish and fretful children. Often screaming and grasping with the hands. Fontanelles still open, or had closed and reopened; most in the vertex. Cold sweat on the face; body cold. They cannot hold the head up; move it from place to place; head totters. Squinting, as it were from pressure; eyeballs seem distended; they protrude somewhat. Coryza, running in a cool room, stopped in warm air and out of doors. Ears cold; point of the nose cold. Swollen under lip; face pale, sallow, yellowish; gets hot, with other complaints. During dentition, diarrhœa with much wind. Greenish, thin stools. Children refuse the mother's breast; the milk has a saltish taste. Children lose flesh; will not stand any more; do not learn to walk. Backward in teething, also in closing of fontanelles. Skull soft, thin; crackling noise, like paper; crepitation when pressed, most on the occiput.—*Hering.*

Causticum. Children with delicate skin, when, during the evolution of a group of teeth, intertrigo makes its appearance, with occasional convulsions. Prolonged constipation; stools tough, covered with mucus, and shine like grease. The child has a yellowish, sickly-looking face; ravenous hunger, and takes its food in a hurried manner; frequent gulping up of the watery portion of its nourishment; "*pot belly.*" The swollen gum sometimes suppurates.

Cicuta virosa. "Grinding of the teeth (when any are through the gums), with pressing of the jaws together, like lockjaw. Convulsions, with limbs relaxed and hanging down, or unnaturally stiffened and extended."—*Williamson.*

Cina. The child rubs its nose much, and is unusually hungry. Very restless in its sleep; must be kept in motion nearly all the time by rocking or otherwise. Hacking cough, followed immediately by

an effort to swallow something. Diarrhœa; stools occurring immediately after drinking. Child wants many things, which are rejected immediately or very soon after being offered them. Even its most choice playthings or articles of food are repelled with violence. It does not like to be looked at, spoken to, or even touched; in fact, it is a *very* peevish child. Its urine, when it can be preserved in a vessel or when seen in a puddle on the floor, soon turns white like milk. Restless at night; frequent crying out as from colicky pains, and calling for water.

Chamomilla. The child starts and jumps during sleep. When awake it must be carried all the time, in order to soothe its sufferings. Sometimes it will sleep only whilst being carried in the arms. One red cheek, the other pale. Diarrhœa, watery and slimy, or like chopped eggs and spinach. Stools the odor of decayed eggs. Dry, hacking cough. Very thirsty; likes to hold its mouth in cold water a long time when drinking. The appetite not so good as usual, and there is frequent vomiting of thin, sour milk. Gums red and tender; much sleeplessness. Wants to be carried into the open air.

Coffea cruda. The child is very excitable and sleepless; it seems as if it *could not* sleep. It frets and worries in an innocent manner; is not cross, but sleepless. It laughs one moment and cries the next; is feverish for want of sleep, which it cannot obtain.

Colocynthis. When the bowels sympathize particularly; much colic, forcing one to double up, with writhing and twisting. Stools watery, frothy or bloody, with pain, which seems to contract or double up. Sometimes the pain is relieved by pressing hard upon the abdomen. Noisy emission of flatus.

Creosote. In this we have an invaluable remedy in difficult dentition. Very painful dentition. The sufferings are usually aggravated at six P. M., and continue till near six A. M. During all this time, by rubbing, and patting, and tossing, and worrying with the child, a very few short naps are obtained. It is a little more comfortable during the day, but the same scene is enacted the following night. The protruding gum seems infiltrated with a dark, watery fluid. Such teeth as are through the gums are dark and show specks of decay down to the gums. Constipation is more frequent; stools hard and dry. When there is diarrhœa the stools are dark-brown, watery, and very offensive; odor rather cadaverous. The stools seem to be exhausting; they excoriate, and sometimes contain portions of undigested food. In such cases we need not despair of so changing the morbid condition of the system as that other teeth shall not turn

black and decay; and even the affected teeth will improve in their appearance.

Cuprum acet. or met. "Dryness of the mouth, with colicky pains in the bowels. Green, bloody, painful stools, and efforts to vomit. Convulsions, beginning with cramps in the lower extremities, and drawing in of the fingers and toes, with much throwing about of the limbs, frothing at the mouth, and choking in the throat."—*Williamson.* Spasms preceded by violent vomiting of mucus. After one spasm the child screams, turns and twists till another spasm occurs. All trouble seems inclined to be translated to the brain, threatening that organ with paralysis or dropsy.

Dulcamara. The aggravations of dentition are all increased by every damp, cold change of weather. Not so much that the child takes cold then, but that the morbid condition of the child is such as to be so influenced by that atmospherical change, upon the same principle as that the pains of Rhododendron are all aggravated by a storm of wind, although the patient be warm and in bed. If the child be inclined to salivation, diarrhœa, eruptions upon the skin.

Ferrum. When a persistent diarrhœa is the result of morbid dentition. Stools composed of mucus and undigested food; sometimes excoriating and exhausting, though painless. The face is often flushed, or has a red spot on each side. Often vomits its nourishment soon after taking it. Dentition advances slowly.

Graphites. When the scalp, face, behind the ears or other portions of the surface become the seat of an eruption which oozes a clear, glutinous, watery fluid. Sometimes the whole scalp, face, behind the ears or such other parts as may be affected become one complete raw surface, constantly pouring out this peculiar fluid. At the evolution of each group of teeth this condition becomes aggravated. Often a severe constipation of large, difficult stools attends the above condition. Sometimes the affected parts itch severely.

Helleborus niger. When brain symptoms are being developed. Dilated pupils, drowsiness, particularly when the stools are white and jelly-like.

Hepar is the remedy when a dry herpetic eruption is developed on some parts of the skin. It often appears in the bend of the forearm, upon the arm, in the popliteal spaces, upon the face or scalp. The itching is very troublesome. A whitish, sour-smelling diarrhœa often attends. Aggravations occur at the approach of every fresh group of teeth. The gums are sometimes ulcerated, very tender and apparently very painful. Traumatic cerebritis.

Hyoscyamus. "Pressing of the gums together, with putting the hands to the jaws, putting the fingers into the mouth, and other indications of pain in the jaws. Difficulty in swallowing. Convulsions, beginning with twitching of the muscles of the face, especially about the eyes. Dilatation of the pupils. Dark-colored, bloated appearance of the countenance, and deep sleep after the spasms go off."—*Williamson.*

Ignatia amara. The child awakens from sleep with piercing cries, and trembles all over. Convulsive jerks of single parts. Frequent flushes of heat, with perspiration. Spasms return at the same hour daily, with trembling all over. Spasms, with cries or involuntary laughter. Stools usually of mucus or of bloody mucus, often attended with undue exertion and prolapsus of rectum. Sometimes there is tenesmus and prolapse of rectum without stool. The child has much sighing, sobbing and crying; sighing and sobbing continue long after the crying.

Ipecacuanha. Continual nausea, with occasional vomiting. Diarrhœa. Stools fermented and of many colors, or green as grass. Face pale, with blueness about the eyes. More frequently useful if, to the above, a variety of catarrhal symptoms are added by cold.

Lachesis. The child awakens in an unhappy mood, and often in a distressed condition. At times convulsions will occur so sure as the child goes to sleep. If we watch such children attentively, we will perceive the breathing to cease just prior to the convulsion, or just before it awakens in distress without the convulsion. The protruding gum is sometimes found to be dark purple.

Lycopodium. The child sleeps with its eyes partly open, throwing its head from side to side, with moaning. It cries and screams just previous to passing water. Red sand or a reddish stain is perceived on its diaper after passing water. Much rumbling, rattling and commotion in the abdomen. If it passes flatus it is very offensive. Aggravations occur at four P. M., and relief at eight or nine. Often very restless all night, like a Rhus restlessness. It takes but a small portion of food at a time, and does not care much for that

Magnesia carb. The teeth do not come through. A green and sour-smelling diarrhœa has continued a long time. Emaciation. Sometimes the stool has the appearance of scum on a frog-pond. Frequent vomiting of sour substances. Sometimes there is loss of appetite and sour breath, with constipation, and frequent urging to evacuate a natural-looking stool.

Magnesia mur. Slow dentition, with distension of the abdomen and constipation. The region of the liver is enlarged and hard, and the

nurse or mother says "the child is liver-grown." The stool is often large and hard, and crumbles as it leaves the verge of the anus. Sometimes the stool is green and pap-like.

Mercurius sol. Copious salivation, and sometimes little blisters are seen on the tongue, gums and cheeks. Quite large ulcers sometimes are seen on the protruding gum. With the above conditions the nights are usually very troublesome. Now it occasionally happens that the child takes cold and the salivation becomes arrested; then convulsions occur. The diaper is often stained with a yellowish, strong-smelling urine. Abdomen often hard and distended. Stools usually slimy, bloody, green and accompanied with tenesmus. A single dose of Merc. is often sufficient to cure such cases.

Nux vomica. For teething children being raised by artificial or mixed feeding, or whose mothers or nurses indulge constantly in highly-seasoned food, wines, etc. Aggravations occur at about four in the morning. Appetite becomes impaired, thirst increases and the child becomes peevish and fretful. Constipation, with large, difficult stools, occurs, or the stools become small, frequent, lumpy or fluid. Bloody saliva often stains their pillows when sleeping. The mouth sometimes becomes sore and the breath very offensive.

Nux moschata. Particularly when the stools are very thin and yellow, soaking into the diaper as it were. They are very exhausting, and the child is very sleepy.

Podophyllum. Grinding of such teeth as are already cut, with crying and worrying, often with painful diarrhœa. Rolling of the head from side to side, with green stools. Whitish, chalk-like stools, very offensive. with frequent gagging and thirst. Morning diarrhœa. Frothy, undigested stools. Prolapse of the rectum with every stool. Sometimes the stools are very frequent all day, all of which are natural. Very worrying and sleepless all the early part of the night, apparently from nervous irritability. Voracious appetite, with other bad symptoms. Diarrhœa immediately after eating or drinking. Food sours soon after eating, when it is rejected. "Gagging, and the discharge of fœtid, carrion-like smelling stools. The motion of gagging is made with the mouth, and not accompanied with the effort in the stomach seen in retching."—*Williamson.*

Psorinum. These cases, at first view, resemble Sulphur. On examining more carefully, if we find a dark fluid stool having the smell of decayed eggs, and eructations, or the child's breath having a similar odor, we may feel very sure that Psorinum is the remedy.

Rheum. Is particularly indicated when a very sour-smelling diar-

rhœa is developed, with much pain in the abdomen during stool. The diarrhœa is aggravated by moving about.

Sepia. Dry ring-worms make their appearance, or seem to brighten up at the evolution of every fresh group of teeth. Bad smell from the mouth. Aggravation of diarrhœa after taking boiled milk. The diarrhœa appears to be very exhaustive.

Silicia. In scrofulous children having worms, with profuse salivation. Frequent pulling at the gums. Fever toward evening and all night, with heat in the head. Difficult stools. The mother or nurse declares, from observation, that the stool frequently recedes before the child can effect its passage. The feet smell badly, notwithstanding every effort to prevent it. Profuse sour-smelling perspiration upon the head in the evening. The fontanelles are large, and the head is larger in proportion than the rest of the body. The protruding gum seems blistered, and is very sensitive. Stools, when very loose, are usually very dark, and sometimes very offensive.

Stannum. In some cases where it seems as if Cina should cure and it does not. Particularly if the child is more comfortable by lying with its abdomen across some hard substance—the shoulder or knee, for instance. Epileptiform convulsions, with clenching of its thumbs. If hernia should protrude, with Stann. symptoms, this circumstance would strengthen its indication.

Staphysagria. The child is very sensitive to the least impression, whether mental or physical. It winces and shrinks from every wry look or harsh word, and cries from the least pain. The gums have a pale white appearance, and are very tender to the touch. Pot-bellied children. Frequent desire for stool, not relieved even by a free evacuation. Such teeth as are cut have a dark look or dark streaks run through them. Moist scald head, with yellow scabs, and very offensive. Colic, with diarrhœa, the last part mucus.

Stramonium. When the child's brain seems so affected as to cause it to cease making its wants known except by motions. Violent grinding of such teeth as are cut. It seems to shrink from the sight of objects when first presented as if afraid. The approach of a bright light causes spasms. Blackish, thin stools, having a cadaverous odor. A very dry mouth or profuse salivation. "Grinding of the teeth. Moving of the fingers in sleep, as if searching for something. Disposition to stammer and try to talk. Often there is a desire for more light, and at other times light brings on an aggravation, and even convulsions. Convulsions, with cries as if from being frightened by the sight of hideous objects. Much throwing about of the

limbs, especially of the arms and hands, with motions of the fingers. The motions are most violent in the upper portions of the body."—*Williamson.* Desire for its mother constantly.

Sulphur. White, sour diarrhœa, with redness about the anus. Green or bloody stools, with crying and worrying, and rawness about the anus. Frequent vomiting of nourishment. Papulous eruptions on the skin, with much itching. The child does not like to be washed any more. Very tender and red about the anus after every stool. It takes no more long and refreshing sleeps. Frequent waking; wide awake. Jumps in its sleep. Seems to have frequent weak and faint spells. Aggravations come twice per day.

Sulphuric acid. The mouth and gums are in an aphthous condition, and seem very painful. The child is very irritable, restless, and cries much of the time. The stools are peculiar, the appearance being like chopped mucus of a saffron color. Even if there is not aphthæ, the stools are sufficiently characteristic, and may be regarded as the key-note when present.

Veratrum a. Vomiting, with severe retching, and severe retching without vomiting. Cold sweat on the forehead. Vomiting renewed by the least motion. Diarrhœa. Each stool followed by great prostration. Cold, damp feeling of the extremities in spite of all covering and wrapping. Very weak, faint pulse. The above condition simulates cholera infantum, but difficult dentition may be the cause.

APHTHÆ—THRUSH.

As described by Leadam, the thrush often attacks the infant in the second week, and is characterized by the mouth and tongue being covered with minute whitish blisters, which are rubbed off by the action of sucking; a succession of these vesicles is constantly taking place so long as the disease lasts, which is sometimes five or six weeks. It is often preceded by a granular appearance of the tip of the tongue a few days after birth, which is caused by enlargement of the papillæ. The thrush often runs in families, and is a disease of debility; but it is generally caused by irritating secretions in the alimentary canal, from bad digestion or improper food, or by the acidity of the food in the stomach, as well as of that remaining in the infant's mouth. This affection generally traverses the whole length of the digestive tract, and develops a redness and excoriation at the anus corresponding to that originally appearing in the mouth.

Thrush may constitute a temporary and comparatively trivial disorder, apparently unconnected with any constitutional disturbance.

But more often it appears as one of the first of a long train of symptoms indicative of severe gastro-intestinal disorder. And finally, in the last stage of such disorder, toward the close of life, the tongue, the inner surface of the cheeks, and even the margin of the lips and corners of the mouth, may be covered by a whitish, paste-like formation, which being forcibly removed discloses a surface red or raw. Thrush is most commonly met with amongst the children of the poor. It consists essentially in the growth of a fungus (*oidium albicans*) upon the buccal mucous membrane, and seldom involves the tissues lying beneath. In public institutions for children, such as children's hospitals, it is very common, and generally appears under such circumstances in grave and even malignant form. Microscopical research has demonstrated its fungous origin.

In all except the very mildest forms of thrush the disorder renders nursing a painful operation to the child; but as it usually appears in connection with, or in consequence of, serious derangements of the stomach and bowels, such as vomiting and diarrhœa, the proper remedy will be found among those indicated for such conditions. It should always be borne in mind, however, that if the child is kept constantly clean, and if it is not dressed too warmly, it will seldom or never be troubled with the thrush. But where the thrush appears by itself, and is unattended as yet by other morbid symptoms, it may be removed, and the still deeper mischief to which it would lead anticipated by the exhibition of *Calcarea*, *Chamomilla*, *Borax*, *Bryonia*, *Mercurius*, *Sulphuric acid*, *Arsenicum* or *Muriatic acid*, according to the character of the accompanying condition and to the particular appearance of the infant's mouth. We give indications for a few remedies:

Æthusa. The aphthous condition causes great distress. Profuse salivation or dryness of the mouth. Vomiting of milk or of a substance resembling milk. Diarrhœa or constipation; sometimes undigested stools. Much crying, as if from colic.

Arsenicum. When the aphthæ assume a livid or bluish appearance, attended with great weakness and diarrhœa.

Baptisia. Profuse salivation. Offensive stools. The child can swallow nothing but fluids; even a small lump of thickened milk will occasion gagging.

Borax v. The child frequently lets go the nipple, showing signs of pain in the mouth from nursing. Downward motion causes fright.

Bryonia. The mouth is unusually dry, with thirst; dry lips, rough

and cracking; the child does not like to take hold of the breast, but when once its mouth is moistened, and it is fairly at work, it nurses well.

Carbo veg. The mouth is very hot, the tongue almost immovable, and a sanguineous saliva escapes occasionally.

Chamomilla. When the child exhibits much uneasiness, and *must be carried* all the time.

Mercurius sol. Much salivation, or more than usual moisture in the mouth. There is inflammation in the whole buccal cavity. Ulcers upon the gums.

Staphysagria. When the aphthous patches seem to bleed easily and the gums are spongy.

Sulphur. The child does not take its usually long sleep; it awakens often. The general appearance of the child indicates Sulphur.

Sulphuric acid. The mouth appears very painful, and the child is very weak. Ecchymosed spots form on the skin.

Pure molasses, applied by means of a piece of muslin or linen, or by the finger, constitutes the best (healing) wash where one seems to be needed. Consult the indications furnished under the head of Disordered Dentition and Indigestion.

Constipation.

Even very young infants are sometimes affected with constipation; in fact, during the first two months of infantile life constipation is frequent, while diarrhœa is comparatively rare. This may be occasioned by some hereditary predisposition, and be maintained by the constantly imparted influence of a costive habit on the part of the nursing mother.

In most cases of infantile constipation the difficulty consists, so far as the child is concerned, in an inactive state of the bowel. Some mothers are in the habit of relieving this by the stimulating irritation of a roll of paper or other small object anointed with lard and introduced within the rectum. The employment of purgatives of any kind, as indeed in all other forms of constipation, is worse than useless. In some cases the constipation may be due to functional derangement of the liver, as in children affected with jaundice, where the stools may be hard, dry and clay-colored, showing a deficiency in the secretion of the bile.

There are also cases of complete inaction of the bowel and retention of the fæces from birth, which are due to imperfect development or actual malformation of the intestine. In these cases the rectum

may be perfect, but with its canal closed by a false membrane, which obstructs it either at its orifice or higher up in the intestine, or the canal of the rectum may be obliterated for a greater or less extent by the adhesion of its opposite sides. These cases may be relieved by a very simple incision where the hard and protruding accumulation of fæces furnishes a sure guide to the operator.* But there are other and more complicated varieties of malformation, such as those in which the natural aperture of the bowel is absent, and the intestine terminates by opening into the urethra, bladder or vagina, or those in which the intestinal canal is not only malformed, but altogether absent for an extent more or less considerable. All such cases require in their treatment no small amount of surgical skill, and the particular directions for the operations they involve will be found in the best works on practical surgery, or better still in West's recent and elaborate Treatise on Diseases of Children.

In the medical treatment of the constipation of infants recourse must always be had to the cause. If this is found in the nursing mother, the proper remedies should first be administered to her. Should there be anything in her diet—such as the use of coffee—which may be capable of rendering either herself or her babe constipated, this also should be attended to. With scarcely a single exception cases of costiveness in nursing infants will be found dependent upon the influence of diet, hereditary and constitutional weakness and inaction of the bowel, or actual derangement of the liver. The remedy should, however, be selected in accordance with all the symptoms, a single dose administered, and allowed entirely to exhaust itself before either repeating it or making a new prescription.

Aconite. Much heat about the child's head; it is feverish, sleepless, restless, gnaws its fist, and its stools are hard and difficult.

Æthusa. Constipation, with vomiting of the milk and other symptoms of this remedy. Milk seems to disagree with the child.

Alumina. There seems to be a want of action in the rectum; the child has to make a very great effort, even for a soft stool.

Apis m. The child is restless, screams out in its sleep, and has bright red pimples on its skin. Urine very scanty.

Bryonia. The stools are very dry, as if burnt, and of a dark color; dry lips and mouth. Alternation of constipation with diarrhœa.

Calcarea c. Hard, undigested stools of a light color. Chalky.

* See cases of this kind reported in the *American Journal of Homœopathy* for 1854, p. 16, vol. viii.

Graphites. The stools are of an uncommon size, very large, and the child has more or less humid eruption over its body, behind its ears, on its face, on the chin, in its groins. This eruption exudes a watery, transparent, gelatinous fluid.

Lycopodium. Red, sandy urine, the sand is seen in the diaper; much flatulence; difficult stools, which it is almost impossible to evacuate.

Mercurius. When the general symptoms of mercury are present; salivation, sore throat, glandular swellings, frequent efforts to evacuate; all these symptoms become more prominent every time the child takes cold. Urine offensive and stains yellow.

Nitric acid. This remedy cures many cases where the pain of evacuating is great during and after the passage, as though the little sufferer had fissures of the anus. It fears to have a passage.

Nux v. Stools large and difficult, or small, frequent and painful, with much colic. When the nurse takes much coffee or highly-seasoned food. The child is quite sleepless and restless.

Opium. The stools occur in hard, round black balls.

Platina. The stools adhere to the rectum and anus like soft clay, so that it is difficult to discharge them.

Plumbum. The stools are composed of conglomerate balls, like sheep's manure.

Sepia. The stools are very difficult to discharge; they seem to remain in the lower part of the rectum, and to require the assistance of the nurse in order to facilitate their discharge.

Silicia. The stools are with difficulty forced to the verge of the anus, when they slip back again.

Sulphur. The child has intertrigo, pimply eruptions, swelling of its skin, soreness of the anus, so that it screams with every attempt to evacuate the bowel; it seems to have piles.

Veratrum. There seems to be a paralyzed condition of the rectum, requiring much straining, when a cold sweat appears on the forehead, and the child seems exhausted after stool.

COLLINSONIA, HYDRASTIS and PHYTOLACCA should likewise be consulted, especially for habitual constipation. See also the treatment of Constipation of Pregnancy.

DIARRHŒA.

Infantile diarrhœa constitutes one of the most frequent and serious of all the diseases that occur in infancy and childhood. Of itself alone, diarrhœa does not often prove directly fatal, but its long continuance seriously weakens the patient and endangers the health; and

it constitutes, moreover, a very grave complication of other forms of disease.

Diarrhœa may appear without fever or other constitutional disorder; this is usually termed by medical writers *simple* or *catarrhal diarrhœa*. Or it may be accompanied by more or less fever, and is then properly termed *inflammatory diarrhœa;* this may become an actual dysentery or inflammation of the bowels. In its mildest forms infantile diarrhœa corresponds exactly to the easy and painless vomiting already described as the means by which the overloaded stomach relieves itself. This may be either a *lienteria*, in which the food passes undigested, or a *diarrhœa crapulosa*, in which the excess of food mixed with fæces is passed in large and frequent quantities. Or again, as is still oftener the case, the diarrhœa may be of a purely mucous character, a condition which results from disordered (excessive) action of the gastro-intestinal muciparous glands and follicles. In this latter form the mucus designed to facilitate the digestive process is secreted in such abundant quantity and in such altered quality that it exerts an influence entirely different; for this primary derangement of the muciparous glands by sympathy affects all the neighboring organs of the gastro-intestinal tract, whose secretions are intended to promote the accomplishment of the function of digestion. In some instances this mucous diarrhœa seems to become a real blennorrhœa, or catarrh of the bowel. This form may arise from cold and dampness, from careless exposure and from want of sufficient covering over the abdomen.

The *causes* of the principal forms of diarrhœa may be arranged under three general heads: I. Those which are connected with the organism itself; II. Those which depend upon the quantity and quality of the food; III. Those connected with atmospheric influences and changes in the weather.

I. The diarrhœas which spring from interior causes are such as those just described as catarrhal, arising from excessive action of the muciparous glands. To this form of diarrhœa many children are so remarkably predisposed that the slightest change of weather or personal exposure renders them subject to it. The extraordinary activity of the whole digestive apparatus in young babes renders the access of diarrhœa of some kind the almost inevitable result of the irritability induced by the process of *dentition*. And in addition to these it should be borne in mind that the changes taking place in all parts of the alimentary canal and of its dependencies, in order to fit them for the proper reception of the varied food upon which the infant will soon

have to subsist, cannot but render these organs still more susceptible to this form of disorder. The change which takes place in the mouth during the period of lactation is exactly equaled by a corresponding change in all the organs of digestion and assimilation. Hence it happens that very few children entirely escape the attack of diarrhœa during their first dentition, while one-third suffer from it severely.

II. The manner in which food too abundant in quantity or unsuitable in quality occasions diarrhœa has already been explained under the head of Indigestion. In many of its forms, at least, diarrhœa itself is little other than a symptom or consequence of intestinal indigestion; and of course those external accidents of food too profuse in quantity or disagreeable in quality but serve to aggravate the pre-existing disposition to diarrhœa arising from the before-mentioned internal or constitutional conditions.

We have already referred to the subject in the opening remarks on the Lesions of Infantile Nutrition and in other parts of this work. But the frightful mortality of infants and children arising from bowel complaints excuses us for quoting the following weighty paragraph from Meigs's and Pepper's Treatise on Diseases of Children: "The system of indiscriminate diet allowed to children in this country is, it seems to us, a fruitful cause of gastric and intestinal complaints. We believe that, as a general rule, children over two and three years of age are allowed amongst us to eat of the food prepared for the older members of the family. Now, any one who will reflect upon the variety of dishes habitually placed upon an American table, ought not to be surprised to see children permitted a choice amidst such profusion, pale, thin, delicate, exposed to frequent indigestions, attacks of diarrhœa and entero-colitis, to gastric fevers and the host of minor ills attendant upon feeble digestive powers. . . . . It has been stated that simple diarrhœa sometimes follows as a consequence of indigestion. We have known such a result to occur in children previously in fine health, and to continue for several weeks or months. In these instances the disorder appears to depend in good measure on the loss of the digestive power of the stomach. This seems proved by the great influence which the character of the food has upon the malady, which is always aggravated by the use of any articles except those universally acknowledged to be the most digestible, and also by the frequent coexistence of lientery when the food is not of the lightest kind."

III. As to the third class of diarrhœa, that dependent upon climatic or atmospheric conditions, it will be sufficient to recall the immense

proportion of cases of this disorder which occur in particular seasons in order to realize how largely even young infants are subject to such influences. Thus, on a comparison of the results of eight years' observation at the Children's Infirmary in London, Dr. West found that in the six winter months, from November to April inclusive, diarrhœa formed seventeen and three-tenths per cent. of all the cases of disease, while in the six summer months, from May to October inclusive, diarrhœa formed thirty-eight and three-tenths per cent. of the cases of disease.* Exposure to the night air will often occasion an attack of diarrhœa in young infants. And dysentery, or actual inflammation of the bowels, so notably depends upon certain conditions of the weather—either magnetic or atmospheric—that when they recur, especially in the autumn, this disorder prevails as an epidemic throughout the whole district.

Symptoms.—The different appearances of the stools in diarrhœa deserve careful attention, since in many instances they greatly aid in the selection of the appropriate remedy. Thus, at the onset of the disorder the discharges are at first purely fæcal; presently they may assume a bright-yellow color, like that of the yolk of an egg; often they are intermixed with slime; and in other cases they present a frothy appearance. Under exposure to the air the bright-yellow color of the evacuations often, though by no means always, changes to green. In other cases the green and yellow colors appear intermingled in the evacuations, while the presence of the small white specks, the caseine of the undigested milk, shows that the function of the stomach is disturbed by the same cause that produces the over-action of the bowels. From the admixture of the white and yellow in these cases the stools have the appearance of chopped-up eggs. As the disorder advances the stools become more frequent, and they are attended with much more distress, each motion being evidently preceded or accompanied by griping or other pains. The symptoms of simple diarrhœa are, however, very variable in their character, as well as in their intensity. Sometimes there is much suffering; sometimes very little, even in severe cases. In many instances the child does not seem, for a while at least, to be much weakened by the disorder; in others it very rapidly runs down. But these latter are rather cases of the severe or inflammatory form of diarrhœa, into which the simpler variety is very often apt to run if continued more than a few days.

In the inflammatory diarrhœa, so called, we find all the symptoms of true inflammation of the bowels, and sometimes also of the stomach,

* West, *On Diseases of Children*, Phila., 1866, p. 508.

in different degrees of violence; there are fever, thirst, tenesmus; colic; abdominal tenderness and heat; frequent, painful, slimy, bloody, or even offensive discharges; great and rapidly increasing exhaustion; and evident tendency to hydrocephaloid, coma or convulsions. Either the severity of the pain and fever, the putridity of the stools or the occurrence of tympanitis will indicate very great danger. When the attack comes on suddenly it often commences with vomiting, and sometimes the irritability of the stomach becomes and continues so extreme that the least drop of fluid is immediately rejected, and frequent and distressing efforts to vomit occur when the stomach is entirely empty. Almost simultaneously with the vomiting occurs the relaxation of the bowels, and the child may have twenty or thirty, or even more evacuations in the course of the twenty-four hours. These may be slimy and streaked with blood, or greenish and watery, or serous, or they may consist of intestinal mucus intermixed with fæces and more or less streaked with blood. Where the stools are scanty there is usually much tenesmus, followed by the discharge of a little mucus or a few drops of blood. With all these severe local symptoms the constitutional disorder is no less distressing; the pulse is quick, the skin hot and dry, and the child is either fretful and irritable when disturbed, or lies sleeping, apparently, with half-open eyes. "The tongue at first is moist, coated slightly with mucous fur; its papillæ are often of a bright red, as are also its tip and edges, while if the disease continues the redness becomes more general, and the tongue grows dry, though it is not often much coated. The thirst is generally intense, the child craving for cold water, and crying out for more the moment the cup is taken from its lips; and the thirst is quite as urgent even in those cases where the stomach is so irritable that it immediately rejects whatever is swallowed."—*West.*

Aconite. The skin is hot and dry; restlessness and much excitability; stools watery and often of a dark color. After the fever has subsided, we have but to wait and the diarrhœa will also disappear without the use of another remedy.

Æthusa. See the indications for Æthusa under Dentition and Indigestion.

Antimonium c. White-coated tongue, some nausea and watery evacuations; sometimes hard lumps of fæces with the water. Absence of thirst.

Argentum nit. Much loud flatus passing with the stool. Stools like spinach, in flakes.

Arsenicum. Much exhaustion and rapid emaciation; stools undi-

gested; offensive and painful stools immediately after taking nourishment. Stool and vomiting at the same time.

Belladonna. The child is very drowsy, half sleeping and half waking; much moaning. Stools involuntary.

Bryonia. Diarrhœa from hot weather, or it is aggravated by the return of every hot spell of weather. Stools bloody.

Calcarea c. In children who have large heads and open fontanelles. The head perspires much, so as to wet the pillow far around. Muscles soft and flabby. The child awakens at three A. M.

Carbo veg. If Bryonia does not cure when indicated.

Chamomilla. Stools watery or greenish, or like eggs beaten up. The child must be carried; it is very feverish and cross. The stool has the odor of rotten eggs. Very thirsty.

China. Painless and undigested, putrid stool; very copious stool, worse every other day.

Colocynth. The passages are small and frequent, with very much pain, causing the child to writhe and twist as if in great distress, and to draw itself double.

Croton t. Colic and diarrhœa immediately after nursing. The stool escapes suddenly, as if with an expulsive spasm.

Dulcamara. Every cool change of the weather excites the diarrhœa; it is excited also by exposure in cold, damp places.

Ferrum. Undigested stools, with easy vomiting of ingesta, often with a very red face.

Graphites. Very frequent and small stools, with eruptions on the skin, from which oozes a gelatinous fluid. The stool is often sour, and excoriates the external anus.

Hepar. Fœtid stools, the child itself smelling sour.

Ipecacuanha. Much nausea or vomiting; almost constant nausea. Fermented stools, particularly indicated at the period of weaning, when food disagrees.

Iris. Brown and very offensive diarrhœa, with cutting colicky pains, nausea and vomiting; emission of very fœtid flatus.

Lachesis. Excessively offensive stools; the child always awakens in distress. Some portions of black blood are seen.

Magnesia c. Stools resembling the scum of a frog-pond. Stools green and slimy, or watery and sour.

Mercurius sol. Much pain before the stool; great relief immediately after. Stools frothy, slimy, bloody or dark green, with much straining. The child's thighs and legs are cold and clammy, particularly at night. Sometimes excoriations about anus.

Nux v. Alternate constipation and diarrhœa. Indigestible food has been the cause of the diarrhœa; the passages are small and frequent and painful; much fretfulness. Worse at four A. M.

Opium. Diarrhœa from fright.

Phosphoric acid. The diarrhœa does not seem to debilitate much, although of long continuance, and the mother wonders that the child remains so strong with it all.

Podophyllum p. Morning diarrhœa, green or watery, or the stools may be quite natural, only too frequent. Prolapsus ani and diarrhœa.

Pulsatilla. The stools are very changeable, no two alike; much worse at night.

Rheum. Very sour-smelling stools, attended with much pain. Very sour smell of the child, which cannot be removed by any amount of washing and care in keeping it clean.

Rhus t. Worse particularly after twelve at night; very restless after that hour.

Sepia. There is an almost constant oozing from the bowels.

Sulphur. Particularly in children of delicate parents. Much redness around the anus, or excoriation between the thighs and upon the parts adjacent. Eruption of pimples upon the skin, or if the child, after getting better under other remedies, always gets worse again.

Veratrum a. Much exhaustion after every passage, with cold sweat upon the forehead and upon the skin in general.*

Dysentery—Colitis.

Inflammation of the large intestines seldom occurs except in connection more or less obvious with that of the small intestines; and the latter, especially in infants and little children, is usually connected with a greater or less amount of gastro-enteric inflammation. Thus, dysentery, or colitis, as it is sometimes termed, may come on as a consequence of the extension of inflammation, which, commencing in the stomach, involves the entire digestive tract in its course. There are, however, many instances of pure idiopathic dysentery which are directly traceable to exposure of the child to the cool, damp air, especially at night, with its abdomen and limbs insufficiently clothed. According to Dr. Condie, "Colitis would appear in the majority of cases to be the result of sudden transitions of atmospherical temperature, particularly the sudden change from warm and dry to cold and damp weather. It is most prevalent during the latter part of summer or the commencement of autumn, when the days are hot, but

* For additional remedies, see Appendix, Note 3.

the nights chilly and damp. It is apt to prove *endemic* in unhealthy localities, especially those favorable to the production of intermittent and remittent fevers, and often prevails *epidemically* with fevers of a catarrhal character. A few days of cool, rainy weather occurring in the summer will often cause the prevailing bowel complaints of children to assume a dysenteric character."

Except when the result of such endemic or epidemic influences, aggravated perhaps by personal exposure, dysentery is seldom met with in children before dentition has commenced. In these latter cases it evidently arises in consequence or in continuation of the gastro-enteric inflammation which so frequently attends difficult dentition.

Symptoms.—Dysentery sometimes commences as diarrhœa. It is usually attended with considerable fever, with evening aggravation and thirst; there may be vomiting, especially of the copious drinks or other ingesta, but usually the development of colitis tends to relieve in some degree the previously existing gastric irritation. The abdomen is tense and tender to the touch, especially along the course of the descending colon. But the most characteristic symptoms of this disorder are the *painful discharges* per anum, which are very frequent, but very small in quantity, and either composed of bloody mucus, pure blood or mucus alone, and the *tenesmus* which precedes, attends or follows the discharges, or which may very frequently compel an abortive and exceedingly distressing effort at stool. In some cases the irritation is kept up by the presence in the bowel of retained fæces, the usual peristaltic action of the intestine having been suspended by the influence of sudden change in the temperature. Such cases are marked by incessant calls to stool and almost constant tenesmus, which are either totally ineffectual, or result in the evacuation of minute portions of fæcal matter, with much slime tinged with blood. But the symptoms of dysentery are so evident that there is no necessity for enumerating them more at length.

The *anatomical lesions* are very grave, especially in severe cases. They are generally confined to the large intestine. "The mucous membrane is commonly found thickened, swelled, red and softened; the submucous tissue sometimes presents ecchymosed points; the follicles are often diseased, their orifices being enlarged and ulcerated. In grave cases, especially those occurring under an epidemic influence, there are usually more or less extensive ulcerations, which may implicate only the mucous, or extend to the muscular or even peritoneal, coat. In such instances pseudo-membranous exudations are often

formed, sometimes in large quantity, and often covering the ulcerations. The intestine contains sanguinolent mucus, or at times a brownish or greenish material, which is evidently the result of a gangrenous condition of the mucous membrane, pus, and lastly false membrane. In some rare cases perforation has been known to take place."—*Meigs and Pepper.*

Treatment.—Select that one of the following named remedies, or any other, which most exactly corresponds to the condition of the patient, and be particularly careful of exposure to the night air, not only during the continuance of the disorder, but even after convalescence has set in, for the relapse which would otherwise be sure to follow might prove more intractable than the original disorder.

Aconite. Much fever; dry heat; restless distress; an irritable or inflammatory state of the system. This remedy is often the specific for the entire case.

Aloes. Stools in consistence like jelly-cakes; a quantity of clear jelly, which may be green or white. Sometimes there is very severe pain, with straining and tenesmus.

Alumina. Has to strain at stool in order to pass water; can pass water only while so doing.

Apis. Frequent bloody stools, without pain. No thirst; restlessness; sleepless, especially during the latter part of the night. Screaming spells. Urine very scanty.

Arnica. Frequent stools of clear mucus, with tenesmus. Bloody stools, or dark and bloody mucus, with sore pain.

Arsenicum. Signs of great exhaustion; after any effort, such as turning over, having its diaper changed, etc., the little sufferer almost sinks from exhaustion. Stools very frequent, of dark-green mucus, or very dark and watery stools, looking like watered bile. Stools very offensive, sometimes corrosive; drinks little but often; great restlessness, turning and tossing, with exhaustion. Aggravation from eating or drinking. Great and rapid emaciation. Often vomits water as soon as taken.

Baptisia. Stools preceded by terrible colicky pains, when bloody mucus passes off, followed by great relief. Sometimes the stools are dark-brown, and apparently fæcal.

Belladonna. Much tenderness about the abdomen, so that even a little jar is painful. Flushed face, red eyes; much bearing-down pain. Moaning, jerking of the limbs while asleep or awake; bright,

bloody mucus, then green mucus, smelling sour; tenesmus during and after stool. Child wishes to drink little and often.

Bryonia. When caused by cold drinks or by very hot weather. The stools are thin and bloody; the child wishes to lie down and be quiet; when sitting up there is nausea and disposition to faint; thirst, with desire for large draughts at a time. Vomiting of food soon after taking it. Parched lips and dry mouth.

Cantharis. The discharges are apparently the scrapings from the mucous membrane, streaked with blood; the urine is burning and very scanty, often passed in drops, and with much pain. Sometimes there is complete suppression of urine, with great distress.

Carbo veg. In very advanced cases; coldness of the breath; heat about the head; desire to be fanned; putrid evacuations; great debility; a venous condition is gaining the ascendency.

Chamomilla. One cheek red, the other being pale; very cross and fretful; thirsty; bloody and mucous stools. The child wants to be carried all the time. The difficulty has been caused by checked perspiration. Often vomiting of bile in the morning.

China. The child is worse every other day; much flatulency and distension of the abdomen, particularly in the afternoon. Stools dark-colored, and having a cadaverous odor which is terribly offensive. Great exhaustion, especially after stool.

Colchicum. Autumnal dysentery; passages like transparent mucus, or like jelly, or of bloody mucus. Sometimes the pain in the rectum and anus after stool is perfectly agonizing, and lasts a long while, causing screams and crying.

Colocynth. The crampy pains are very severe, causing the child to double up with every stool. There is little or no straining. The stools consist of pure mucus or of bloody mucus.

Dulcamara. If the dysentery is caused by exposure to cold and damp, or if it becomes worse as the weather grows cooler.

Ipecacuanha. Much nausea and vomiting, or constant nausea. Dysentery from eating sour substances or unripe fruit or vegetables. Loathing of all food; loaded tongue. Slimy, bloody and offensive stools, worse in the evening. Tenesmus during or after stools, or both. Autumnal dysentery.

Lachesis. Dark-colored stools of a cadaverous odor. Abdomen very hot; tongue red and cracked at the tip, or brown and bloody. The child awakes apparently much worse and as if in great distress.

Mercurius cor. Very much pure blood is passed with the stool, with much tenesmus.

Mercurius sol. Not so much blood, more bloody mucus, with tenesmus before and after stool. Much relief immediately after stool Moist tongue and great thirst. Cold feeling in the abdomen, sometimes extending down the thighs and legs. Cool perspiration. Sometimes the child will sit on the commode for a long while after stool, as if it had not quite finished or did not wish to leave.

Nux v. A small portion of natural fæces is passed with every evacuation of blood and mucus; no appetite; sleepless toward morning. Stools frequent but small. Ineffectual urging.

Phosphorus. Green and bloody passages, the anus remaining constantly open. If able to talk, the child will complain of a weak, empty feeling across the abdomen.

Podophyllum p. Evacuations of bloody and green mucus, with tossing of the head from side to side. (Worse in the forenoon.)

Pulsatilla. Mucus streaked with blood; worse in the evening and through the night; no thirst. Great changeableness of the stools, so that no two are quite alike. The child is restless, and wants to be in the open air; seems to be smothered in the house.

Rhus t. Is almost, if not quite, a specific where the pain runs in streaks down the limbs with every evacuation. Useful in cases with typhoid type. The child is generally worse after midnight.

Sulphur. The passages make the perineum red all around the anus. In scrofulous patients, and in those with eruptions more or less numerous upon the body. Frequent relapses; the child seems to be doing well, when, without any apparent cause, it gets worse.

Veratrum a. Great prostration after every evacuation, with cold sweat upon the forehead.

Cholera Infantum.

Much of what has already been said under the head of Diarrhœa will apply to Cholera Infantum. This disease very often proves fatal, even under the best of treatment, since it appears usually in the latter part of the summer, when the young infant's system is already somewhat exhausted by the previous heat, when the air is impure and the weather sultry, or warm and damp, and since it seems to spring up as an epidemic from some atmospheric miasm which is little less than malignant. In this worst form of infantile diarrhœa all the symptoms seem to vie with each other in intensity, and the disorder runs a very rapid course. This course, however, is not always marked by a steady uniformity; sometimes the violence of the gastric symptoms will temporarily abate, and the diarrhœa

continue in intensity; at other times the diarrhœa appears to become less frequent and painful, and the stomach more severely affected in proportion; and sometimes also a similar lull may be observed in the force of the whole disease, and the poor worn-out mother can hardly realize that her child is not out of danger—can scarcely understand the physician who sadly explains to her that the improvement should come in a gradual decline, and not in a sudden subsidence of the symptoms. The former condition affords ground for hope, but the latter, in some distressing cases that have come under my observation, but preceded the onset of fatal convulsions.

The *causes* of cholera infantum are predisposing and exciting. Of the former, the chief cause consists in an hereditary or acquired weakliness of constitution, which leaves the child open to the attacks of various diseases. Of the latter, we may enumerate summer heat, improper food, exposure to an impure or poisonous atmosphere, and the irritability of system consequent on dentition. The intense heat of summer appears to exert a powerful influence in promoting the disease. In the tabular statement prepared from the records of the Board of Health of Philadelphia by Dr. Pemberton Dudley, and published in volume seven of the *Hahnemannian Monthly*, the disease appeared year after year about the middle of June, and disappeared about the middle of September, rising to its height during the hottest days, and the mortality being apparently regulated day by day by the temperature.

Vomiting and diarrhœa form the most remarkable symptoms. The stomach is so irritable that it rejects immediately, and sometimes with violence, everything which it receives. At first the vomited matter consists of the ordinary contents of the stomach, but this does not continue long, and soon the characteristic watery, sero-mucous material is poured forth in greater or less quantity and frequency, and with greater or less violence. Sometimes the matter vomited is tinged with bile and presents a greenish hue. In the advanced stages of the disorder the vomiting becomes spontaneous, and the fluids ejected resemble those thrown off from the bowels. The discharges from the bowels are ordinarily composed entirely of a perfectly colorless and inodorless fluid, often containing minute mucous flocculi. In other cases they are still very watery, but the fluid is yellowish or brownish in color, contains rather a larger amount of thin feculent matter, and has a most offensive odor—an odor which is peculiar for its extreme fœtidity, a fœtidity so great that we have known it to cause vomiting in those exposed to it, and so adhesive as to render it necessary to change at

once all the clothing and bed-linen of the child, and even then the fœtor may cling to the body of the patient after repeated washings. These stools are discharged without the least effort, sometimes unconsciously, and they are generally large in quantity, soaking not only through the child's diaper and clothing, but the bed upon which it lies. In some cases, however, they are very small in quantity, and are squirted from the anus as if from a syringe. In such cases there is usually more or less tormina and tenesmus. Eight, ten, twelve, twenty, or even more stools may occur within twenty-four hours. It frequently happens that two or three movements will occur within a few minutes of each other, followed by a cessation for an hour or so, during which interval the child lies perfectly inanimate, as if completely exhausted. Sometimes the stomach seems to lose its irritability, and to allow whatever food or drink is taken in to pass through both it and the intestines unchanged, and to be immediately thrown off from the bowel in the same condition. But the extreme languor and prostration and rapid emaciation are as characteristic of this affection in infants and very young children as of the corresponding Asiatic cholera in adults.

As the disease advances the discharge becomes still more frequent, involuntary, "profuse, dark-colored like dirty water or the washings of stale meat, and very offensive. The emaciation of the patient becomes extreme; his eyes are languid, hollow and glassy; his countenance pale and shrunken; his nose sharp and pointed; and the lips dry, thin and shriveled. The surface of the body becomes cool and clammy, of a dirty brownish hue, and often covered with petechiæ. The tongue is dark-colored, smooth and shining, or covered, as well as the parietes of the mouth, with aphthæ. In many cases the child lies constantly in an imperfect doze, with half-closed eyes, and so insensible to external impressions that flies will frequently light upon the half-covered eyeballs without the patient exhibiting the least consciousness of their presence. The abdomen becomes more or less tympanitic, and the hands and feet of a leaden hue or pallid and œdematous. The fauces becoming dry, causes a sense of uneasiness, which often induces the patient to thrust the hand deep in the mouth, as if to remove some offending substance. (*Belladonna.*) The patient, unless relieved from his sufferings by a judicious treatment, becomes daily more and more exhausted, rolls his head about when awake, and utters constantly short, plaintive, scarcely audible cries. He falls at length into a state of complete coma, death being frequently preceded by a convulsive attack. Not unfre-

quently, at an early period of the disease, the brain becomes affected, and the child dies with all the symptoms of acute meningitis."—*Watson.*

The child has no desire for food in many cases, but the thirst appears to be extreme, and cold fluids are taken with avidity, even though discharged from the stomach within a few minutes afterward. The pulse rises rapidly in frequency as the disease advances, gradually becoming more and more feeble and thread-like; while the temperature of the body rises gradually, and in some instances the little patient becomes exceedingly hot. Respiration becomes shortened and anxious, which may even amount to dyspnœa in bad cases. The urine becomes more and more scanty as the quantity of fluid voided by the stomach and bowels increases, and may even be entirely suppressed. The tongue, as the disease progresses, loses its moisture and becomes dry and pasty, and in some instances cold. The abdomen does not appear to be tender of pressure, but is sunken, doughy and inelastic, and the skin of the abdomen may be pinched into folds in which it will remain for some time. If the disease is not checked collapse will set in. It usually runs a very rapid course, and will terminate fatally in one, two, three or four days, or gradual restoration to health will occur.

The *prognosis* of cholera infantum depends upon the violence of the attack, the ability of the patient to withstand it, and the skill of the physician in encountering the disease and combating its unfavorable conditions. In some instances, when cholera infantum attacks an infant, the physician feels that the case is a hopeless one, from his knowledge of the weakly constitution of his little charge; while in others he has the comforting assurance of considerable inherent strength to resist, and a consequent hopefulness as to the final result. As a general thing, it may be stated the prognosis will depend upon the severity of the symptoms. "When the discharges consist merely of serous fluid, and are copious and frequent; when they consist of small quantities of deep-green matter mixed with much mucus or with blood; when accompanied by straining; when they number from fifteen to twenty-five in the day; when they are very fœtid; and when, with these symptoms, the abdomen is tense and tympanitic, the countenance pinched, the expression languid, the extremities cool, the pulse rapid and small, and the child irritable and restless, or, on the other hand, very still and subdued,"—then, according to very high old-school authority, the prognosis is exceedingly bad. And the truth of this statement is in general terms ad-

mitted, with some qualifying circumstances to modify it, such as the previous good condition of the child, both hereditary and acquired, the absence at the time of the attack of the irritation of dentition, the fact that the child is nourished at the maternal fount, and has favorable atmospheric surroundings, together with the wonderful efficiency of homœopathic medication. *Favorable symptoms* are—an abatement of the fever and the gradual restoration of an even temperature, with increased volume and decreased frequency of pulse; cessation of vomiting, and decrease in the number of the evacuations, with a gradual return of the stools to a more natural condition and appearance; natural and peaceful sleep; desire for food; and a general improvement in the appearance of the child, together with a return of playfulness, etc.

Treatment.—Cholera infantum is almost peculiar to large cities and to summer heat, and a child having an attack of simple diarrhœa is peculiarly susceptible to the producing influence of this dread disease. It is obvious, therefore, that it is of great importance to remove the simple diarrhœa; and one of the best methods of securing that, and of otherwise affording comparative immunity from cholera infantum, is to send the little one away into the country to some salubrious situation, where pure air may be breathed plentifully. Should this be impossible from any cause, then the physician should enjoin upon the parents the importance of keeping the child as much as possible in the open air, taking it into the parks or public squares, and making short excursions with it upon the rivers and into the country places adjacent, taking *great care* not to fatigue or worry the child, and not to expose it to the hot sun. Fresh and pure air has saved the lives of many little ones. The physician should see to it, likewise, that the child under his care is properly clothed and fed; many of the commonest and most obvious laws of hygiene and dietetics will otherwise be violated by parents, even in their anxiety to do the best they can for their children. And the physician, in case he is called to a child suffering from a diarrhœa in summer, and especially if the stools become copious and watery, should select his remedies with the utmost care and watch the case with great solicitude, lest it slip into cholera infantum, and the child, having its strength taken away by the prodromic diarrhœa, dies when its life might otherwise have been saved.

Consult the following remedies and their indications, as well as those given under the headings Atrophy, Diarrhœa and Dysentery:

Æthusa. The child lies stretched out and in an unconscious condi-

tion, with pupils dilated and a fixed and staring look. *Linea nasalis.* Face sometimes red and sometimes pale; mouth either moist or dry; vomiting of white, frothy matter. Vomiting and diarrhœa, with great prostration. Pulse sometimes imperceptible. Convulsions, with clenching of the thumbs and turning downward of the eyes. Profuse vomiting of the milk, which is thrown off as soon as it is taken. Milk in any form does not agree with the child, and excites vomiting. Constant thirst and great prostration. Vomiting of coagulated milk.

Antimonium c. White coating on the tongue; nausea, retching, coughing; vomiting and watery diarrhœa; absence of thirst. The child is fretful and peevish, turns itself away and cries when looked at or touched.

Arsenicum. The child is very weak, and the slightest effort, such as vomiting, etc., seems to exhaust it. Intense thirst, with vomiting immediately after drinking. Although the child constantly wishes to drink, it takes but a sip at a time. Simultaneous vomiting and purging. Coldness of the extremities. The face is pale and cadaveric, and the skin is dry and shriveled. The child is very restless, constantly tossing to and fro. All the symptoms are aggravated after midnight.

Belladonna. Great heat of the head and dryness of the mouth and lips. Tongue coated white, with red margins. The child wakes from sleep with a start, and is delirious, or is very sleepy and yet cannot sleep. Sudden darting and twitching of muscles during sleep.

Benzoic acid. "Fœtid, watery, white stools, very copious and exhausting. During stool much pressing or straining. Strong-smelling urine, mostly dark-colored. Troublesome dry hacking cough. Tongue coated with white mucus or ulcerated."

Bryonia. When hot weather seems to develop the attack. The child vomits its ingesta immediately. Lumpy diarrhœa; colic, with much thirst and desire for a large quantity at a time; lips dry and parched.

Calcarea c. In leucophlegmatic children during teething. Swelling and hardness of the abdomen; flabby muscles; skin dry and shriveled; hair dry, looking like tow. Profuse sweat of the head when sleeping. Stools whitish, watery and undigested.

Camphor. The skin is cold as marble, yet the child will not remain covered; much prostration and diarrhœa. Sometimes these cold spells only come on at night and pass off in the morning. Occasionally there is neither vomiting nor purging, but coldness and great prostration.

Carbo veg. Similar to Bryonia; may be used when that remedy

appears to be indicated, but fails to cure. Involuntary stools, which are very offensive; emissions of large quantities of flatus, either fœtid or inodorous. Child likes to be fanned.

China. Very flatulent diarrhœa, containing portions of the ingesta; stools fœtid, and occurring immediately after eating. Partaking of fruit may have been the cause of the attack. Great weakness and inclination to sweat or great prostration after a stool.

Croton t. The stool occurs suddenly—one gush and it is finished. The lips are dry and parched. Great prostration after a passage.

Dulcamara. Every cool change in the weather or an unusually cool night causes a relapse, or such condition of the weather appears to cause the attack at its first onset.

Gratiola. Violent vomiting and purging of yellow substances, and much flatulency.

Ipecacuanha. *Much nausea* and vomiting, or almost constant nausea; these symptoms predominate. Watery diarrhœa, or green, or, still more particularly, fermented stools.

Laurocerasus. Pulse very slow and irregular or imperceptible. When the child drinks the fluid gurgles when passing through the œsophagus like the noise made by pouring fluid into an empty barrel.

Mercurius sol. The child has colic, slimy and sometimes bloody stools, with tenesmus, the colic being relieved immediately after the stool. There is often much perspiration, particularly upon the thighs, where it is cold and clammy. The child is worse in the early part of the night, and is very weak.

Nux v. In cases where some marked error in diet has caused indigestion; or we may think of Nux after Ipecac. has failed.

Phosphorus. The child vomits its drink as soon as it gets warm in the stomach. The stools are very watery, and contain little lumps which look like tallow.

Phosphoric acid. Great exhaustion; sunken eyes, with blue margins; stools are generally painless.

Podophyllum p. Exceedingly offensive stools, which are most frequent in the morning. Prolapsus ani with stools. Moaning during sleep, with half-closed eyes, and rolling the head from side to side. Gagging or ineffectual retching.

Secale c. Great debility, vomiting and diarrhœa; much thirst; pale face, sunken eyes, dry heat, quick pulse, restlessness and sleeplessness. Involuntary stools. Great aversion to heat or to being covered.

Sulphur. When there are repeated relapses, or when the case seems to linger, with excoriations, redness about the anus; eruptions; weak

spells; sleeps with frequent waking. Worse in the early part of the morning.

Veratrum. The least motion increases the nausea. Cold sweat on the forehead, from vomiting, with great prostration. Pulse almost imperceptible. The least quantity of liquid excites vomiting, which is followed by cold sweat on the forehead. Prostration, with cold sweat and cold breath. Stools consist of greenish water with flakes. Violent thirst for cold water.*

VOMITING.

Vomiting in infants and little children constitutes one of the most obvious symptoms of indigestion. This, as already stated, may be merely an effort of nature to relieve the overloaded stomach. But in a large number of cases the vomiting, while it forms but a single one with other symptoms, indicates a still more serious disorder of the stomach; and from the explanation already given of the nature and progress of indigestion, it will be seen why vomiting should often be accompanied with diarrhœa. In the more severe forms of gastro-intestinal disease this is always the case; and this connection was especially shown in the consideration of Cholera Infantum in the preceding section, where these two characteristic symptoms were discussed together.

Vomiting differs in different cases, in accordance with the nature and extent of the morbid influence upon which it depends. Thus, we may note several kinds of vomiting which may occur in infants:

First. That simple regurgitation of food taken in excess already sufficiently described.

Second. Acrid and sour-smelling vomiting, vomiting from indigestion, and such as appears to result from gastric or general fever.

Third. Bilious vomiting—vomiting of greenish or bitter fluids, either separately or mingled with food. This form may imply functional disturbance of the liver, or it may simply result from gastric irritation and straining to vomit, which causes an actual regurgitation of the bile.

Fourth. The vomiting which accompanies severe forms of diarrhœa, as in cholera infantum, inflammatory vomiting and diarrhœa; the discharges from the stomach may be watery.

Fifth. Vomiting of blood, a rare form of disease in very young infants, occurring within a few days, sometimes within a few hours, after birth, and accompanied by *purging of blood.* This seems to result from engorgement of the liver and abdominal veins, and may

* For additional remedies, see APPENDIX, Note 3.

arise from interruption of the circulation by external compression in difficult labor.—*West.*

Sixth. Fæcal vomiting, indicative of obstruction of the bowels, as in cases of most obstinate constipation, of intussusception and of strangulated hernia.

Seventh. Vomiting which occurs as symptomatic of other diseases. Of these we mention that which appears as one of the most important symptoms of *incipient cerebral disease:* "Nausea and vomiting are seldom absent. I am not acquainted with any one symptom which should so immediately direct your attention to the brain as the occurrence of causeless vomiting, and especially its continuance. At first, perhaps, the child vomits only when it has taken its food; but before long the stomach will reject even the blandest fluid, and then the efforts of vomiting will come on when the stomach is empty, a little greenish mucus being ejected with no relief, the retching and vomiting soon returning." This may continue for several days before any other indication of cerebral disease is discovered; and in this connection the bowels are usually, although not invariably, constipated. The persistence of intractable vomiting, in the absence of any other cause, either in the quality of the food or in the state of the digestive apparatus, will occasion a very strong suspicion of deep-seated dyscrasia, powerfully affecting the organic nervous system, and threatening to develop itself in the form of hydrocephalus, either acute or chronic. The vomiting which so constantly precedes the attack of scarlatina is well known; and in this case, as in that first mentioned of incipient cerebral disease, the severity and persistence of the symptomatic vomiting bear some proportion to the gravity of the subsequent disorder. For further consideration of this subject see the article on Hydrocephalus.

Treatment.—In the treatment of vomiting, careful attention must be given to all the accompanying symptoms and conditions, even to the observation of the state of the pupil of the eye, to the scrutiny of the discharges themselves, and to the absence or presence of known causes and attendant circumstances.

When there is *vomiting of blood,* first be sure that the blood does not come from the nipple; if it does, a little pressure upon the neck of this organ will cause it to appear.

For the several kinds of vomiting study the following remedies:

Vomiting of blood: See if it is drawn from the nipple.

Arnica. May be needed if the child has been injured.

Arsenicum. The child seems weak and much exhausted.

Ipecacuanha. Persistent nausea, with vomiting of blood.

Nux vomica. Constipation. Violent vomiting of bright-red blood.

Regurgitation or vomiting of milk:

Æthusa, Bryonia, Calcarea c., Cina, Jodium, Ipecacuanha, Lycopodium, Nux vomica, Silicia, Sulphur.

Vomiting of ingesta:

Calcarea c., Cham., China, Ipecacuanha, Iris, Lycopodium, Nux vomica, Phosphorus, Pulsatilla, Sulphur, Silicia.

Bilious vomiting:

Arsenicum, Bryonia, Cham., China, Ipecacuanha, Mercurius, Nux vomica, Pulsatilla, Sepia, Veratrum.

Fœcal vomiting:

Belladonna, Nux vomica, Opium, Plumbum.

CHAPTER XXXVI.

DISEASES OF CHILDREN—CONTINUED.

Lesions of the Respiratory Mucous Membrane.

THE great majority of the disorders incident to infants and young children consists in affections of the gastro-intestinal and respiratory mucous membranes. The latter organs especially are so exceedingly delicate as to offer but inefficient resistance to the many noxious influences inseparable from atmospheric vicissitudes, and at the same time they form the seat of development for various constitutional dyscrasia, and actively sympathize with morbid processes in other organs. It is stated on the authority of Professor Jörg of Leipsic that the great sensibility of the lining membrane of the respiratory apparatus does not exist in the same degree in the first month or two of infantile life that it does afterward. "The exposure of an infant two or three weeks old to a low temperature or to a vitiated air will be followed by disturbance of the functions of the liver and the occurrence of jaundice, or perhaps by such depression of the muscular power as to render the child incapable of taking a full inspiration, so that its lungs collapse, and it dies from disease of the respiratory organs, but without the cough or bronchitic symptoms,

which would not fail, if it were a little older, to announce the irritation of the mucous membrane of the air-tubes." To this remark, however, coryza forms an exception, since this affection is often seen to prove very annoying at an early period of infantile life. *Catarrh*, *Bronchitis* and *Pneumonia* seem to follow in order, in unison with the development of the child's physical system, and each disorder prepares the way for that which may follow, the last form seeming in some cases to be but the extension and development of the first.

Coryza.

Coryza, snuffles or *cold in the head* is one of the earliest and most common affections of the young infant. It consists in inflammation of the mucous lining of the nasal passages. Sometimes the first that is known of it is that the infant's nose is stopped up, so as to hinder its respiration while at the breast. The swelling of the mucous membrane of the nares, and especially the accumulation of the secreted mucus, not only hinder the little sufferer from breathing through its nose, as is its wont in nursing, but occasion also during its sleep the peculiar snuffling sound—similar to snoring in adults—which gives to this disorder its popular name. In some cases there is a considerable flow of mucus, and all the symptoms resemble those seen in the epidemic influenza of older children. Here the *Euphrasia* deserves attention, in addition to the remedies commonly used, since it will often be found to correspond in a remarkable manner with the totality of the symptoms.

In other cases there appears to be "something more than a simple inflammation of the Schneiderian membrane, since it either secretes a very tenacious mucus in extreme abundance or becomes coated with a false membrane, which sometimes extends even to the tonsils and palate. Cases of this kind are usually associated with extreme depression of the vital powers, and have received on this account the name of *Coryza maligna*. I have no doubt of their identity with diphtheria, of which they constitute the form known as nasal diphtheria."—*West*. In addition to the *Kali bi.*, those two more recently proved remedies, *Cubebs* and *Arum triphyllum*,* will be suggested to the homœopathic practitioner, to whom the totality of the symptoms of each case is everything, while the name by which the disease may be designated is of small account.

Where the coryza tends to become chronic, and to maintain itself in spite of the indicated remedies, we must look still deeper into the

* *Hahnemannian Monthly*, vol. ii., pp. 213 and 459.

nature of the case, if not before, since this very disposition to persistence evidences some constitutional taint—either scrofulous or worse—which had not otherwise been discoverable. Indeed, chronic coryza, fully developed and established, wants only the intolerably offensive odor of the discharge to become a veritable *ozæna*. This latter will of course consist in an ulcerated state of the mucous membrane of the nares, and may be purely scrofulous in its origin, or dependent upon some more or less remote syphilitic taint in the system. The history of the case and the attendant symptoms will usually show the nature of the affection, and in his diagnosis the physician may sometimes be assisted by observing in spots the minute traces of a characteristic copper-colored eruption. By thus adapting his remedies to all the conditions and symptoms of the case, he may well hope in a short space of time to remove the primary affection of the nasal mucous membrane of the young infant, which if not thus early eradicated will presently extend itself to the adjacent mucous surfaces, and become a much more formidable and intractable kind of disease.

Aconitum. This remedy is frequently introduced at first when there are febrile indications. It will often cut short an attack of catarrh when promptly administered.

Allium cepa. The discharge from the nose is profuse, watery and excoriating, and there is corresponding lachrymation. Violent cough accompanies the coryza.

Ammonium c. Dry coryza, with stoppage of the nose, especially at night, and lachrymation.

Arum triphyllum. Profuse coryza, the fluid discharged being burning and ichorous, making the nostrils and lips sore; feverishness and hot, dry skin. Child picks at itself, even producing raw places.

Calcarea c. This medicine may be appropriately given after Chamomilla when that remedy seems indicated, but fails.

Carbo veg. If the coryza return in the evening.

Chamomilla. When there is a watery or mucous discharge. The child is quieted, and in fact relieved, by carrying it up and down the room. One cheek red, while the other is pale.

Dulcamara. The child gets worse at every cold change in the weather or from exposure to cold air. Dry cough.

Euphrasia. Profuse fluent coryza and acrid lachrymation; the eyes are much involved. Ulceration of the margins of the eyelids.

Kali bi. An invaluable remedy when the discharge from the nose is tough and stringy; sometimes it seems to extend to the throat, and to cause choking.

Mercurius. The nostrils are red, raw and ulcerated. Frequent sneezing and profuse fluent coryza.

Nux v. The catarrh is worse at night, particularly toward morning or in the morning. Through the night the nose is very dry.

Pulsatilla. Coryza much worse every evening, better every morning Discharge of yellowish-green, thick and sometimes fœtid coryza. Worse toward evening.

Sambucus n. The nose seems *perfectly dry* and completely obstructed. Very frequently indicated when the child "snuffles" constantly.

Sticta p. There is a constant irritation in the nose to blow it, but no discharge.

Sulphur. Fluent coryza, like clear water, and very profuse.

Tartar em. Obstruction of the nose, and at the same time much rattling in the bronchia.

Bronchitis.

The term Bronchitis is employed to express an inflammation of the bronchial mucous membrane. It is also known as *Catarrh, Catarrhal Fever* and *Bronchial Catarrh*, and is a disease of very common occurrence among infants and older children, especially during the spring and winter months.

The acute form of bronchial inflammation, that which is generally understood by bronchitis, is confined to the larger bronchial tubes, and displays at first considerable fever, upon the subsidence of which the catarrhal secretion may make its appearance as a critical discharge. This form of disease is the one which oftener attacks children apparently robust, and in some—whose constitutions are far from being so good as they seem—the disorder runs a very rapid course, and is succeeded by a mucous secretion, dangerous in proportion to its abundance, and abundant in proportion to the plumpness and apparent heartiness (and real weakness) of the child.

The disease results from exposure to a low or damp temperature, or from a sudden transition from heat to cold or from cold to heat; sometimes it appears to prevail epidemically. The style of dress adopted by mothers for their children is likewise a fruitful cause of bronchitis. It is distressing, and at the same time absurd, to see the tender infant exposed to cold and inclement weather clad in such insufficient garments as to render it liable to "take cold" at any moment—garments which its parents would consider entirely insufficient if they would take the trouble to compare them with their own ample and comfortable clothing. Sometimes also it appears as a com-

plication of epidemic eruptive fevers, especially measles. It commences with the ordinary symptoms of cold in the head, such as sneezing, running at the eyes and nose, hoarseness, cough, dry, hot skin and accelerated pulse. In fact, a severe attack of bronchitis usually consists in an extension into the air-passages of inflammation originally commencing in the form of influenza. The child cries when it is put to the breast or attempts to swallow; it is disturbed by frequent fits of coughing, which is at first short and dry, but soon becomes wheezing and rattling; and it appears oppressed with tightness of breathing. In mild cases slight mucous râles are heard, which increase with the extension of the inflammation. As the inflammation extends more and more through the ramifications of the bronchia, assuming then the form of *capillary bronchitis*, the febrile symptoms become more developed and the skin burning, hot and dry; the pulse is rapid; there is considerable restlessness, panting of the breath, tossing of the head about from one side to the other, flushing of one or both cheeks, the cough being constant with little or no expectoration, and on putting the ear to the chest sibilant or whistling with harsh mucous or sub-crepitant râles are heard at different parts, proving the extension of the inflammation throughout the whole chest. The symptoms are aggravated toward evening, the child having been comparatively comfortable during the day. This evening exacerbation is due, according to Handfield Jones, "to a lowering of the nerve-power, the vaso-motor nerves partaking of the general debility, and thus allowing dilatation of the arteries, and causing increased hyperæmia of the affected parts, with more abundant exudation." As the disease subsides, the respiration becomes more free and the cough loose and easy, the sound of the cough itself being the only guide in this respect in young children, since the phlegm is always swallowed. When the disease occurs in the most acute form, the catarrhal symptoms are frequently absent and the attack sudden; on the other hand, a low form of sub-acute bronchitis, which has originated in a slight catarrh or influenza, often constitutes a protracted and dangerous variety of the disease.

Bronchitis arising from an extreme and sympathetic irritability of the mucous lining membrane of the air-passages constitutes a very distressing complication in measles. In such cases, where the cough is dry and almost spasmodic, incessant, accompanying every breath, with imminent danger of congestion, *Ipecacuanha* has given immediate relief. In the severer forms of acute bronchitis the subsidence of the primary fever is succeeded by a profuse secretion of (tenacious)

mucus, which chokes the bronchial tubes and effectually excludes the air from a considerable portion of the air-cells and blood-vessels. The little sufferer is in great danger of perishing in such cases from slow suffocation. The countenance becomes livid, the extremities cold and lead-colored, drowsiness supervenes, which may be followed by coma, convulsions, and finally by fatal asphyxia. To the above description of bronchitis—drawn principally from Leadam—it may be sufficient to add that this disorder in its initial stages may be distinguished from pneumonia by the external catarrhal symptoms, subsequently by the distressing and paroxysmal nature of the dry and almost spasmodic cough, by the wheezing and whistling sounds, and finally by the very copious, sometimes stringy and suffocative secretion of mucus, which in the third stage of the disorder either concludes it by a favorable resolution, or destroys the patient's life by suffocation.

Capillary bronchitis—the *acute suffocative catarrh* and *congestive catarrhal fever* of some writers—may occur either as an independent disease, or may result from the extension of the primary inflammation of the larger bronchia to the smaller ramifications of the air-tubes. The symptoms are more violent and dangerous than in the ordinary form of the disease. The respiration becomes greatly hurried, and the pulse rises to 150, or even higher; there is an anxious expression of countenance, great restlessness; the cough is very troublesome, and evidently gives rise to pain. "The resonance on percussion is not modified. Auscultation reveals at first sibilant râles, mixed with some mucous rhonchus; but soon a fine sub-crepitant râle is heard over all the lower parts of both lungs behind, and approaching sometimes over the bases of the lungs, the character of crepitus. After a time the sub-crepitant râle is heard over the whole, or nearly the whole, dorsum of the chest, and to a greater or less extent, though not so well marked as behind, over the anterior regions of the thorax. This râle is audible at first both in inspiration and expiration, and is very distinct, but at a later period it is heard only in the inspiration, or there is substituted for it the mucous râle, while the sub-crepitant râle is now heard only in the forced inspirations during coughing or crying. These râles are fugitive and irregular, disappearing or changing from one to the other after fits of coughing."—*Meigs and Pepper.*

This form of the disease usually runs a very rapid course, lasting from five to eight days, although it may terminate in death or restoration to a better condition in a much shorter time. Favorable symptoms are—less frequent and easier respiration, a return of the natural respiratory murmur in parts of the chest, a subsidence of the sub-crepitant

râles, and a diminished frequency in the beats of the pulse. Should the breathing become more and more oppressed and exceedingly rapid, 80 to 90 per minute, with fan-like motion of the alæ nasi, and an increased frequency of pulse, which is small, thread-like and irregular, the case may be regarded as very grave and a fatal termination may be apprehended. As death approaches in fatal cases "the respiration is uneven, irregular, stertorous, and often slower than before; the cough is smothered and less frequent; the restlessness generally diminishes, and the child sinks into quiet, and often becomes comatose; the paroxysms of suffocation are less frequently renewed and less violent, and death occurs in a state of quiet insensibility, or is preceded by partial or general convulsive movements."

Sub-acute and chronic bronchitis usually result from the subsidence of an acute attack. The symptoms vary in severity in different cases, but are usually a mild type of those presented above, the most constant and distressing being the cough and expectoration. And children suffering from these forms of bronchitis are liable, upon any exposure to unfavorable atmospheric influences, to a rousing up of the inflammatory process, which results in an aggravation of all the symptoms, or, in fact, to an acute bronchitis, either simple or inflammatory. Such aggravations, it is claimed, likewise frequently occur in children who are teething at the irruption of every tooth.

Treatment.—It is important that the child be kept in a well-ventilated room, of equable temperature, and free from exposure to draughts and cold. The following remedies should be consulted:

Aconite. When the fever runs very high; hot skin; much distress and great restlessness. When these symptoms are present at the commencement of an attack of bronchitis, Aconite will sometimes cut it short.

Arnica. The child cries every time it coughs, or even before coughing, as though it dreaded it.

Arsenicum. When there is great prostration; restlessness after twelve at night; it drinks little and often; suffocative attacks.

Belladonna. The mucous râles are large and crepitous, hoarse cough; much moaning; moaning at every breath; starting and jerking of the muscles.

Bryonia. Respiration much oppressed; dry, cracked lips; cough worse after drinking; constipation of dry, black, burnt-like looking stools. The child seems to desire rest; every motion seemingly aggravates the suffering.

Calcarea c. Much mucus in the chest. In leuco-phlegmatic children; large and open fontanelles; much perspiration on the head, so that the pillow is wet far around.

Chamomilla. The child is very cross and fretful; one cheek red, the other pale; must be carried to be appeased.

Cina. Vermiculous symptoms prevail, such as picking the nose; nothing satisfies the child; it is always hungry.

Drosera. The fever and the cough—which is very hoarse—are worse after twelve at night.

Dulcamara. The disease has been induced by cold damp air.

Hepar. The child seems croupy, decidedly so, and the phlegm is loose and choking. It chokes in the cough.

Ipecacuanha. Much nausea and vomiting of mucus; the cough is strangling and suffocating, so much mucus seems to be accumulated in the bronchial tubes; it turns blue in the face.

Lycopodium. There is much oppression of the chest, and the *alæ nasi* are seen to dilate or spread out wide, like the large end of a trumpet, and then to contract, alternately.

Nux v. Always worse after four o'clock A. M. Constipation; loss of appetite; cough is very tight and dry, and is sometimes relieved by expectoration of a small quantity of mucus after much coughing.

Phosphorus. Severe and exhausting cough, which the child dreads and avoids as long as possible. The case becomes worse in the evening, and continues so during the night. The fever is often very high and the pulse very rapid.

Pulsatilla. The cough is very loose, and with all the fever there is but little or no thirst. The child gets worse toward evening, and it has more difficulty of breathing when it lies on its side.

Silicia. In children who have large bellies; perspiration about the head; of a scrofulous constitution.

Sulphur. The child has papular eruptions upon its skin; rather inclined to excoriation; much rattling of mucus in the chest; sleeps in very short naps, frequently awaking.

Tartar em. Much thirst; wishes to drink little and often. When the child coughs there appears to be a large collection of mucus in the bronchial tubes, and it seems as if much would be expectorated, but nothing comes up.

Verat. viride. Cough worse in going from warm to cold air.

Pneumonia—Lung Fever.

As an idiopathic disease, inflammation of the lungs is comparatively rare in infants, never occurring, it may be affirmed, except in

those who have a decided constitutional predisposition to such affections. Such predisposition may be traced in little children whose parents, one or both, have suffered with pulmonary phthisis. Infants born from such parents, one of whom may have recently died with consumption, when but a few months old have been observed to fall victims to pneumonia, developed in a very rapid manner and under the influence of scarcely noticeable external causes.

It is not always easy to determine, at the first and with any degree of positiveness, whether an infant is suffering with pneumonia or with bronchitis; nor in fact is it absolutely necessary for the homœopathic treatment, since we carefully select the remedy which is the exact simile of the existing symptoms and conditions; nor will the prescription be properly influenced by our *pathological interpretation* of these symptoms. And indeed in many cases both forms of inflammation, that of the parenchyma of the lungs and that of the mucous lining membrane of the air-passages, run into each other, and the pneumonia of infants is as apt to be asssociated with bronchitis, constituting broncho-pneumonia, as that of adults to be complicated with pleurisy. The *sputa*, alike characteristic in bronchitis and in pneumonia, afford no aid where the patient is either an infant or a very young child, since these little folks never expectorate. The existence of the mucous râle, distinctly confined to one lobe of the lung, and a circumscribed redness in the cheek of the same side, would afford strong presumption of pneumonia. In this latter disease, also, the cough is less violent, though frequent and short, and it is not so much attended with rattling of mucus; there is often a circumscribed redness of the cheek of the same side with that of the inflamed lung, and the child evidently prefers lying on the affected side. Where the pneumonia invades both lobes of the lungs—which, however, may be a successive development—there will be still more evidence of congestion; flushing of the face and hurried and short respiration, and rapidly increasing exhaustion. The history of the case, and its relation to hooping-cough, to influenza or to measles, either of which may remarkably tend to develop such phenomena, will greatly aid in the diagnosis; and the same is true of the previous history of the patient and of his hereditary proclivities.

In pneumonia, at its *first stage*, or *stage of engorgement*, as in bronchitis, the fever comes first, with dry cough; then the fever abates somewhat as the cough becomes more loose and catarrhal. But in no stage of the disease does the cough assume the paroxysmal and almost spasmodic form so often seen in bronchitis, and which results from

the tenacious nature of much of the secretion in this latter disease, and the consequent difficulty of starting it from the bronchia. The first stage of pneumonia is characterized by nervousness, fretfulness and restlessness; constipation of the bowels and sometimes vomiting; redness of the tip of the tongue, the latter coated white in the middle; the child breathes through the open mouth, instead of through the nose; or there is an unusual alternate contraction and expansion of the nostrils—a symptom which should always attract attention to the respiratory organs when seen in young children. He sucks by starts, because he cannot breathe as usual through the nose while nursing; he "seizes the breast eagerly, sucks for a moment with greediness, then suddenly drops the nipple, and in many instances begins to cry."

In the *second stage*, or that of *red hepatization*, the little patient becomes languid, sometimes drowsy; the respiration is more evidently hurried, "the *alæ nasi* are dilated with each inspiration, the abdominal muscles are brought into play to assist in its performance, and any change of posture renders the breathing more labored and more hurried. The cough becomes much more frequent; it is still hard, sometimes evidently painful, so that the child cries at each cough; at other times it is an almost constant short hack." As the disease still advances the bright flush of the face and the florid tint of the lips subside; the body remains very hot, while the extremities may become cool; the face may appear pale and the lips assume a livid hue where the pneumonia is very extensive. The babe becomes still weaker, vomits the food, which it takes greedily from the severe thirst; and finally, through the hurried nature of the respiration, becomes incapable of nursing at all. Percussion reveals a dullness over the seat of the disease, while there is evident diminution of elasticity of the thoracic walls. Auscultation reveals fine sub-crepitant râles, with well-marked bronchial respiration. Death may suddenly occur in this stage from exhaustion or from collapse of the lung.

In the *third stage*, or that of *gray hepatization*, the respiration becomes more labored and *irregular*, though less frequent. The little sufferer loses its voice, or becomes very hoarse and almost entirely incapable of coughing. The face is sunken, the extremities cold, the pulse extremely small, and so frequent as to be almost impossible to count. The child is restless at intervals, or lies in a state of half-consciousness, and suffers very much from dyspnœa on being moved. The face and nails exhibit a livid hue if the disease advances unchecked, and coma and convulsions close the sad scene. Abscesses sometimes form in this stage of the disease, and if they

should discharge into the pleural sac, *pneumo-thorax* would be the result.

During dentition, under the attack of measles and the prevalence of influenza, infants are especially liable to become subject to pneumonia; at such times, therefore, the physician will most carefully scrutinize every symptom which might indicate the onset of a disease that is alike insidious and fatal in the aged and in the very young. The only other form of disease for which infantile pneumonia might be mistaken is incipient hydrocephalus; to this error the vomiting, the fever, restlessness and constipation—which are alike common to both diseases—might easily lead those not on their guard. And this the more especially since, according to Dr. West, to whose work we are much indebted in the above description, the cough in some cases of pneumonia is at first so slight as scarcely to be noticed, and even where it is more strongly marked it might easily be mistaken for the sympathetic cough which is sometimes present in the early stages of hydrocephalus.

Treatment.—The following remedies will generally be found sufficient for the treatment of cases of pneumonia, which usually terminate favorably, especially in children over two or three years old. Consult also the medicines mentioned under the head of *Bronchitis.*

Aconite. If the child has a truly synochal fever, is very restless, with much oppression of the chest and anxiety. It can scarcely cough, the suffering is so intense. Short and rattling breathing; constant cough; almost constant crying, with anxious countenance and great uneasiness.

Belladonna. Face very red and eyes injected. The child moans with every breath. Its skin imparts a burning sensation to the hand. Jerking and twitching of the muscles.

Bryonia. The child cannot bear to be moved, the least movement so greatly increases its sufferings. Dry and parched lips; mouth dry; constipation; fæces hard and dry as if burnt, usually of a dark color. The cough is aggravated by drinking, but the child nevertheless wishes to drink large quantities of fluids.

Lycopodium. Decided flapping or fan-like motion of the alæ nasi; they dilate widely and extremely, and then contract, alternately.

Mercurius. Much fever; thirst; salivation; a profuse perspiration which affords no relief; a great deal of coughing, with great distress.

Phosphorus. Particularly in tall and slender children; cough violent, sounding dry or loose; panting respiration; hoarse toward evening.

Sulphur. In cases attended with pustular eruptions; skin rough and scaly, and other indications for this remedy.

Calcarea and **Hepar** should also be studied, the former in very fat children especially.

Croup.

Croup is an especial disease of little children, and it by no means spares young infants. Strictly speaking, it is an inflammatory affection of the mucous membrane, first of the larynx, and subsequently of the trachea also. Under the general name of *croup* are popularly included two distinct forms of disease—one, the *inflammatory* or *true croup;* the other, the *spasmodic* or *spurious croup*. The inflammatory or *membranous croup* is gradual in its onset and insidious in its character, and unless arrested by the appropriate medication it is pretty certain to terminate fatally. The spasmodic or false croup is not attended with formation of false membrane, and, though much more sudden and violent in its onset, it is far less dangerous in its nature. The true membranous croup has an element of persistence, and the great hoarseness may remain for a long time unabated, as well as the other symptoms, and give the physician much anxiety about the ultimate result, even when improvement is actually taking place as rapidly and favorably as possible. And in no other disease is the triumph of homœopathy over allopathic practice more evident or more grateful than in this. Three-fourths of the cases of membranous croup confessedly perish under allopathic treatment, and no small proportion of those of the spasmodic variety; while those who survive, especially an attack of true croup, have been so barbarously treated with blisters, cups, leeches, purgatives, emetics, *et id omne genus*, that they remain for a long time enfeebled. In the homœopathic practice, on the contrary, a case of croup is very seldom lost, even of the membranous variety, and never, we think, save from want of attention and care on the part of the nurse, failure to call in the physician before the disease has too far advanced, or failure on the part of the physician himself to administer the remedy required by the exigencies of the individual case.

Etiology.—Croup is developed in constitutions predisposed to this disorder by a variety of causes which in other persons might have resulted in simple catarrh or pneumonia. The most frequent cause, however, is exposure to cold and damp. We remember an exceedingly obstinate case of croup occurring in a little boy in consequence of his sitting playing in the damp snow. It has been remarked by

the physicians of Edinburgh that the croup occurs among the poorer classes in that city most commonly on a Sunday or Monday, and they account for it by the fact that the cottage floors are usually washed on Saturday afternoon, and remain very damp. We remember a remarkable case of croup which resulted from a leak in the roof, by means of which the moisture penetrated the ceiling of the child's sleeping chamber after a heavy rain in winter, and rendered damp the papering of the walls in the corner where his bed was placed. Particular states of the atmosphere and wind sometimes seem to favor an epidemic development of croup, and this may be in dry, cold air, as well as in the wet.

MEMBRANOUS CROUP may begin with simple *hoarseness*, followed by an occasional *hoarse cough*, which to uneducated ears has no particular significance, but which to the initiated announces the preliminary stage of this much-dreaded disease. In some cases related by allopathic writers the children thus affected were stated to be already past all hope of recovery while yet able to play about the room! This hoarseness may continue, and the hoarse cough become more frequent, for two or three days before the illness of the child becomes so obvious as to seriously alarm the parent. But usually toward evening these cases become very much worse, yet the next day the child seems so much better the fond mother allows herself to think the danger is past. But the second and third night soon undeceive her, when, if unarrested by the homœopathic remedy, the gradual but sure development of the false membrane threatens to destroy her child with slow suffocation.

In many cases of true membranous croup, however, the symptoms are much more severe from the first. "The child, after retiring to rest, suddenly awakes from his sleep with difficult and wheezing respiration and frequent paroxysms of loud, ringing cough; his skin is intensely hot, his face flushed, and his voice hoarse and indistinct. In general, these symptoms after a short period gradually abate; the respiration becomes more free, the patient falls asleep again, and on awaking in the morning, with the exception of some degree of hoarseness and a slight cough, presents no symptoms of any serious disease; the pulse, however, will, in general, be found to be more frequent than natural, the cough more hoarse and resonant.

"On the ensuing evening the respiration becomes again suddenly difficult, loud and wheezing, and the cough convulsive and ringing, the patient experiences a sensation of impending suffocation, and

carries his hand to his throat, as if to remove the cause of his suffering. His face becomes swollen and flushed, his pulse hard and frequent, and his voice hoarse and almost inaudible." These symptoms become more and more intense, unless the progress of the disease is arrested by appropriate medication, while the remissions become shorter and less distinct. The cough loses its acute ringing sound, while the loud ringing respiration of the patient is heard beyond the apartment he occupies. The dyspnœa becomes excessive; the patient is in a constant state of agitation; his face is swollen and livid, his lips purple, and his forehead covered with large drops of perspiration. The skin becomes cool, the pulse small, feeble and extremely rapid; the thirst is often intense. By the cough, assisted sometimes by vomiting, a quantity of thick, ropy mucus, and even fragments of the false membrane, are expelled. If a tubular portion of the false membrane is thrown off, great relief may result.

Spasmodic or Non-membranous Croup.—In this form of croup the symptoms from the first are much more violent, and the onset of the disease is correspondingly sudden. The patient, who retired to bed apparently in perfect health, is suddenly awakened from sleep with a violent fit of loud, ringing cough; his respiration is loud, wheezing and oppressed, and attended with a feeling of immediate suffocation. As in the former variety, the difficulty of breathing and the cough occur in paroxysms, which as the disease advances become more and more frequent, until there is no longer any remission. While the attack, by its suddenness and violence, announces no small degree of danger, still it gives some reason to hope the case is rather one of the spasmodic than of the membranous form of croup. In the more advanced stages of croup the evidences of the formation of the false membrane become too positive to be denied. Still, the same great symptoms of hoarseness, peculiar ringing cough, and loud wheezing or sibilant (hissing) inspiration, and dyspnœa appear in both varieties of croup, in different degrees of intensity according to the severity and more or less advanced stage of the case.

A brief recapitulation of the *symptoms of croup*—that is, of those common to both forms—will enable the physician the better to recognize the disease and select the simile for each case.

The *hoarseness*, which comes on gradually in the membranous croup, and more suddenly in the inflammatory variety, in either form remains during the remission. The alteration of the voice gives what is recognized as the croupy tone, but this sounds very differ-

ently in different cases. Sometimes it resembles the crowing of a cock or the barking of a dog; in some cases it is hollow and deep, in others screeching, lisping or wheezing; in others again the voice is entirely suppressed as the disease advances, and in some rare instances from the very first.

The *cough* also has various sounds; it may be violent, short, shrill, hacking, afterward crowing, hollow and harsh; it may be simply hoarse, or sound as if the child were coughing into an empty pot or metallic tube. In general the cough is dry, and it is followed by the peculiar sonorous, loud-sounding or hissing inspiration. As the disease advances the cough acquires a husky or even muffled sound, which would indicate the effusion of coagulable lymph.

The *respiration* becomes short and difficult, in paroxysms, with loud and wheezing, hissing and sawing inspirations. As the disease advances the paroxysms become more severe, the dyspnœa more terrible; "the little patients raise themselves up, want to leave their beds, grasp at the larynx in order to remove the obstacle from the throat; they put out their tongues, throw their heads back, and breathe in this way with the windpipe pushed forward; there is an evident endeavor to elongate the neck, and to stretch it upward and backward. According to Heim, this is a sign of membranous exudation having taken place."—*Hartman.* After these violent paroxysms of orthopnœa, the sufferers fall back exhausted, and sometimes sleep.

The later stages of the disease are marked by the blue or livid color of the skin, the result of deficient oxygenation of the blood; swelling of the face and neck from obstructed circulation; and drowsiness, etc. The fever, which from the first is strongly marked, becomes still more intense as the disease advances; there is great thirst, and little or no difficulty of swallowing; while the pulse becomes irregular and rapid in the paroxysms, and more and more faint with the rapidly increasing debility.

There are numerous other symptoms, either common to croup or peculiar to individual cases, which it is impossible, and indeed unnecessary, to enumerate here or among the indications for the various remedies. But the most remarkable and characteristic have been mentioned in either case; so that the practitioner, however inexperienced, need be at no loss to know on the one hand what he has to contend with, or to determine the appropriate remedy on the other. It should be remembered that croup is one of the few diseases in which it may be necessary to awaken the patient in order to give the

medicine regularly, for if allowed to sleep too long at a time the disease makes very great progress. This is, however, principally to be observed by those who use the lower homœopathic preparations. In badly-treated cases there may be noticed sometimes a strong disposition to the development of bronchitis, or even of pneumonia, as the successor of croup, but this will very seldom occur under the homœopathic *régime*.

Treatment.—**Aconite.** This remedy should always be given at the first; it will often prove to be the only one needed, if given right, unless some other remedy is strongly, in fact I might say perfectly, indicated. Aconite will be especially called for if there is a high fever, skin dry, much restlessness and distress. "*Cough and loud breathing during expiration*, but not during inspiration. *Every expiration ends with a coarse hacking cough.*" *

Arsenicum is always to be thought of when there is great exhaustion; the least effort seems to overcome the patient; the child is cold and wants to be covered. The cough is very exhausting, and becomes worse after midnight. The cough is also worse after drinking; is generally dry, but sometimes accompanied with expectoration of frothy mucus. Croup before or after nettle-rash.

Belladonna. If the cough is hoarse, causing the face to flush and the eyes to become red. Is a very useful remedy in croup when these symptoms are present.

Bromine. Spasm of the larynx; suffocative cough; hoarse, whistling, croupy sound, with great effort; rattling, wheezing, gasping; impeded respiration; heat of the face; formation of a false membrane in the larynx and trachea; much rattling in the larynx when coughing. If this last symptom be present more especially, even in desperate cases, Bromine will cure if a cure be possible. It should be given every hour or two, and continued some time if necessary.

Chamomilla. With this unusual remedy I once cured a very bad case of croup, when all other medicines had failed to afford relief and I despaired of the child's life, from observing very strongly marked in this case that characteristic symptom of Chamomilla—the child must be carried up and down the room for relief. I was led to give this remedy, which, much to my delight, was followed by speedy recovery.

Hepar. If there is a rattling, choking cough, becoming worse particularly in the morning part of the night. The croup comes on or

* Dr. W. E. Payne, *U. S. Journal of Homœopathy*, vol. ii., p. 521.

gets worse during the after part of the night or early morning. The child chokes with every coughing spell. Coughs into a choke.

Iodine. Always indicated when there is pain in the chest and larynx. Membranous croup, with wheezing and sawing respiration. If the child is too young to express its feelings, it will grasp these parts with the hand. The child is pale. *Coldness of the face in very fleshy children.* The voice has a deep, hoarse, rough sound. Much mucus.

Kali bi. Croup, with expectoration of tough, stringy mucus. Membranous croup. Especially suitable for light-haired, plump and fat children. The air sounds as though it were passing through a metallic tube. The croup comes on insidiously. Mucus very stringy.

Kaolin. Promises to be a valuable remedy for croup. Cough accompanied by suffocative attacks; the child is very hoarse and breathes with difficulty. It may be tried when other remedies have failed.

Lachesis. This remedy has cured very far advanced and apparently hopeless cases of croup, indicated particularly by *very distressing aggravation after sleeping, as if the child were dying.* Or the child, as it were, sleeps into the croup and awakens with an attack. So long as the child is awake it does very well, but on sleeping the attack comes on or gets worse, and it arouses with a paroxysm of choking, almost loses its breath, and sometimes goes into convulsions.

Phosphorus. When a hoarseness remains after croup, and when there is a tendency to relapse. Gets worse toward evening.

Spongia. The cough is dry and sibilant, or it sounds like a saw driven through a pine board, each cough corresponding to a thrust of the saw. Spongia is particularly indicated when there is no mucous rattle with the croup. The cough is dry and hoarse, and causes pain in the throat, but no mucous rattle.

Tartar e. When there is a sound as if a large quantity of mucus were in the bronchial tubes, while none is expectorated, and there is apparent danger of suffocation. This symptom, as if a quantity of mucus were rattling in the larynx at every coughing spell, while so little is expectorated, is characteristic of Tarter Emetic.

Hooping-Cough—Pertussis.

Hooping-cough is a contagious and frequently epidemic disease, which at its first onset appears as catarrhal, then becomes nervous, paroxysmal, spasmodic and convulsive, and then again catarrhal. It particularly attacks little children, and seldom occurs twice in the same individual. Adults are not always exempt when exposed to its influence for the first time, and it constitutes one of the most dan-

gerous forms of disease to which young infants are liable. At its first appearance this affection is scarcely to be distinguished from a common cold, but when fully developed it is characterized by a convulsive cough in which the attacks, occurring at longer or shorter intervals, are composed of sudden, jerking and noisy expirations, and followed by inspirations anxious, protracted and still more sonorous.

When left to itself and uncomplicated, hooping-cough runs a regular and progressive course, occupying about six weeks in each of its successive stages of development, persistence and decline. But the disorder in each case proves more or less severe in intensity and various in manifestation according to the nature of the individual constitution in which it is implanted. In some instances it takes no very severe hold upon the system, in others it seems to develop organic pulmonary or bronchial disease. In others, again, it more powerfully affects the cerebro-spinal nervous system, and terminates in convulsions, which, arising in consequence of nervous exhaustion, soon destroy what little strength remains.

Like the asthma of adults and the laryngismus stridulus of children, hooping-cough appears to be primarily a nervous affection, which consists in an irritation of certain of those motor filaments of the pneumogastric which supply the organs of voice and respiration. And the profuse catarrhal secretion which appears in its more advanced stage forms a similar crisis in this disorder and in asthma. That this affection is an irritation of the motor filaments, corresponding to neuralgia of the sensitive filaments, and not an actual inflammation of the nerve, may be seen from the severe functional disorders of the parts supplied by this nerve on the one hand, and on the other from the almost constant absence of organic lesion, as proved by numerous *post-mortem* examinations. And, as will appear in the following description of the phenomena of hooping-cough, the nervous affection may at the same time produce, by spasmodic contraction, a temporary occlusion of the smaller bronchial ramifications,* and a still more severe contraction of the rima glottidis.

In spasmodic cough spasm of the glottis forms a constituent part of the affection. At the onset of the attack "there is a feeling of contraction and oppression of the chest, during which the patient generally seizes hold of some firm object; at times there is nausea, and then attacks of cough supervene, the expiration occurring in jerks, and in a more or less rapid succession, introduced or interrupted by a sudden

* Laennec, *Diseases of the Chest*, p. 101.

inspiration with a lengthened sound. The respiratory muscles act tumultuously, the abdominal muscles are drawn in and rigid, the trunk is bent forward. At times there are convulsive movements of the extremities and startings of the whole body. Suffocating attacks are more violent and threatening the less the patient exhales. The impeded transmission of the air shows itself in the absence of the vesicular murmur, as well as in the phenomena attending a disturbed state of the circulation—viz., lividity of the tumid face, congestion of the eyes, and ecchymosis between the conjunctiva and the sclerotic, hæmorrhage from the nose, the cavity of the mouth and the bronchia. The cough is dry, and a little viscid mucus is expectorated with difficulty. After a duration of from two to five minutes the paroxysm, which often consists of two fits divided by an interval, ceases; it generally terminates with vomiting of bronchial mucus and of the contents of the stomach, and at times with syncopic exhaustion. After this comes a period of great repose."—*Romberg.*

As the disease advances the paroxysms become more protracted, severe and exhausting; the infant becomes black in the face, and seems to lose its breath entirely; and the characteristic whooping sound with which the attack commences, which appears so frightful to strangers, seems to call the attention of the mother or nurse if the child is for the moment out of her arms. In the decline of the disease the symptoms may become less violently spasmodic and more prominently catarrhal, the catarrh becoming in some cases so profuse as to threaten suffocation. In other cases, from hereditary disposition to such disease, the hooping-cough seems to become complicated with, or to run into, pneumonia. In these cases, instead of intervals of perfect rest and natural respiration between the paroxysms, we find a permanent acceleration of breathing, shortness of breath and dyspnœa, the characteristic symptoms presented by auscultation or percussion, a livid hue of the lips and cheeks, incapacity for exercise or exertion, and loss of strength.

Hooping-cough is not a dangerous disease *per se*, but it is liable to become complicated with certain other affections which may add to its severity, and indeed lead to a fatal termination, and this is particularly true when the cough occurs in weakly and cachectic children. The chief of these complications of hooping-cough are—convulsions, collapse of the tissue of the lungs, bronchitis, pneumonia and emphysema, while tuberculosis is a not infrequent sequent of the disease, leaving the little patients in miserable health, early to fall victims to consumption. Hence, hooping-cough is a disease requiring

nice and discriminating treatment. Unfortunately, the want of success of the allopathic school in cutting short the disease has led the people to regard hooping-cough as an evil that must be endured without remedy, except that afforded by time, and hence too many cases are neglected.

In children who are naturally predisposed to cerebral disease the tendency of the hooping-cough may be to assume a still more strongly marked convulsive form. According to Watson, "when the disease occurs within the first two years of life it is usually attended by convulsions, and many more die within those periods than afterward." And it is in this direction especially that the homœopathic treatment will be found remarkably valuable. The remedies greatly moderate the violence of the disorder, even if they do not at once remove it, and by thus shortening its paroxysms, and rendering them less frequent and severe, the little patient's strength is saved. And the remedies carefully selected to meet the particular indications of each individual case, at the same time that they preserve the strength as much as possible, and prevent the disease from assuming its most violent form in general, hinder also its particular development and complication in new forms of pulmonary or cerebral disorder. In the treatment of this affection, therefore, the homœopathic physician should not expect to find in any remedy, however highly lauded, a complete specific. Still less should he seek to compel the disorder to succumb to the massive doses of any such remedy. Let him be satisfied to prescribe for his patient, and adapt as accurately as possible the remedy to the existing conditions. A little extra pains taken in this direction in the first visit in ascertaining the totality of the symptoms, and in finding the true *similimum* for them in each case, will save him a world of trouble in the end. In some epidemics of hooping-cough the remedy which is thus found suited to the *genus epidemicus* in one instance may also apply in other cases, but not absolutely in all, since always and in every instance the medicine must be made to suit the individual patient rather than the general form of the prevailing epidemic disorder.

Aconite. If a constant febrile condition seems to prevail, or if the patient grasp at his throat with every cough, as if he were in pain. In first stage, dry and hacking.

Arnica. Every coughing spell is announced with crying; the child not only cries during the coughing spell, but before its accession, as if in dread of it. Bloody expectoration.

Arsenicum. When there is great prostration, with waxy paleness and coldness of the skin. Expectoration of frothy mucus, often accompanied with suffocative spells. The cough is excited by drinking.

Belladonna. The child gets very red in its face with every coughing spell, or the cough has produced such congestion as to cause the sclerotic to appear extremely reddened. Sneezes after coughing.

Bryonia. Cough worse after eating or drinking, with vomiting of the ingesta; cough excited by the slightest motion. Lips are dry and parched, and the child wishes to drink large quantities of water.

Carbo veg. Great exhaustion after every coughing spell, with blueness of the skin, hot head and face. Relieved by *hard* fanning.

Causticum. A dry cough remains a long time; it does not get entirely well. Especially adapted to feeble, delicate children.

Chamomilla. The cough is dry; the child is very fretful; must be carried in order to appease it; one red cheek.

Chelidonium. When a very loose, rattling cough remains a long time, and does not improve any more.

Cina. The child picks its nose much, or gets perfectly rigid in every coughing spell; ravenous hunger.

Coccus cacti. Every coughing spell is terminated by spitting of large quantities of ropy mucus.

Conium. When violent fits of coughing occur, mostly through the night; the cough is always worse during night.

Coralium rub. In some forms of violent spasmodic cough. "Firing minute guns of short, barking cough, all day, and for half an hour or so toward evening increasing to a violent spasmodic paroxysm." *

Cuprum ac. With every paroxysm, the child coughs itself into a cataleptic fit; it appears as if it were really dead. Much mucous rattling before each paroxysm. Long-continued paroxysms of suffocative cough. The child wishes cold water after every coughing spell, and seems to be relieved by drinking the water.

Drosera. When the child is worse, particularly after twelve at night, with high fever; cough in violent spasmodic spells as if it would suffocate; sometimes bleeding at the nose and mouth.

Dulcamara. The child is made worse by the changes of the weather from warm to cold, or by exposure to cold, damp air.

Ferrum. Vomiting of the ingesta after every cough; not so profusely as in a Bryonia case, neither is there the parched lips and thirst, but there is more pallor and weakness.

Hepar. When the cough seems complicated with croup; worse

* Dr. Richard Hughes, *Brit. Jour. of Hom.*, No. ci., p. 501

toward morning; the cough sounds croupy, and it seems as if the patient would choke with the cough; or choking cough without having a croupy sound. Coughs into a choke.

Hyoscyamus. The cough is always worse as soon as the child lies down, and is relieved by sitting up.

Ipecacuanha. Strangling with the cough till blue in the face. Much mucus in the chest. Nausea and vomiting with the paroxysms.

Kali bi. Choking cough and spitting out tough, stringy mucus, which sticks to the throat, mouth and lips, and hangs down in strings from the lips.

Kali c. Sacculated swelling over the eyes in light-haired children.

Lachesis. The child always awakens in a coughing fit; it seems very faint and weak.

Mephitis p. In some forms of spasmodic cough this remedy is a specific in many cases.

Mercurius. The child sweats very much at night, and bleeds at the nose and mouth with every coughing spell. Either by day only, or by night only, it has always *double coughing spells*, which are separated by an interval of perfect rest.

Nux v. Hard dry cough, with constipation; worse after four o'clock A. M. The child becomes blue in the face, and bleeds at the nose and mouth.

Phosphorus. Much hoarseness; almost total loss of voice from the effects of the cough. Worse toward evening.

Pulsatilla. Cough very loose, with vomiting of mucus; diarrhœa; worse at night.

Sepia. The cough is always much worse in the morning, when it is loose, and terminates in an effort to vomit or in real vomiting. This termination of a paroxysm is characteristic of Sepia.

Silicia. May be useful in vermiculous subjects, in whom Cina does not answer.

Sulphur. There are frequent relapses without any known cause, or where the cause consists in exposure to cold in scrofulous subjects. Sulphur is a specific in a sort of suppressed cough—dry, suppressed and choking, without the cough being pronounced.

Squilla. During the cough the child sneezes, waters at the eyes and nose; the child constantly rubs its eyes, nose and face with its fists during the cough.

Veratrum. After every fit of coughing the child falls over exhausted, with cold sweat on its forehead.

Laryngismus Stridulus—Asthma of Millar.

Under the names of Asthma of Millar, Thymic Asthma of Kopp, Laryngismus stridulus, Child-crowing, Spasm of the Glottis, Spasmodic Croup and False Croup, different authors have described an affection peculiar to infants and very young children, which is not indeed very common, but which for this reason, from its apparent resemblance, is apt to be confounded with croup.

The difficulty consists essentially in spasm of the glottis, which impedes respiration and occasions *sonorous dyspnœa*. "Spasm of the glottis occurs in paroxysms of varying intensity, according as the glottis is partially or entirely closed. The milder attacks are characterized by a short attack of dyspnœa, difficult and often sonorous inspiration, as in apnœa, accompanied by restlessness and anxious expression of the face; such attacks are at first often unnoticed, as the health of the child does not appear affected in the intervals. A trifling mucous rattle in the larynx sometimes precedes. In the more violent paroxysms the apnœa approaches to suffocation, and the respiration is interrupted for seconds, and even for one or two minutes. The eyes are wide open and staring, the face becomes livid and cadaverous, the alæ nasi and the muscles of the neck act violently, the arms are stretched out and rigid, asphyxia appears unavoidable, when at last the air penetrates with jerks and with a sonorous tone, and the paroxysm closes with a fit of crying and sobbing." * These attacks may terminate with a loud sonorous inspiration, or by a long, deep-drawn inspiration, with a crowing noise. This particular mode of termination will be seen to be characteristic, and diagnostic of this affection from croup, in which no such distinct remission of the dyspnœa can be recognized, at least not in true membranous croup.

Dr. Ley, in his very able treatise on this disorder,† gives the following still fuller résumé of its symptoms: "The essential symptoms, then, of laryngismus stridulus are, sudden attacks of breathlessness from partial or total obstruction to the admission of air into the windpipe, varying according to the degree of closing of the glottis, and commonly succeeded, or at all events attended, by a sonorous inspiration. Where the closure of this chink is not perfect the child struggles for its breath, the respiration is hurried, the countenance generally bluish or livid, the eyes staring, and each inspiration is attended with a crowing noise; where it is more complete—and this

* Romberg, *Diseases of the Nervous System*, i., p. 331.

† *An Essay on Laryngismus Stridulus*, by Hugh Ley, M. D., London, 1836.

state at the commencement of the paroxysm, according to my observation, is much more frequent—the function of respiration is entirely suspended for a while; there is an effectual obstacle to the admission of air, the child makes vehement struggles, by some termed convulsive, to recover its breath; at varied intervals, from a few seconds up to a minute, or, upon some occasions, nearly two minutes, air is at length admitted through the glottis, now partially open, and this rush of air, passing through a very narrow chink, produces the peculiar sound. To these symptoms not unfrequently succeeds a fit of coughing or crying, which terminates the scene; or, if the glottis be not even thus partially open, the child, at the end of from two to three minutes, at the utmost, will die of asphyxia; pallid and exhausted, it falls lifeless upon the nurse's arm, and it is then that the child is generally said to have died in a fit.

"In the violent struggles for the recovery of the breath to which I have alluded all the muscles supplied by the respiratory system of nerves are thrown into violent action; the eyes are often involuntarily rolled upward by the agency of the trochlearis; the muscles of the face are expressive of agony, or occasionally convulsed; the head is thrown back by the muscles supplied by the spinal accessory nerve; the serratus magnus is in violent action; the diaphragm and abdominal muscles contract vehemently, and even the extremities are rigid. With all this, however, the face is commonly pallid, and has that lurid tinge denominated cadaverous, and the external veins, tinged with highly carbonized blood, form long streaks upon the forehead and temples, which continue long after the cessation of the paroxysms."

The cause of this terrible malady was long but imperfectly understood. Dr. Ley, whose description of "child-crowing" we have already quoted, published his very learned and able monograph in 1836. In this he attributes the malady to pressure exerted by enlarged bronchial glands upon the pneumogastric and recurrent nerves. This opinion he founded upon actual *post-mortem* examinations, and he illustrated it by five lithographic engravings from these morbid specimens, which show the nerves thus flattened and compressed by such enlarged glands. Dr. F. Barrier of France, writing in 1844, attributes the disorder to pressure exerted directly upon the air-passages.* Laennec, writing in 1808, says inflammation of the bron-

* "Bien que nous partagion l'opinion de M. Blache, qui attribute au spasme de la glotte la dyspnée decrite par des auteurs Anglois et Allemands sous le nom d'asthme thymique, nous dirons plustard qu'il nous repugnerait point de placer la cause de cet asthme dans la compression exercée par le thymus hypertrophié sur les voies aeriennes."—*Traité Pratique des Maladies de L'Enfance*, par F. Barrier, D. M., Paris, 1845.

chial glands is very little known, and appears to be very rare. He speaks of tuberculous affection of these glands, particularly in scrofulous children. Louis, in 1843, says of the bronchial glands, "These bodies very frequently undergo tuberculous transformation, not only in children in whom all accurate observers coincide in regarding the transformation of these organs as even more frequent than that of the lungs." And he states that the compression of the trachea and bronchi, causing difficulty of breathing and swallowing, impeded circulation, and even fatal hæmorrhage, is far from being a rare effect of their enlargement.*

Dr. Marshall Hall states that the disease may arise from affections of the centre of the excito-motory system. He regards it as "an affection of the excito-motory or true spinal system of nerves, producing in mild cases partial closing of the glottis and difficult inspirations, while in more severe cases the spasmodic disposition extends to other parts of the body—to the eyeballs and to the flexors of the fingers and toes."

From a careful study of the different descriptions of the disorder under consideration, which has indeed a great variety of designations, but which is commonly called laryngismus stridulus, it will appear that on the one hand the symptoms are so various that they are almost capable of being distinguished into two or three different diseases, and on the other it will appear also that the causes are no less various in their seat and mode of action. Thus, again, we have on the one hand the *paralysis of the trunk of the vagus and its branches,* resulting from the swelling and induration of the parts exerting pressure upon them: "its conducting power is frequently impaired by scrofulous affections of the cervical and thoracic glands, and especially of the bronchial glands;" and on the other hand *spasm of the glottis,* which has very similar results, although under somewhat different conditions. That is, it is more apt to occur *in early infancy;* the attacks of spasm of the glottis more frequently appear at night, on awaking from sleep, or from any sudden movement or exertion; they may often be traced to hereditary predisposition. This form of disease is more frequent in the city than in the country; in those who are brought up by hand or prematurely weaned, instead of being nursed; and in many cases it may be seen to result, in some way, from the influence of the first dentition. In a note to one of his lectures Dr. West thus speaks of this disorder: "There is a form of spasmodic affection of the larynx which, under the name of thymic asthma, has attracted considerable

* *Researches in Phthisis,* Syd. ed., pp. 91 and 92.

attention among continental writers. The spasm of the glottis, which is the most prominent symptom in this affection, is supposed to be due to the pressure of the hypertrophied thymus upon the larynx, and the consequent irritation of its nerves."

There can be no doubt that the several forms of dyspnœa more or less variously described under the different names above given are due to pressure exerted by the cervical glands, by the thymus gland, or by the bronchial glands, in a morbidly enlarged and indurated condition, either upon the nerves, upon the bronchia, or directly upon the larynx. But whether in any particular case they act by producing direct spasm of the glottis, through pressure upon the bronchus or larynx, irritating the peripheral extremities of their nerves, or whether they cause paralysis, by pressing directly upon the vagus or one of its branches, the physician must determine for himself from the study of the symptoms present. Sufficient has been here stated to lead him to a careful study of his case; to realize that he may have to contend, not so much with a temporary or accidental affection, as with a disorder of a most important function—a disorder resulting from some deep-seated, even hereditary dyscrasia, which may have been developing itself in those obscure glandular structures, and which only reveals itself to his observation in its secondary consequences.

Hypertrophy of the thymus gland is no doubt the most frequent in earliest infancy, and this morbid condition may have originated even before birth. The corresponding enlargement of the thyroid gland occurs later in life, and constitutes the disorder known as *goitre* or *bronchocele*.

Arsenicum. If there is much thirst and restlessness.

Belladonna. The face and eyes are very red; the head is very hot.

Gelseminum. Sudden and severe attacks of dyspnœa, with crowing noise, profuse perspiration and darkly flushed face.

Ipecacuanha. If much nausea prevails, or there is much strangling as if from mucus.

Lachesis. The paroxysms recur as often as the child gets into a sound sleep.

Laurocerasus. If the spells seem to be excited by some abnormal condition of the heart.

Moschus. In cases similar to the above, but not so violent.

Phosphorus. This remedy may be called for in some cases of very tall, slim children.

Sambucus n. The child suddenly awakens, nearly suffocated; sits up in bed and turns blue; gasps for breath, which it finally gets; the spell passes off; it lies down again in bed, but to be aroused sooner or later in the same manner.

Stramonium. If the child seems quite delirious, does not know where it is; as soon as it can speak it constantly calls for papa and mamma, although they may be at the same time present and trying to console the child.

In chronic cases, such as may be supposed to arise from enlargement of the cervical or bronchial glands, study *Calcarea c.*, *Jodium*, *Iodide of Mercury* and *Spongia*.

Atelectasis Pulmonum.

The term atelectasis—derived from the Greek *ατελης*, imperfect, and *εχτασις*, expansion—is used to express a condition of the lungs occasionally met with in infants, in which portions of them remain in the fœtal condition, having never, from some cause or other, been penetrated by air. This condition may be due to the circumstances attending the infant's birth, such as exposure to cold or to a vitiated atmosphere; the casting off of the placenta before the establishment of the respiratory act, and a consequent lowering of the vital forces, etc. But the disease is usually congenital, and may be due to debility of the infant in consequence of imperfect nutrition in utero, or to the diseased and debilitated condition of the mother during her pregnancy from phthisis, typhoid fever or other exhausting disease, or from disease of the father, such as syphilis, which is calculated to impress itself upon the child in the form of imperfect cell-development.

The following are amongst the most constantly present of the *symptoms* that indicate the presence of atelectasis pulmonum: "The child comes into the world feeble and weak, and instead of crying vigorously and loudly the moment or very soon after it is born, it fails to cry at all, or the cry is low and weak, or it is whimpering or wailing; the color, instead of being brick-red or dark red, is pale and whitish, leaden or livid; the muscular movements, which in healthy children are strong and vigorous, are in these languid and slow, or there are none or scarcely any, the limbs being relaxed and motionless. If the breathing is observed, it is found to be short, high and imperfect, and it is evident that the thorax is but imperfectly dilated at each movement of respiration. When these symptoms exist in a very marked degree, the infant either dies soon in a state of asphyxia, or, the muscular force slowly increasing, the respiration gradually im-

proves, and the child is, after a longer or shorter time, either out of danger, or it falls into the same state as that of one in whom the symptoms have been from the first less severe. Under the latter circumstances the infant continues feeble and weak. It breathes shortly, rapidly and imperfectly, but often without any appearance of labor. The cry is rare, and when heard is low and feeble, or there is a constant plaintive moan, which is very characteristic and strongly expressive of exhaustion, with each respiration. The color continues pale and whitish, or it is bluish, and the temperature of the extremities is lower than natural. The child sleeps the greater part of the time, and is unable to nurse or nurses very feebly, but can swallow when food is poured into its mouth."

In favorable cases and under proper hygienic and medicinal measures these symptoms, after lasting a few days or a few weeks, begin to improve, and the child assumes a more natural hue, breathes more freely and with less difficulty, and begins to nurse. In unfavorable cases the respiration becomes quicker and more imperfect, the evidences of insufficient oxygenation of the blood become more marked, it ceases to swallow, muscular twitchings set in, and the child either dies in convulsions or sinks into a condition of syncope, and thus ends its life. Dr. Rees of London, in an essay on atelectasis, calls attention to the peculiar movement of the ribs during respiration, and regards it as a characteristic symptom of the condition of the lungs: "During the inspiratory effort the ribs are seen to move inward toward the mesial line of the trunk, instead of outward as in ordinary respiration, thus diminishing instead of expanding the transverse diameter of the thorax. The explanation of the altered movement is as follows: When the diaphragm descends the lung ought to expand in such a way as to fill up the increased space produced in the thoracic cavity by the descent of that great muscle. Instead of this being the case, however, the lung is collapsed and inexpansive, and cannot enlarge sufficiently to fill up the space alluded to, so that there would remain a vacuum in the chest were it not that the thoracic walls are driven inward by the pressure of the atmosphere upon their outer surface."

Treatment.—In treating a case of atelectasis very much will depend, in securing a successful result, upon hygienic measures. Everything should be done that will have a tendency to improve the general health of the infant and to increase its ability to breathe. The room in which the infant is should be at all times of a temperature of about 75°, thoroughly ventilated, and the child should be warmly clothed and

covered. Perfect rest or at most very gentle motion is very important. It has been recommended that the infant should lie upon its right side, with the head and shoulders elevated at an angle of 45°. The nourishment of the child is of great importance. If breast-milk of good quality can be obtained, and the child is too weak to suck, the milk should be drawn by means of a pump and given to the babe, frequently and in small quantities at a time. This failing, diluted cow's milk—one part milk to two parts of water—may be used.

Consult the following remedies:

Acon. Great difficulty in inspiring; very restless and distressed; easier with its head and shoulders raised to a sitting posture.

Bell. Face bluish-red, or alternating with a very pale face; eyes seem injected; respiration seems painful; much whining and crying; the child seems afraid to breathe.

Bry. Color of the face is of a bluish-red; great difficulty in inspiring, seemingly as if the lungs could not expand, and the child is *evidently easier* when lying down and when kept very quiet.

Camph. Bluish color of face; the child's surface feels very cold; rather more difficulty in making an inspiration; very great debility; better when lying down.

China. Face very pale; the trouble all seems to be from the loss of blood.

Cuprum. Color of the face bluish; difficulty of respiration; much rattling of mucus, and rather inclined to spasms, which are first seen in the fingers and toes and extremities.

Hyos. Bluish color of face; great difficulty in inspiring; must be raised up; all the muscles of the body and face incline to jerk and twitch.

Phosph. Color of face is very changeable; the child is hoarse; long and slender in its figure.

Spong. Face reddish; crowing respiration; *no* mucous rattle; *must be raised up* to be able to breathe.

Tart. emet. Very pale face; more difficulty in expiration; head hot and sweaty; rattling of mucus, more in the throat-pit.

Verat. Face bluish; much exhaustion; cold perspiration on forehead or other parts of the body; almost pulseless.

Consult also remedies for Apparent Death, Laryngismus stridulus, Croup, Catarrh, Bronchitis and Pneumonia.

CHAPTER XXXVII.

DISEASES OF CHILDREN—CONTINUED.

Scarlatina—Scarlet Fever.

SCARLATINA is an epidemic and contagious exanthemata, characterized by a high degree of continued fever, a scarlet rash, and inflammation of the tonsils and mucous membrane of the mouth and pharynx. It forms the most terrible and fatal scourge of infancy and childhood. Its highest mortality is said to occur during the third year of life, and under the old-school treatment entire families of children have been swept away. The homœopathic treatment of this much-dreaded disease renders it far less fatal. In fact, from all but the more malignant forms of scarlet fever the danger of a fatal termination seems almost wholly removed. Still, the cases of this latter variety, and even others of less original severity, require for their successful treatment the utmost patience and skill on the part of both physician and nurse. This is due in part to the unsteady and even treacherous nature of the disease itself in the severer cases, and to the serious complications which may arise during its progress, and in part to the sequelæ which may change an apparently favorable convalescence, even in milder cases, to a new and still more dangerous form of disease.

Scarlet fever has usually been divided into three varieties—*Scarlatina simplex*, *Scarlatina anginosa* and *Scarlatina maligna*. But this difference in degree of the severity of the disease, whether confined to particular cases or extended to epidemics, is of little practical value. A more simple classification consists in a twofold division—viz., *Scarlatina Sydenhami* and *Scarlatina miliaris*. Perhaps the best classification of all would be into *mild* and *grave* cases, according to the degree of severity of the attack and the character and extent of its concomitants and complications.

The scarlet fever of Sydenham, the true Belladonna scarlet fever of Hahnemann, is now comparatively rare. But it is important to distinguish it when it does appear from the more common scarlet fever, if for no other reason than because the prophylactic use of Belladonna, so strongly recommended by Hahnemann and proved so wonderfully efficacious in the former variety, is of no avail in the latter form. The true scarlet fever of Sydenham, the *Scarlatina*

lævigata, or smooth scarlet fever of some authors, runs a comparatively regular course, and is much less disposed to strike in and occasion dangerous metastases than is the other variety. This latter and more common form of scarlet fever is at once more insidious, more treacherous and vastly more dangerous than the former. In its severer forms it is always impossible to tell how much more of the malignant element may yet remain behind and waiting for the favorable moment—of convalescence even—for development; and in the milder cases we know not what an hour may bring forth; the eruption, apparently well out, may suddenly recede without apparent cause, and the most critical and alarming symptoms replace a condition which had been encouraging and satisfactory.

Scarlet fever is the popular name of a disease which is developed from an epidemic and infectious poison. Children who have not had the disorder will rarely escape taking it from visiting a house where it prevails, or even where it has recently prevailed; and children in houses miles away from any others, with no direct communication, are stricken down with the disease, the infection being conveyed by the wind for long distances across the country. This disease consists, then, in the development of a peculiar poisonous miasm, principally upon the skin, where the eruption forms a salutary crisis of the fever. With this development upon the *skin* there may also be a development upon the *mucous membrane*, which becomes more or less deeply and extensively involved in proportion to the malignancy of the morbid influence by which it is caused; and finally, failing this sufficient development upon the skin, in the fauces, nostrils, etc., or deserting the skin, the disease may attack the meninges of the brain, producing convulsions necessarily fatal unless relieved with the utmost promptitude. As a consequence of the ravages made by this disorder in the system—ravages which are dreadful just in proportion to the amount of pre-existing psoric dyscrasia which the scarlatina poison finds and with which it unites itself—all the latent psoric miasm in the system is developed, and there results a post-scarlatina dropsy or some form of "scrofulous" disease.

Symptoms.— *Vomiting* or nausea is very frequently the first symptom which indicates the onset of either variety of scarlet fever; and we think a malignant form of the disease, and especially of the *scarlatina miliaris*, may be apprehended when the vomiting is very severe and persistent. In other respects, the more generally the eruption is developed over the entire surface of the skin the less apt is the throat to become seriously affected; for in all but the worst cases the disease

thus seems in a measure to expend itself upon the exterior surface; while the mucous surface, the throat and nostrils are apt to become the seat of the development of the disease in proportion as it fails to be sufficiently developed upon the skin. And yet in the malignant forms of the disease the eruption involves the entire surface, and in the worst cases assumes a livid hue, while the fauces and nostrils are affected to the extent of ulceration, putrid exudations, gangrene, and sloughing of the swollen and compressed portions of the tonsils, etc. This is the old *scarlet fever and canker-rash*, or *Cynanche maligna*.

The *fever* which forms the continued crisis of the eruption is characterized by being steady and almost uninterrupted in its course, gradually increasing till the eruption is well out; continuing with little or no abatement during its continuance, and in favorable cases gradually subsiding as the eruption itself gradually fades away. The pulse also maintains a corresponding uniform height, showing scarcely any of the decline and aggravation, day and night, which is common to true synochal fever. Many of the other symptoms, as the nervous restlessness, may be relieved by the accession of the eruption; but the fever itself holds on its steady course of intensity, until at the full term the appearance and continuance of the efflorescence gives place to its decline. And even then, in badly managed cases, instead of sensibly abating, the fever may take a fresh start under the typhoid form.

The *eruption* in the smooth variety is a mere blush of efflorescence, a redness of the skin which, beginning about the face and neck, gradually spreads over the whole surface of the body and of the extremities. This full development of the eruption is only arrived at by the third day, and a similar redness may be seen in the mouth and fauces, and even in the nostrils. The eruption in *Scarlatina miliaris*—the more common form of the disease—gives a perceptible roughness of the skin, and a sensation as if its surface were covered with minute granules. This is caused by an enlargement of the cutaneous papillæ, and is more evident on the extremities and front of the body.

On the fourth day the eruption is at its height; and even after the rash has extended pretty generally over the surface of the skin, it will come out much more fully and assume more and more the boiled-lobster appearance, both in color and in the sensation of roughness which it imparts to the applied hand. On the fifth, sixth and seventh days the eruption declines, first remaining stationary a day or so, or commencing very gradually to fade away. In favorable cases the

decline corresponds to its original mode of appearance, but in the reverse order, gradually disappearing in a uniform manner, and from the extremities first. Next succeeds *desquamation* of the cuticle, a process which often occupies many days before it is completed. It generally commences about the seventh day, though it may begin either earlier or later. It usually occupies ten or twelve days, but may be greatly prolonged. During the stage of desquamation the urine becomes more abundant, pale, and has a faintly acid reaction. *Albuminuria* is also frequently observed during desquamation—more frequently in fact than during the eruption. Scarlet fever is a very uncertain and treacherous disorder. All may be going on well when at once some untoward change, some unlooked-for and dangerous symptoms may arise. Sudden fading away of the eruption in different parts of the body, its partial recession, its premature decline or increasing lividity—symptoms which may occur in apparently favorable cases, but which are more apt to appear in the malignant forms of the disease—will necessarily awaken the greatest anxiety, and the remedy should be at once most carefully selected to meet the imminent danger.

The *tongue* affords some very characteristic indications in scarlet fever of either variety, since, as will subsequently appear also in the fauces, the mucous membrane develops an appearance corresponding to that of the external skin. We give Dr. Watson's concise description of what, in different degrees of intensity, may be always seen in this disorder: "The appearances of the tongue in scarlet fever are also peculiar and characteristic. In the scarlatina *simplex* and *anginosa* it is often covered at the outset with a thick white, cream-like fur, through which are seen projecting the red and exaggerated papillæ, the edges of the tongue being likewise of a bright-red color. The red points gradually multiply, and the white fur clears away, and at length the whole surface of the tongue becomes preternaturally red and clean and raw-looking, and after becoming thus clean, as well as red and rough, and like a strawberry, it will sometimes, when the disease goes on unpromisingly, get dry and hard and brown, as you know it is apt to be in certain species and stages of continued fever." In the milder as well as in the severer cases of the disease the tongue and fauces should always be inspected at each visit.

The *fauces* present a still more striking resemblance to the eruption on the external surface. If able to speak, the patient will complain of soreness of the throat, and upon examination will be found a greater or less amount of swelling, with redness of the tonsils, uvula and

palate, either smooth and bright red, corresponding to a similar eruption on the skin, or rough and granular, of a darker color or dusky hue, corresponding to the accompanying external scarlet rash. After the first day or two the tonsils and uvula may be seen to be covered with a whitish exudation, or gray, aphthous formations, like false membranes, which, being removed, leave an ulcerated or sloughy surface. The tonsils, uvula and palate are very much inflamed and swollen, but the aphthous or false-membrane-like formation which covers them, although it may extend to the nares, and even in some measure involve the œsophagus, does not affect the larynx; in this important respect differing from the more firmly organized exudations of croup and diphtheria. Frequently, as an accompaniment of bad cases, we have inflammation and swelling of the submaxillary glands and considerable œdema of the surrounding cellular tissue. This enlargement sometimes becomes very great, and of course adds to the already existing difficult deglutition, and, in such cases, where the pressure is great, to difficulty of breathing.

The *skin* becomes dry and hot in proportion to the intensity of the fever; the pulse is quick and hard, varying from one hundred to one hundred and fifty per minute, according to the severity of the case and the age of the patient. The thirst is not remarkable; the appetite is of course lost, and the bowels are usually bound up, or, if they are opened, the stools are observed to be of a much darker color than is natural.

The *temperature* in scarlet fever is not nearly so high as might be supposed, ranging between 100° and 106°. "In thirty cases reported by Ringer (*Med. Times and Gaz.*, Feb. 15, 1862) the temperature remained at the same point throughout the day in the more severe attacks; in slighter ones it fell in the morning and rose during the day, being most frequently at its highest point between two and eight P. M. When the morning remission was marked, it indicated the approach of a favorable termination. The first decided fall of temperature, coinciding with a diminution of the eruption, occurred in the majority of cases on the fifth day, or if not on the fifth day it usually was deferred until the tenth or fifteenth. In these latter cases, however, a fall of varying extent had occurred on the preceding fifth days. After the marked fall on the fifth, tenth or fifteenth day the temperature remains from 99° to 101° for a variable time, coinciding when persistent with continuance of the angina or some one of the other lesions of the disease. If at any time after the complete fall of the temperature there is any considerable elevation again, it indicates the

development of some sequel, either an affection of the kidneys, throat or one of the serous membranes. It is thus seen that the temperature in scarlatina tends to form arcs or cycles, usually of five days' duration."

The preceding account of the natural history and principal and most characteristic symptoms of *scarlet fever* has reference rather to those cases of the ordinary severity. In those which run a regular course and terminate favorably, the eruption consumes three or four days in reaching its height, remains apparently stationary a day or two, and then in the course of three or four days more gradually fades away, so that by the eighth or ninth day the period of desquamation will have been reached, and this may consume an equal or still greater amount of time in proportion to the severity of the case. And until this process is entirely completed, and the old cuticle, destroyed by the intense cutaneous inflammation, is replaced by new skin, it will be absolutely essential to have the patient very carefully watched over to guard him from any exposure, which even in comparatively mild cases might be rapidly followed by a new and still more dangerous disease in the form of some one of the various sequelæ of scarlet fever.

In that condition of the disease which has been designated *Scarlatina anginosa* the principal force seems to be expended in the throat. Hence all the throat symptoms are rendered much more intense and painfully severe than in the simpler and more common form of scarlet fever. The general fever, and especially the eruption upon the skin, are much less strongly marked. "Almost from the commencement of the attack soreness of the throat is experienced, attended with difficulty of deglutition, and often with considerable stiffness of the neck, and pain and difficulty in moving the lower jaw, due in part to the swelling of the submaxillary glands. On examining the throat, it is seen to be intensely red, and the tonsils are red and swollen. The swelling of the tonsils increases rapidly, until they almost block up the entrance of the pharynx, and thereby render the attempt to swallow so difficult that fluids are often returned by the nose. An adhesive mucus collects about the back of the throat, and often seems to cause great annoyance to the patient, and specks or patches of lymph form upon the tonsils, and look like sloughs covering ulcers. In some of the severest cases a very troublesome coryza comes on, and an adhesive yellowish matter is secreted in abundance by the mucous membrane of the nares, whence it runs down upon the upper lip, excoriating the skin over which it passes, and causing still

more serious suffering by the obstacle that it presents to free respiration."—*West.*

In addition to these symptoms the *ears* also become affected from the extension of the severe inflammation along the course of the Eustachian tubes; there is very great deafness, followed by copious and acrid discharge from the external meatus. Even the mastoid process of the temporal bone becomes carious.

When the *throat* thus becomes the principal seat of the disease the eruption does not appear so regularly or so seasonably upon the external surface. It is often delayed till the third or fourth day, and generally comes out in scattered patches on the chest and arms. In some cases it is wholly confined to the back of the hands and wrists, and sometimes entirely vanishes the day after its appearance, and reappears partially and at uncertain times. About the fifth or sixth day it begins to decline, following the same order in its decline which it had previously observed in its appearance, subsiding first on those parts which it had primarily occupied. Desquamation of the cuticle follows the disappearance of the rash, unless the latter has been very slight; and the fever and inflammation of the throat begin to abate with the fading of the eruption, though sometimes the sore throat and some degree of fever continue for a week or ten days after the rash has entirely disappeared. All these symptoms, in their severity and persistence, are capable of being very much modified by the use of the appropriate remedy. Our object here is simply to portray the natural order and the progress of the disease when not interfered with, and yet it must be remembered that they naturally present a very great variety, in different persons, as regards their severity and their mode of combination.

In *Scarlatina maligna* all the symptoms may be said in general terms to be simply much more severe than in the milder forms of the disease, the principal distinction being rather of degree than of kind. Still, a brief account of such cases may be useful. The rash is extremely irregular, both in the time of its appearance and in its duration, and also in its extent. It often comes out at a later period of the disease, disappears after a few hours, or suddenly vanishes, to be again and again renewed in the course of the disorder. Its color may be paler than in milder cases, or in irregular patches it may assume a livid hue; in the course of the disease in its worst varieties petechiæ may also appear on the skin. Soon after its first onset "the fever assumes a typhoid form, the heat of the skin is less intense, and there is great disorder of the functions of the sensorium, with small, fre-

quent and often irregular pulse. There is at the same time a dull redness of the eyes, with a dark-red flush on the cheeks; the patient is restless, fretful, and at times delirious; the delirium is sometimes violent, but more generally it is of a low, muttering kind. The tongue quickly becomes dry and brown, or red, dry and glazed, and often so tender and chapped that a slight touch causes it to bleed; the teeth and lips are covered with sordes, and the odor of the breath is extremely fœtid. The throat has a dusky-red appearance; there is not much swelling, but dark incrustations form on the velum, uvula and tonsils, which are not, as has been generally supposed, sloughs, but merely exudations of lymph or false membranes. In some cases, however, there is a gangrenous inflammation of these parts, which are destroyed by the sloughing which succeeds. There is at the same time acrid, excoriating discharge from the nostrils, and a viscid secretion from the fauces, impeding respiration and producing a rattling noise. In severe cases the inflammation extends to the posterior pharynx, which, though not much swollen, is so irritable that on attempting to swallow fluids they are rejected through the nostrils. The inside of the lips and cheeks is frequently covered with aphthæ, and the cervical and submaxillary glands become inflamed, abscesses occasionally forming in them and in the surrounding cellular tissue." In many cases of this malignant form a fatal termination comes on the third or fourth day, the little sufferers appearing to sink under the general malignant influence. Scarlet fever *without the eruption*, in which the entire force of the disorder is expended upon the mouth and fauces, is of no uncommon occurrence; some instances have been known in which those who have thus had the throat affection without the eruption have subsequently had the scarlet fever eruption without the throat affection, the same poisonous influence appearing capable of developing either the one or the other affection exclusively or both together, according to the state of the patient's system. But in this, as in the other forms or varieties of this disorder, the true physician will seek to adapt the individual remedy to the particular condition of each individual patient.

Treatment.—Select the remedy to meet the condition of each individual patient according to the indications given below, and compare also the medicines subsequently indicated under the Various Sequelæ.

Aconite. When there is much distress, restlessness, heat, thirst and sleeplessness; the rash is not smooth. Aconite relieves the excitement

of the system, both nervous and sanguineous, and at the same time promotes the development of the eruption. Miliary rash, of a darkish hue; there is evidence or expression of fear. The patient does not wish to be alone; red face, which turns pale on rising.

Ailanthus gland. The rash is of a *brown* appearance and is miliary, covering the entire body or appearing in patches here and there; well-marked delirium; more or less stupor; great debility, the patient being easily exhausted; great thirst, the tongue and lips being more or less cracked; the teeth are covered with a brown slime, or sordes; the skin may be very hot or feel rather cool to the touch; pulse very rapid and small. The color of the rash and the exhaustion are the most characteristic symptoms of this valuable remedy.

Ammonium carb. When the rash continues out longer than the ordinary period, and *there is tendency to gangrenous ulceration* of the tonsils, or enlarged tonsils, of a bluish appearance, and accumulation of much offensive mucus there. The rash is only faintly developed, with drowsiness, stupor, dry mouth and burning pain in the throat.

Apis. At the onset, when there are stinging pains in the sore throat, absence of thirst; the rash is characterized by red spots or points diffused here and there over the body; scanty and high-colored urine; considerable dyspnœa; great restlessness and uneasiness; sudden sharp outcry during sleep; squinting; skin has a bloated, swollen appearance, and may be either hot or cold; the rash may have disappeared suddenly, leaving the above-described red spots or points; general dropsy seems imminent.

Argentum nit. Bluish or blackish eruption, with convulsions, with great restlessness and tossing about preceding every convulsion; emission of a large amount of flatus, which passes off, together with a quantity of greenish slime.

Arnica. In typhoid states, with epistaxis, or hæmoptysis, aggravated by coughing; or when ecchymoses of various colors appear on different parts of the body, or even small boils.

Arsenicum. The rash may be pale or petechial and attended with dyspnœa. The eruption has disappeared too quickly, and there is rapid prostration and sinking, or the throat becomes putrid with the same circumstances as under Aconite. Thirst for frequent sips of water; great restlessness and marked exhaustion after every movement. The surface is usually cool; sometimes there is a cold sweat; the patient does not wish to be covered. Pulse weak.

Arum tri. The lips, corners of the mouth and perhaps the nostrils are raw and bloody, and there is an apparent tendency for this state

of things to increase in depth and circumference. There may also be a profuse (acrid) discharge from the nose. The throat becomes extremely sore and excessively putrid, and the fever very persistent. In such cases (of *Scarlatina maligna*) *the Arum is the only remedy.*

Aurum. Fœtid discharge of mucus from the nose; or for otorrhœa of a similar nature, especially if bones come from the ear.

Baryta c. Where the sore throat is pale, instead of having the bright redness of Belladonna; the submaxillary and parotid glands are swollen and tender; the breath is putrid; the child scrofulous and dwarfish.

Belladonna. In the true Sydenham scarlet fever, where the eruption is perfectly smooth and truly scarlet; or scarlet fever in any form with the following symptoms: Eyeballs red and injected; the skin is so hot that it imparts a burning sensation to the hand; much delirium; the child jumps up in the bed, and often wants to walk about while yet asleep; jerking of the muscles; throbbing of the carotids; bending of the head backward; lips, mouth and throat very red; difficult deglutition; the child moans, whimpers and worries.

Bryonia. The rash does not come out fully—it seems pale; there are frequent attacks of dyspnœa; nausea and faintness on sitting up; constipation; parched lips. There is great thirst; the child grasps the glass and drinks with great eagerness and in large quantities; although somewhat restless, the child is disposed to keep still, because it then feels better. The rash may have receded and left the above symptoms.

Calcarea c. In cases of scarlatina where the temperament is leucophlegmatic, the nose sore and obstructed; the glands of the neck are swollen; slow fever, especially worse in the evening; the child appears pale and languid—does not seem to convalesce. The face seems bloated and free from the rash. The throat is much inflamed, with patches on the tonsils; great anxiety and oppression, as if the lungs were giving out, with loud mucous rattling.

Camphor. Extremities cold and blue; rattling in the throat; hot breath; hot sweat on the forehead, and the child refuses to be covered.

Carbo veg. This remedy should be considered when the soreness of the throat continues after the disappearance of the eruption. Putrid sore throat; *sloughing away of some of the swollen parts of the fauces.* Rattling in the throat; rapid sinking of strength; cold breath; cold extremities, covered with a sticky sweat, yet the child may wish to be fanned.

Chamomilla. The child is exceedingly troublesome, and must be carried up and down in order to be relieved.

China. In cases threatening to become anæmic, with diarrhœa or lienteria and other symptoms of the remedy in a marked degree.

Cina. The child bores with its fingers in its nose; is very fretful, so that nothing pleases it; the urine turns milky on standing; colicky pains; the child is almost constantly hungry.

Coffea. In some cases of extreme wakefulness it may aid in bringing out the eruption, where, from the predominance of the symptoms of nervous excitement over those of sanguineous excitement, it may appear indicated, rather than Aconite.

Colchicum. In cases where there is bloody urine, or urine looking very black and containing albumen.

Conium. In cases where the parotid and submaxillary glands are swollen and *hard as a stone;* the lips and teeth are covered with black crusts; the skin is hot, and the patient delirious or senseless.

Cuprum acet. When repercussion of the eruption or metastasis of the disorder to the brain has occurred, and there are convulsions, vomiting or gagging; face pale and twitching; much restlessness, tossing and turning; stupor and delirium, threatening paralysis of the brain.

Dulcamara. This remedy may be called for when suppression of the eruption has been caused by exposure to cold and damp air, unless some particular symptoms should require another medicine.

Gelseminum. Great nervous excitement; cold hands and feet; crimson flush of the face; the tonsils are swollen and very red; the pulse is very rapid. There is not the heat of surface nor the jerking of muscles indicative of Belladonna.

Hellebore. When a dropsical condition attends the scarlatina, and the urine is scanty and dark-colored, and deposits a sediment resembling coffee-grounds; terrible headache; dilated pupils.

Hyoscyamus. There may be stupidity, drowsiness or vacant staring; indistinct speech, answering no questions; or there may be great nervous excitability, illusions of the imagination, indistinct mutterings; mouth dry and red, inability to swallow; the abdomen is tympanitic; the stools pass involuntarily and unnoticed; rolling of the head from side to side; twitching and jerking of single muscles here and there over the body, indicative of oncoming spasms.

Ipecacuanha. Constant nausea and occasional vomiting.

Kali carb. When the right parotid gland especially is swollen; high fever and restlessness; the symptoms are aggravated about three

o'clock in the morning; dryness of the skin; sacculated swelling above the upper eyelids; stitching or sharp shooting pains.

Lachesis. Scarlatina maligna, with external swelling of the neck and glands, and great sensitiveness to pressure of these swollen parts, so that the slightest touch seems to be perfectly unbearable; even a light and thin cloth cannot be tolerated about the throat; the sore throat and the membranous deposit, if there be any, commence in the left tonsil and spread toward the right; the urine is very dark-colored.

Lycopodium. This medicine is sometimes indicated at the commencement of the disease when the sore throat begins on the right side and spreads toward the left. Stuffing of the nose; rattling in the throat; stupidity; the child is very unamiable on getting awake; it kicks off its coverings and behaves in an angry manner; the eruption is of a dark-red color, and is sometimes found only on the hands, face and back; urine scanty, dark-colored and frothy.

Mercurius sol. The mouth is sore and studded with small vesicles. Ulcerated throat; the mouth and tongue are very moist; dirty-yellow coating on the tongue; the breath is excessively foul-smelling; great thirst; swelling of all the glands of the neck; ptyalism; hawking and spitting; itching and restlessness; the perspiration seems to make the child feel worse.

Mercurius prot. Useful in some cases where the angina is very intense; or where it does not suit to give Merc. sol. or viv., although indicated; or, again, where there has already been an abuse of mercury. It also follows well after Lachesis, after the efficacy of that remedy appears to be spent.

Muriatic acid. The rash assumes an intense redness all over the body, accompanied with great drowsiness; or the eruption may be scanty and interspersed with petechiæ; the face is of a dark-red hue, the rest of the body purplish; great anxiety and restlessness; aggravation of the symptoms in the evening. The fauces have a dark-red, or rather bluish-red, appearance, and are extremely sore; foul breath; acrid discharge from the nose, excoriating the nostrils and upper lip; much sighing and groaning; the patient has a constant tendency to slide down in the bed, getting lower and lower down toward the foot.

Nitric acid. The eruption presents a fine miliary appearance; the skin is very hot; the breathing intermits; the tonsils are swollen and very sore, and there is great difficulty in swallowing; the angina seems to extend up into the nares and nostrils, and a thin purulent matter is discharged therefrom; the tongue is dry and cracked.

Nux vom. The mouth and fauces are full of small and fœtid ulcers;

the mouth is particularly sore, with flow of bloody saliva and difficult deglutition.

Opium. The brain seems to be oppressed; extreme drowsiness; stertorous breathing; vomiting; convulsions, with coma and stertorous breathing continued between the spasms.

Phosphorus. Indicated when the eruption suddenly disappears without apparent cause. It is likewise useful after Muriatic acid, when the chest symptoms become very alarming. The patient seems to sink into an apathetic mood, wants nothing and cares for nothing; nevertheless there is much restlessness.

Rhus tox. When the rash itches violently, and there is much restlessness at night; or when there is an ichorous or thick and yellow discharge from the nostrils, with swelling of the glands of the throat. Rhus becomes especially serviceable in some cases after the third day, when perhaps the fever is still rising or increasing; the tongue gets red and smooth, and the patient becomes drowsy and delirious; must change the position every few minutes, especially during the night; the scrotum and penis become swollen; swelling of the parotid gland, which suppurates and discharges profusely, often on the left side at first, and subsequently on the right.

Silicia. Where there is marked glandular involvement and suppuration. (See indications for this remedy under Scrofula.)

Sulphur. Is especially adapted to children of psoric diathesis who are prone to skin affections. The patient lies quietly, in an unconscious condition, and apparently sleeping. The rash appears faintly, and the skin is sometimes hot and itching; the heat seems to come in flashes, when the clothing is thrown off.

Zinc. Retrocession of the eruption; the child lies motionless and unconscious; involuntary jerking and twitching of the muscles; grinding of the teeth; screaming spells; loss of speech; occiput very hot and forehead covered with a cold perspiration; the face is distorted; body and limbs are cold and of a bluish-red hue; pulse thread-like and difficult to count.

Dropsy after Scarlet Fever.

The most common of the sequelæ of scarlet fever is the dropsy, thence called *post-scarlatinal dropsy*. This affection is remarked to succeed as often to the mild as to the severer forms of scarlatina, and sometimes forms a disorder more dangerous than the original affection.

The dropsy usually appears first in the face, eyelids, hands and

lower extremities, but gradually becomes a complete anasarca, and if not arrested in its progress involves the different serous cavities. In these latter it may cause copious effusion—a condition more or less imminently dangerous according to the particular cavity which is thus affected.

The *post-scarlatinal dropsy* generally comes on in ten or twelve days from the disappearance of the rash, but its approach is sometimes earlier and sometimes later. The appearance of the disorder, in some cases, may be announced by a certain paleness of the countenance, increasing languor, loss of appetite, furred tongue, costive bowels, scanty and turbid urine, and considerable gastric disturbance. But in the majority of cases the dropsical appearance in the face attracts attention before any complaint is made of the other symptoms. The swelling, beginning on the face and hands, may be confined to these parts, but in most instances it gradually extends till the whole body becomes œdematous. A puffy or swollen appearance in the lumbar region, over the kidneys, should be regarded as indicating a very serious form of the disease. So long as the dropsical effusion is confined to the subcutaneous cellular tissue, there is little immediate danger, but when the effusion has taken place into the cavity of the abdomen (*ascites*), into the cavity of the chest (*hydrothorax*), or into the ventricles of the brain (*hydrocephalus*), the danger will be very great, and successively greater in a constantly increasing ratio in these successive states. In the last-mentioned stage of the dropsy, that in which the head has become involved, we find drowsiness, coma or convulsions. These fatal symptoms may result from the simple pressure of the effused fluid in the ventricles upon the cerebral substance, from uræmic poisoning, the result of a suspension of the function of the kidneys, or from the combined influence of both these causes.

The condition and appearances of the *urine* are very strongly marked and important in this disorder. In the milder cases the urine will usually be found albuminous; this condition may be detected by boiling or by the addition of nitric acid. "If the attack be more severe, the urine, which is very scanty, is of a brown or smoke color, deep red or coffee-colored, and throws down a deposit chiefly of a reddish-brown color, which, however, does not entirely disappear when heated, while albumen is present in it in extreme abundance. It is to the presence of the coloring-matter of the blood that this dark hue of the urine is to be attributed, but in some instances blood is present in great abundance, and for a season the case is strictly one of hæmaturia. Usually, though not invariably, the

presence at any time of a large quantity of blood in the urine indicates a very serious disturbance of the functions of the kidney, and forebodes a slow and imperfect convalescence. On the other hand, extreme degrees of anasarca and hæmaturia are by no means generally associated, nor does the complete disappearance of the blood from the urine constantly imply a corresponding improvement in the patient's general condition."—*West.* Urine copious and *red as madder dye* may be a critical symptom of convalescence under the severe and aggravating action of large doses of homœopathic medicines.*

The *causes* of post-scarlatinal dropsy are usually supposed to be found in some undue exposure to the air, or in some similar influence of a change of the weather upon the tender skin. The desquamation of the cuticle itself, by interfering very considerably with the excretory action of the skin—if not for the time totally suppressing it—no doubt throws upon the kidneys a double burden—a burden greater than they can bear; hence the serous accumulations in the cellular tissue, and subsequently in the great (serous) cavities of the body. With this the constitution, as psoric or otherwise, of the individual patient, has doubtless much to do; and since this sequela makes its appearance more frequently after the milder than after the more malignant cases of scarlet fever, it is supposed by some that it constitutes an ultimate and necessary development of the poison, which had not been sufficiently eliminated by the eruption upon the skin and by the accompanying affection of the mucous membranes. But, however this may be, there can be no doubt that in most cases the careful treatment of the original disorder with the appropriate homœopathic remedies—*especially the antipsoric*—will almost entirely remove the disposition to the subsequent dropsy. It should not be forgotten in this connection—and it may be offered in support of the above-mentioned opinion—that the post-scarlatinal dropsy is but an after-part of the original fever in some cases—that some epidemics of scarlet fever are remarkably characterized by a disposition to be followed by dropsical effusion; yet the physician cannot be too particular in explaining the importance of keeping a child convalescing from scarlatina sufficiently clothed to keep it warm, and *insist* upon it that such a child shall be kept from all exposure to cold, damp or draughts of air. Many little ones, recovering nicely from the disease, have been absolutely killed by the carelessness of parents or the neglect of

* See *Am. Hom. Review*, 1860, vol. ii., pp. 337 and 433, for detailed cases of this disease.

physicians in warning them of the dangers resulting from exposure to cold under such circumstances.

Treatment.—This affection, except in the very last stage, when not only has the worst form of effusion taken place, but when even the kidneys themselves have already become disorganized, yields to the homœopathic remedy in the most grateful and admirable manner. This assertion will be seen to be amply sustained by examining the cases reported in the *American Homœopathic Review*, referred to above. The medicine should be carefully selected in accordance with all the symptoms, and, if the true simile be not found among those indicated below, compare also those given under Hydrocephalus, or administer, without hesitation, any remedy called for by the characteristic symptoms of the case, for these latter, belonging exclusively to the idiosyncrasy of the patient, may be different from any before observed in other cases.

Arsenicum. General anasarca of a waxy paleness; thirst for water in small quantities, but very frequent; great restlessness, particularly after twelve at night; much exhaustion after the least effort; undigested stools; sense of suffocation on lying down; palpitation of the heart. Albuminuria.

Apis m. Very scanty urine; waxy paleness of the feet and legs, which are much swollen; absence of thirst; stinging pains here and there over the body; dyspnœa, with feeling as if "every breath would be the last;" the child must sit perfectly erect in order to breathe.

Apocynum cann. General dropsy; hydrothorax; urine high-colored and very scanty; considerable gastric disturbance; pulse weak and irregular. Albuminuria in some cases.

Baryta c. Swelling of the cellular tissue of the neck; also of the submaxillary and parotid glands.

Belladonna. Great paleness of the face, much moaning and grinding of the teeth. Stupidity, half sleeping and waking.

Hellebore. The urine is scanty, and deposits a dark, coffee-ground-like sediment; pain in the back part of the head; dilated pupils.

Kali c. The dropsy commences with a sacculated swelling above the upper eyelids, which continues to characterize the case throughout; the face is enlarged, pale and bloated; the child is worse about three o'clock in the morning. Albuminuria.

Lycopodium. The urine deposits red sand, while the urine itself is clear; it may be red or reddish, however; great commotion in the abdomen from rolling and rumbling of flatus; the child begins to feel

worse about four o'clock in the afternoon, and begins to feel better again about eight in the evening. Albuminuria.

Phosphorus. Urine deposits a gray sandy sediment. The scrotum and penis are enormously swollen, together with general anasarca, which compels the patient to sit erect. Albuminuria.

Pulsatilla. There is much pain in one ear or the other, and some deafness; the urine is very scanty; there is a bad taste in the mouth, and nothing the patient takes has a good taste; the child is worse toward evening and throughout the night. Albuminuria.

Rhus tox. The eyelids present a bladder-like appearance and the child is very restless at night, particularly the last part. The patient is scarcely able to see in consequence of the bloating of the eyelids; great thirst, with dry tongue; general dropsy. Albuminuria.

Squilla. Great desire to urinate, with copious emissions of urine, which is as clear as water; great itching of the eyelids, which causes the child to rub the eyes, producing profuse lachrymation; sneezing and profuse coryza, which sometimes excoriates the nostrils; general anasarca and hydrothorax.

Veratrum. Vomiting and purging, with much prostration.

See also the treatment of other dropsical affections.

Other Sequelæ of Scarlet Fever.

Post-scarlatinal Rheumatism.—Among the most important, although perhaps not the most common, of the sequelæ of scarlet fever should be recorded the *intense painfulness, with swelling of the back of the hands, wrists,* and even of the feet, which sometimes appears as the eruption is going off. The back of the hands and wrists seems to have some especial relation to scarlet fever, for in some cases the original eruption, and in others even the subsequent dropsical affection, are entirely confined to them. This is a very dangerous sequela, unless arrested by the proper remedies, to which, however, it yields with great promptitude, and is thus described by a recent observer: "This (sequela) is seen in the inflammation, shining, swelling, and intense pains in the (wrist and ankle) joints, which sometimes appear as the eruption subsides and desquamation commences. By allopathic writers this is termed scarlatinal rheumatism, and it may be said to resemble simple arthritic inflammation also in its disposition, so much greater in children than in adults, to metastasis to the heart. But it differs from all ordinary arthritic inflammation by an almost equally marked tendency to purulent effusion into the affected joints. This form of disease, though fortunately rather rare, is sometimes

epidemic. Sometimes also it is complicated with great swelling in the neck, enlargement of the sub-maxillary glands, and other indications of acute scrofulosis." * "We meet now and then with secondary inflammation of the joints, which may even go on to the formation of pus. I saw the hand thus affected in a child who died on the sixth day of the disease. The wrist and the back of the hands are the parts usually affected. The symptom is always a very ill-omened one, even though it should be but evanescent," etc.—*West.* "I have several times, when the rash of scarlet fever was disappearing, known pain and swelling of the larger joints to supervene, simulating very closely the local phenomena of sub-acute rheumatism."—*Watson.*

The remedies for this painful affection, especially where it appears by itself as the principal symptom, may be found in *Apis, Belladonna, Bryonia, Lachesis, Rhus tox.* or others, where other complications present.

Neuralgic pains in extremities and other parts.—Study *Lachesis, Colchicum, Merc. sol., Arsenicum, Digitalis, Cannabis, Rhus tox., Gelseminum* and others.

Scrofula, in the form of enlarged and even suppurating cervical and submaxillary glands, in many cases forms an important sequela of scarlet fever. This affection may begin in the course of the original disorder, especially of the anginose variety, or it may be subsequently and more gradually developed. Dr. Condie's description of this affection, as it appears in the course of the scarlet fever itself, with slight modification will apply equally well to its subsequent development in other cases: "One of the most common and remarkable accompaniments of scarlatina anginosa is an inflammatory intumescence of the submaxillary ganglions, which in general presents itself the day subsequent to that in which the swelling occurs in the pharynx. There then takes place a swelling painful to the touch, and sometimes tense and red. The inflammation is at first confined to the glands, but in many cases soon extends to the surrounding cellular tissue, often producing an enormous tumefaction, reaching around the front of the throat from ear to ear, and preventing the jaw from being opened wider than just to permit the tip of the patient's tongue to be protruded. Ordinarily, the swelling is produced by an œdematous condition of the cellular tissue of the

* *Am. Hom. Review*, ii., p. 438.

throat, and quickly disappears as the inflammation of the glands diminishes. Occasionally, however, a suppuration takes place, commencing either in the glands or in the cellular membranes, and an abscess results." Sometimes two, or even three or four, abscesses may be seen running at the same time in the slow convalescence after a severe attack of scarlatina in scrofulous children.

The remedies needed in such cases may be found indicated under *Scrofula* in a succeeding chapter, to which reference may be made.

SILICIA, GRAPHITES, HEPAR, BARYTA C., CALCAREA C., CALCAREA PHOS. and MERC. IOD. may be mentioned as worthy of especial study in this connection.

Otorrhœa may be a very serious sequel of scarlatina. It is due to the inflammation of the mucous lining of the throat extending up the Eustachian tube, and if not cured may result in destruction of the organ of hearing and permanent deafness. Such remedies as CALCAREA C., BOVISTA, PULSATILLA, MERCURIUS SOL., SILICIA and SULPHUR may be studied with advantage. But that remedy should be chosen and administered which bears in its pathogenesis the totality of symptoms presented by the individual case.

RUBEOLA MORBILLI—MEASLES.

In frequency measles constitute the first, and in importance the second, of the eruptive fevers of childhood. Like scarlet fever, this disorder arises from a specific epidemic and infectious miasm, and usually occurs but once. The nature of the miasm itself, as in the case of other endemic, epidemic, infectious and contagious diseases, is by no means satisfactorily settled. A certain mould or *fungous growth* on damp straw or other decaying vegetable matter has been observed to give rise to the measles in newly-enlisted soldiers lodged in barracks. In a similar manner, decaying animal matter—putrescent fish—has been known to cause the severest epidemics of this disorder. In both these classes of cases, in which many lives were lost, the development of the measles as a malignant disorder seems to have been favored by the impurity of the air and low and damp temperature of the climate.* Unlike scarlet fever, this disease is apt to be much more severe when it occurs later in life than when it appears in early childhood. The epidemic character of measles seems also

* Compare Carpenter's *Human Physiology*, Chapter III., and Pereira's *Treatise on Food and Diet*. New York, 1843, p. 43.

rather more strongly marked than that of scarlet fever, and its contagiousness possibly a little less so, for its epidemic influence is much more universal in the districts where it breaks out than is the scarlet fever, and the disease itself is at once much more universal and far less dangerous.

Diagnosis.—From scarlet fever, with which the measles is most apt to be confounded, it cannot always be certainly distinguished in sporadic cases before the appearance of the eruption. But the absence of vomiting (although even this symptom may sometimes precede the appearance of measles) and of the sore throat, and the presence of catarrhal symptoms. such as injection of the sclerotica, coryza, sneezing, hoarse and scraping cough, will usually be sufficient to prevent the inexperienced practitioner from giving a wrong diagnosis, while the prevalence of one epidemic or the other will in most cases greatly assist him in his determination of their nature. In the early stage of the eruption it may be confounded with small-pox, but the papules of measles are larger, softer and less elevated, and have not the shot-like feel of the papules of variola; and in variola there is an absence of the catarrhal symptoms which belong to measles. At any rate, where there is room for doubt it is far better to give a guarded diagnosis, and thus avoid the imputation of ignorance or inexperience which would arise in case of a mistake.

Symptoms.—After a period of incubation of thirteen or fourteen days the eruption of measles makes its appearance; but about the tenth day after the exposure to the infection the *introductory fever* arises. This fever is often severe, attended with lassitude, shivering, thirst, dry cough. "The eyes become vascular and watery, the eyelids heavy, turgid and red. The membrane which lines the nasal cavities, the fauces, the larynx, trachea and bronchial tubes is affected. Hence we have generally as symptoms much sneezing, as well as lachrymation, a copious defluxion from the nostrils, soreness of the throat and an obvious redness of the fauces, and most commonly a dry, hoarse, peculiar cough; so that the symptoms which usher in an attack of measles are the symptoms of coryza and catarrh. In some instances there is diarrhœa also, indicating a simultaneous affection of the mucous membrane of the intestines, and not unfrequently vomiting; but the vomiting, as in small-pox, ceases on the coming out of the eruption." —*Watson.*

The eruption usually makes its appearance on the fourth day, sometimes much later. It comes out first upon the face, whence in the course of a couple of days it extends over the body and extremi-

ties. The eruption of measles consists of a rash made up at first of minute papillæ, slightly elevated, which, as they multiply, coalesce into blotches that have more or less a horseshoe or crescentic shape, and leave the intermediate portions of the skin of their natural color. "On the third or fourth day of the disease the skin begins to be covered with an eruption of small distinct red spots, these first becoming visible about the throat and face. The blotches or eruptions are of an irregular circular or semicircular figure, and continue for the most part distinct from one another. The several spots or points in them rise slightly above the general level, and are felt to be rough and uneven under the fingers." * After about forty-eight hours from its appearance, and by the time it is at its height on the trunk, the eruption begins to disappear from the face, and by the ninth or tenth day it will have disappeared entirely, thus making its whole duration about six days. The desquamation of measles, less constant and noticeable than that of scarlet fever, takes place in minute branny scales, instead of the larger portions of cuticle which are sometimes thrown off after the latter disease. In severe cases of measles, however, as in scarlet fever, the desquamation is more extensive; and in some instances even the *nails of the fingers* are similarly thrown off, and replaced by new growths.

The *cough* often becomes most distressing, violent and incessant, and the fever itself more severe, after the appearance of the eruption; but this aggravation is but temporary, and will readily yield in a short time to the properly indicated remedy; and in favorable cases convalescence may be pretty well established in twelve or fourteen days from the commencement of the illness. The homœopathic treatment, while it may not very materially abridge the natural duration of this or other eruptive disorders, will very greatly moderate the severity of their symptoms, prevent, in a good measure, the accession of troublesome and even dangerous complications, and in almost all cases either entirely preclude the appearance of the usual sequelæ, or render them the occasions of effecting a more radical and permanent improvement of the subsequent condition.

Complications and Sequelæ.—Diarrhœa sometimes makes it appearance upon the decline of the eruption, if it has not existed at an earlier period. This has been regarded as exerting no unfavorable influence upon the convalescence. The mucous membrane of the bronchia affords a seat for the development of measles, corresponding to that of the fauces and nasal fossæ in scarlet fever. Hence the

* *Illustrations of Cutaneous Disease*, London, 1841.

cough, at first dry, but at the last loose, which in greater or less degree accompanies the measles, and whose aggravation, above referred to, forms a most distressing complication. Under the old forms of treatment this irritation of the bronchial mucous membrane was apt to be developed into a true bronchitis. But under homœopathic treatment this tendency may almost always be entirely averted. Pneumonia forms the severest and most dangerous complication of measles, and also the most important sequelæ to be guarded against. The revulsion of the eruption from exposure to cold is always liable to be followed by this result at any stage of the original disorder. And in children of delicate constitutions and scrofulous habit may be observed a strong disposition to pneumonia, no less decided than the disposition to external scrofulous disease which is developed by scarlet fever in the same class of patients. And it may be remarked here, that in attending young people—and by this we mean also those partially and quite grown up—who are attacked with measles, the most sedulous care should be taken lest through its imperfect treatment and unfavorable convalescence this disease should lay the foundation for confirmed ill-health, or even of actual pulmonary consumption. And perhaps this remark may be more applicable to girls and young women than to those of the other sex, although these latter are by no means exempt from the danger. We believe that more cases of this serious "poor health" may be traceable to badly-treated and badly-managed measles than to all the other exanthemata combined.

Rubeola maligna, *Rubeola nigra*, or *Black Measles* may occur either as an epidemic or sporadically. Its existence as an epidemic is not very common, and its cause is inexplicable. The occurrence of sporadic cases of black measles must depend upon some deep-seated dyscrasia of the individuals thus affected. The symptoms usually attendant upon measles assume an exaggerated type, and the whole course of the disease exhibits an adynamic or typhoid and malignant character. There is great feebleness of pulse, general depression and weakness, and difficulty of breathing, and frequently either delirium or stupor. Petechiæ make their appearance, the skin presents a darkened or livid appearance, there is sore throat, bleeding from the nostrils, and sometimes an exhausting diarrhœa or dysentery sets in. The eruption comes out slowly and imperfectly, and is dark-colored or even black, in consequence of the exudation of blood into the papules. This form of the disease frequently terminates fatally; otherwise the prognosis of measles is almost always favorable.

Treatment.—The room in which the patient is confined should be kept at a comfortable temperature, say from 70° to 75°, without excluding fresh air; the patient should be kept as quiet and undisturbed as possible, and the remedy should be carefully selected to meet all the symptoms and conditions.

Aconite. Dry, hot skin; heat in the head, with restlessness. Aconite is the most suitable remedy in a large majority of cases for the fever, the catarrhal symptoms, the cough, even though croupy, and the stomach and bowel symptoms.

Antimonium c. If there be pain in the ears, white coating on the tongue and much vomiting.

Apis mel. Absence of thirst; scanty urine; great restlessness and inability to sleep; stinging in the skin; dyspnœa; the measles do not come out properly.

Arsenicum. When there is much prostration; thirst for water, wishes to drink often, but little at a time; great heat of the skin. Too sudden disappearance of the eruption; pallor; great restlessness; vomiting and diarrhœa at the same time; exhausting cough; the child vomits water after drinking it; worse after midnight.

Belladonna. Difficulty in swallowing; severe coughing spells, causing much redness of the face, constant moaning and drowsiness; evident congestion of the head, with red eyes.

Bryonia. The eruption does not fully develop itself; it appears pale, and there is much dyspnœa and violent cough, or there may be a partial retrocession, with similar symptoms; motion aggravates the symptoms. Vomiting of all nourishment.

Camphor. When there is much coldness and blueness of the skin; the face is pale, the child does not wish to be covered; the eruption does not appear. In these circumstances Camphor will bring out the eruption and relieve the patient. Dysuria.

Coffea. When there is excessive sensitiveness of the skin and of the senses to every impression; weeping, irritability; great wakefulness, and much excitement.

Dulcamara. Retrocession of the eruption from exposure to damp, cold air.

Drosera. Very hoarse cough accompanies or follows the disease, which is worse after midnight.

Euphrasia. There is much lachrymation, coryza and extreme photophobia.

Hepar. Choking and croupy cough, which is worse after midnight or in the morning.

Ipecacuanha. Much nausea; short, hurried breathing. *Incessant and most violent cough with every breath;* this symptom, sometimes frightfully severe in delicate children suffering with measles, Ipecac. relieves like a charm. The measles do not come out properly.

Kali bich. In those rare cases in which the cough is accompanied with tough and stringy expectoration.

Mercurius. The glands of the throat are much swollen, and there is difficulty in swallowing; slimy stools streaked with blood; tenesmus.

Hyoscyamus. When the cough is very racking and exhausting, and is worse on lying down and relieved by sitting up. The rash does not come out well. Much spasmodic action.

Lachesis. The measles do not come out. When the child goes to sleep it is troubled with dyspnœa and cough until it gets awake; there seems to be a struggle between difficulty of breathing and coughing.

Phosphorus. For symptoms indicating bronchitis; violent and very exhausting cough. (Compare Ipecac.)

Pulsatilla. Very loose and rattling cough; lachrymation; photophobia; thick and yellowish coryza; absence of thirst; very bad taste; nightly diarrhœa; the rash is very slow to make its appearance; the child usually gets worse toward evening.

Stramonium. The rash does not make its appearance; the child seems afraid of all objects when first seen, and shrinks from them; inclination to spasms, or the child lies in an apparently natural sleep, with a red face and an occasional raising of the head from the pillow.

Sulphur. The eruption fails to make its appearance, and the catarrhal symptoms become worse, with other Sulphur symptoms.

Treatment of the Complications and Sequelæ of Measles.

DIARRHŒA.—For the diarrhœa which attends or follows the measles, consult *Bryonia*, *Mercurius*, *Pulsatilla* and *Sulphur*. (See *Diarrhœa*.)

BRONCHITIS.—For bronchitis study *Bryonia*, *Ipecacuanha*, *Phosphorus*, *Pulsatilla*, etc. (See *Bronchitis*.)

PNEUMONIA.—For pneumonia compare *Belladonna*, *Bryonia*, *Phosphorus*, *Sulphur*, etc. (See *Pneumonia*.)

RUBEOLA MALIGNA.—In the congestive and malignant variety, which, although very rare, may appear—the so-called *black measles*—compare *Arsenicum*, *Hamamelis*, *Lachesis*, *Phosph. ac.*, *Pulsatilla*, *Rhus*.

Itching of the Skin.—In those cases in which the itching is excessively annoying, study *Dolichos pruriens, Rhus tox* and *Sulphur.*

Roseola—Scarlet Rash.

This disease, which has also been denominated the *French measles* and *Rubeola sine catarrho,* is occasionally epidemic, but is not usually regarded as a contagious exantheme. The eruption of roseola, which is preceded by febrile symptoms, makes its appearance as irregular-shaped patches of a rose-colored hue, and which are unaccompanied by elevations or papulæ. When not epidemic, it seems to depend chiefly upon derangements of the digestive apparatus as a producing cause, though it may likewise be due to sudden changes of temperature, violent exercise, taking cold drinks while the body is warm and perspiring, etc.

The eruption may appear suddenly during the night, and cover the entire body with its rose-colored patches, situated closely together, yet distinct. "In another and rather more violent form, occurring especially during dentition, the eruption appears after vomiting, fever, diarrhœa and slight nervous symptoms, or possibly after slight convulsions, with the characters above mentioned, except that the rash is deeper in color, greater in extent, and that it lasts generally a longer time—two, three, or four days. Again, in a yet more marked form, the *Roseola æstiva* and *autumnalis,* the disease is preceded by certain symptoms which it is important to note. It begins with more or less chilliness, alternating with heat, with loss of strength and spirits, with headache, restlessness, sometimes mild delirium, and even, it is said, with slight convulsive phenomena. At the same time there is some febrile reaction, marked by accelerated pulse, heat and dryness of the skin, thirst and loss of appetite; the digestive function is shown to be deranged by the presence either of constipation or diarrhœa. After these symptoms have continued for two, three, four, or even six or seven days, the eruption appears first upon the face and neck, whence it extends in twenty-four or forty-eight hours to the rest of the body." —*Meigs and Pepper.*

The rash of roseola sometimes bears a strong resemblance to that of measles, and fades away gradually in two or three days; but it sometimes comes and goes for a week or two after the first appearance. Sometimes the rose-colored spots are arranged in the form of rings, with healthy skin within the circumference of each ring. When this phenomenon presents itself the disease has been termed *Roseola annulata.* There can be no very great difficulty in distinguishing this

affection from scarlet fever or measles when the prodromic and characteristic symptoms of these latter diseases are taken into consideration. The *prognosis* is always favorable.

Treatment.—The treatment of roseola is a very simple matter. The child should be kept in a suitable temperature and its diet corrected. Such medicines as ACONITE, BELLADONNA, BRYONIA, MERCURIUS SOL., PULSATILLA, RHUS TOX. and SULPHUR may be administered to suit the presenting symptoms. Consult the remedies laid down for the treatment of Measles and Scarlet Fever.

MILIARIA—MILIARY FEVER.

This eruption consists of clusters of minute red and white pimples, like the smallest millet-seeds, which from being elevated give a rough feeling to the hand. The neck, chest and back are the principal seats of this eruption, which appears in successive crops, and is usually the result of excessive heating of the body. This overheating may be caused by the too great abundance of clothing, or it may be the natural result of the summer temperature.

A slight fever often precedes the eruption, which, however, like the eruption itself, is sometimes quite violent. From measles, which the miliary fever and eruption somewhat resemble, it may be readily distinguished by the absence of catarrhal symptoms, and also by the temporary nature of the affection itself. The symptoms, even in the severer cases, yield very readily to the appropriate homœopathic remedy.

Aconite. Affords prompt relief when indicated by the restlessness, heat and peculiar nature of the eruption.

Bryonia. May be required in very warm weather; the child is better when kept perfectly quiet.

Chamomilla. The child is very fretful, and is relieved by being carried.

Hepar. The eruption comes out in circles. Sepia is also indicated by this peculiarity.

Sulphur. In the more inveterate cases; the skin is rough and scaly.

PEMPHIGUS—POMPHOLYX.

This eruption appears in the form of large *bullæ*—vesicles like blisters—in which a watery fluid separates the cuticle from the skin. It is usually believed to indicate an unhealthy condition of the system; sometimes it shows a disposition to assume a typhoid character, and

in the worst cases it seems to have many features in common with the gangrenous form of infantile erysipelas.

The approach of the disorder is sometimes thoroughly denoted by a livid suffusion, like that of erysipelas, slightly elevated. More frequently, however, the complaint comes on in apparently perfect health. The bullæ or blisters are oval, filled with a yellowish serum, which soon becomes turbid, of a dark brownish-red color, and the bulla either dries up and is transformed into a dark thin scurf, surrounded by a narrow border, or else it breaks, leaving a flat excoriation, which is likewise soon covered with a thin scurf. This eruption often appears soon after birth; sometimes, however, it is congenital. It does not seem to be confined to any particular part of the body, but breaks out behind the ears, on the neck, chest, back, inner surface of the thighs, on the groins, on the extremities, and on the palms of the hands and soles of the feet.

Treatment.—Attention should be paid to the diet, and the digestive organs should be regulated by appropriate medication. One of the following remedies may be administered:

Arsenicum. May be required in the more malignant cases, especially where Rhus seems indicated, but fails to arrest the disease or cure the cachexia by which it is supported.

Rhus t. Where each bulla is surrounded by a red, inflamed base.

Thuya. Cures most all cases, particularly if painful.

CAMPHOR, RANUNCULUS BULB., SABINA or SECALE C. may also prove useful in the treatment of this disease.

BELLADONNA, CARBO VEG. or LACHESIS may be required if the bullæ become darkened from the effusion of bloody serum into them.

VARIOLA—SMALL-POX—VARIOLOID.

Variola is the natural small-pox, as it appears in those who have not been vaccinated. *Varioloid*, or modified small-pox, is the corresponding disease, as it appears in those who are more or less protected by vaccination, by inoculation or by a previous attack of variola. Variola runs through a regular course of three distinct stages: 1, that of *incubation;* 2, that of *development and maturation;* and 3, that of *decline.* Varioloid differs little from variola in the first stage; a severe attack of the former may be a much more dangerous illness than a mild attack of the latter. The principal difference is found in the fact that in modified small-pox the eruption is usually much less copious,

and that it sooner begins to decline. In other respects the two forms of disease may for all practical purposes be considered as identical. Since the infection from the mildest case of modified small-pox is capable of causing the severest form of confluent variola in those unprotected, under suitable circumstances either disease may develop the other. In distinct small-pox, *Variola discreta*, the pustules admit of being counted, being placed at such distances from each other as not to coalesce or run into one another, even when fully matured. In confluent small-pox, *Variola confluens*, the pimples are set so close as to run into each other on the third or fourth day of the inflammation. In general, the latter variety is by far the more severe, and in this consists the only real difference.

Symptoms.—I. *Stage of Incubation and Initial Fever.* The usual duration of the period which intervenes between the reception of the infection of variola and its initiatory development is from twelve to fourteen days. This has been called by nurses the period in which the disease is *breeding*. In some instances, children, and older persons as well, are sensibly affected, and experience a very considerable degree of languor, lassitude and fever during this period; in others no particular inconvenience is perceived.

II. *The Stage of Development and Maturation.* The first part of this period is occupied by the initiatory or eruptive fever. And as it is important to determine, if possible, the onset of this disorder, even before the eruption makes its appearance, we will endeavor to portray this fever in such a manner that it may be recognized, even in cases of children too young to speak of the intense, unusual and long-continued pain in the back, which in older persons at once excites suspicion of this disease. There are three strongly-marked symptoms which precede and accompany the eruptive fever of small-pox in children, and by means of which we think the disease may always be strongly suspected, if not absolutely determined, in advance of the eruption; and these are the vomiting, the coma, and the convulsions. The sickness with which the eruptive fever of small-pox sets in is in general very severe, and the disorder of the stomach often continues for forty-eight hours, during which time vomiting frequently recurs. The cerebral condition is often one rather of stupor than of delirium, although in milder cases this latter symptom prevails. In the severer cases convulsions sometimes take place and continue, alternating with coma, for as long a period as twenty-four or thirty-six hours. The persistence of the vomiting will readily distinguish the case from scarlet fever. Nor is the skin so hot and dry as in scarlet fever.

The stupor or coma, in connection with the vomiting on the one side and the convulsions on the other, will serve to enable the practitioner to distinguish the case from one of incipient cerebral affection, in which indeed there may be even prolonged vomiting, but in which neither the coma nor the convulsions are so rapidly developed. Should there be severe diarrhœa, it is generally regarded as a dangerous complication; constipation generally lasting throughout the disease. There is generally great thirst, with loss of appetite. The urine is scanty and high-colored.

The second part of the period of development of variola is occupied by the appearance of the *papular eruption*. This never occurs in less than forty-eight hours from the commencement of the actual illness, and it may be delayed somewhat longer. These papulæ are at first slightly red, somewhat acuminated elevations, quite minute, and capable of being overlooked in a hasty examination, and yet conveying a distinct sense of irregularity to the finger as it passes over them. "They increase in size, and in the course of forty-eight hours assume a vesicular character, and contain a whey-like fluid, while instead of a conical form they now present a central depression. During another period of forty-eight hours, or thereabouts, these vesicles go on enlarging, their central depression grows more and more apparent, and their contents become white and opaque; they are no longer vesicles, but have become converted into pustules, each of which, if they be distinct, has an areola of a red hue around its base. As the size of the pustules increases they lose that central depression which they had presented while vesicles; they assume a spheroidal form, and even become slightly conical. The next change observable in them is an alteration of their color from a white to a dirty-yellow tint, which they continue to retain until the desiccation of the eruption commences. The *maturation* of the pustules usually occupies from the commencement of the fifth to the commencement of the eighth day of the eruption, or from the eighth to the eleventh day of the disease, when the process of *desiccation* begins."—*West*.

The pustules are generally most numerous on the face, neck and limbs, and less on the trunk than elsewhere. Indeed, the eruption on the face and neck may be of the confluent form, and yet discrete on the chest, abdomen and extremities. In almost all cases of variola, and in severe attacks of varioloid, the mucous membrane of the mouth, fauces and nares is likewise covered with the eruption. It here begins "with more or less vivid redness of the membrane, which is followed by the production of little elevations, the real nature of which, whether papu-

lar or vesicular, seems not to be clearly determined. About the second or third day these elevations assume the appearance of small, whitish, rounded and umbilicated pseudo-membranous points, which last generally about five days, and are then detached, leaving usually a little ulceration or erosion, which heals without leaving a cicatrix. Sometimes the gums become inflamed, swollen and spongy, and there is generally more or less inflammation of the pharynx, with difficulty of swallowing, and swelling and tenderness of the submaxillary glands. When the eruption extends to the mucous membrane of the larynx, which it sometimes does, the voice becomes hoarse and low, and there is considerable hoarse or barking cough. During this stage of the disease the fever generally subsides, if it has not done so before, and the pulse falls considerably in the number of its beats—from 130 or 140 to 100 or 80.

After the eruption has continued for five or six days, and maturation of the pustules is going on in the face and extremities, there is a renewal of the fever—*secondary fever* or the *fever of maturation*—the pulse rises again, and this fever continues for four or five days more, and then gradually declines.

III. The stage of decline and the formation of the pustules into scales generally commences between the sixth and ninth days, and terminates between the tenth and the fourteenth days. It commences upon the face, as does the eruption, and thence spreads to the extremities and trunk, and from the eleventh or twelfth to the twentieth days, and even later, the process of desquamation goes on, the scabs or scales dropping off and leaving red blotches upon the skin, which do not fade for a long time afterward. When there has been ulceration and loss of substance of the derma during the process of maturation, there is left beneath the scale a pit or depression, which is, in fact, a cicatrix—the small-pox pit—and which remains throughout life.

The above description of the three stages of small-pox suffices for the disorder as it almost always appears, but there are many cases occurring during the prevalence of an epidemic of the disease—and this was noticeably the case during the malignant epidemic which prevailed in Philadelphia during the years 1871 and 1872—in which the disease runs an irregular course in any or all of its stages, or is accompanied with phenomena unusual to variola. In these irregular cases any of the stages may be lengthened or shortened, or increased or decreased in the severity of their attendant symptoms. The initial fever does not usually subside, as in ordinary cases, but rather increases, the

pulse being full and reaching to 160 or 170, the skin being hot and dry. The eruption presents in different cases a varied appearance, differing in some cases very greatly from the ordinary variolous eruption. It may be pale, uneven, and destitute of the usual areola. "In other instances the papules and areolæ are of a purple-red color, and the vesicles, instead of being transparent or whitish, are also reddish, and appear to be filled with a bloody serum. The pustules in these cases also contain a sanguinolent fluid, and when broken their contents escape and form bloody scabs. In this variety of the disease, which is called *hæmorrhagic* (*Purpura variolosa*, black small-pox), the papules and vesicles are very small; they are developed slowly, and remain flat and undistended as a general rule, whilst in a few cases they are of a large size, but remain almost always flattened in shape and unfilled." This form of the disease, indicative of a profound alteration of the blood, has a tendency to terminate unfavorably. The mortality from small-pox differs in different epidemics, but it may be stated that in the ordinary form of the disease occurring in patients over five years of age, and who were in a fair state of health previous to the variolous attack, a favorable termination may be looked for, whether the eruption be confluent or discrete. The younger the patient attacked, *cæteris paribus*, the greater the danger. Complications may arise in connection with ordinary variola which may make what would otherwise have been a favorable case assume a very grave aspect. When the disease runs an irregular course, such as has just been described, death very frequently results, and the hæmorrhagic variety, as previously remarked, has a strong tendency to terminate fatally.

Treatment.—The patient should be placed in a *cool and well-ventilated room*, and be sufficiently covered to be kept warm. The diet should be plain, yet nutritious and digestible, and cooling drinks should be allowed plentifully. In the more severe attacks, where there appears to be considerable loss of strength, a yet more nutritious diet may be given, carefully avoiding meat in every form.

Aconite. Is absolutely demanded in some cases, especially in the first and early part of the second stage. There is great fearfulness and apprehension of an unfavorable termination; high degree of fever; great restlessness; especially suited to full-blooded and active children.

Ammonium mur. In cases where the eruption is sufficiently well developed upon the trunk and upper extremities, but upon the lower

limbs it is thinly scattered, out of all proportion. Sore throat, with swelling about the neck; hæmorrhages.

Antimonium c. A great deal of vomiting; the tongue is covered thickly with a white coating.

Apis mel. Apis may be useful in the earlier stages: there are erysipelatous swellings, with stinging pains; soreness of the throat; absence of thirst. It may also be used at a later period, when there are great dyspnœa, to the extent that the patient fears each breath he draws will be the last; great restlessness; scantiness of urine; very annoying stinging in the throat; the pustules seem to be retrogressing.

Arnica. Partially developed eruption, with ecchymosed spots here and there; great restlessness; a bruised and sore feeling is markedly complained of; involuntary stools, passing while the patient is sleeping; the head is hot, while the body is comparatively cool.

Arsenic. Hæmorrhagic small-pox, black small-pox, and in other forms of irregularly developed variola with typhoid tendency; the pustules fill with a dark-colored bloody fluid; the pustules are too flat; the patient is very restless, and yet is greatly exhausted; thirst, but drinking of only small quantities at a time.

Baptisia tinct. Typhoid symptoms; fœtid breath; scales on the teeth and lips; profuse salivation; the pustules appear thickly in the nasal cavities, and in no other part; imagines himself disjointed and cannot bring the pieces together.

Belladonna. This remedy is especially adapted to plethoric, thick-set patients. The patient is dull and sleepy; the skin is very hot; the eruption does not appear; flushed face, injected eyes, throbbing of the carotids, and all the evidences of determination of blood to the head; bleeding from the mouth or nostrils.

Bryonia. Headache as though the head would burst; thirst, with desire for water in large quantities; great nausea, faintness and even vertigo on raising from a recumbent position; dry and parched lips; the patient lies perfectly still, because motion aggravates the pains and other symptoms; a pale eruption may be seen under the skin.

Camphora. Where coldness of surface and collapse set in suddenly; the pustules seem to shrink away at once; the patient does not wish to be covered and is exceedingly weak. The dose must be very frequently repeated until reaction is being established.

Cantharis. Dysuria and bloody urine, with cutting and burning pain on voiding it; very distressing headache and pain in the back; the eruption is not properly developed, or, being developed, assumes the hæmorrhagic hue.

Carbo veg. The pocks fill up with a dark and bloody serum; the breath becomes cold, and there is very great exhaustion and depression of the vital forces. It differs from Arsenic by the absence of the characteristic thirst of that remedy.

Chamomilla. May be required in some cases to allay the fretfulness of the little patient, which is quieted only by being incessantly carried.

China. The pustules fill with a black fluid; exhausting and painless diarrhœa; the child cannot bear to be touched.

Cimicifuga. The muscular pains are unusually and peculiarly severe, partaking of a rheumatic character.

Hamamelis. Hæmorrhagic small-pox, with passive venous hæmorrhages.

Hepar s. c. A croupy cough is developed during the progress of the disease, with choking during each coughing spell. Hepar should then be given as an important remedy, to ward off the threatening complication.

Hydrastis can. When the pustules are dark-colored and there is great prostration; the face is very red, itches and tingles, and there is facial œdema quite marked; the throat is very sore.

Hyoscyamus. Great rage, anguish, delirium, coming on in paroxysms; the patient constantly wants to get out of bed or to be uncovered; the eruption does not come out at the proper time.

Ipecacuanha. The disease is characterized by continuous nausea.

Lachesis. The child's symptoms are all worse after sleeping; it wakens in great distress, becomes more comfortable after getting wide awake, and is worse again after another nap, and so on.

Mercurius sol. Is especially indicated during the stage of maturation. The tongue is very moist; salivation; great thirst; swelling of the tongue; the mucous membrane of the eyes, nose and mouth looks red and raw; diarrhœa or dysentery, with tenesmus, and other symptoms of Mercury.

Phosphorus. Is especially adapted to tall and slender persons. There is a dry and exhausting cough, accompanied with pain or feeling of rawness in the chest; hæmoptysis; weak feeling across the abdomen; the pustules begin to fill with blood.

Phosphoric ac. The pustules do not fill properly; they look like blisters, burst and leave a raw surface. The patient is dull and stupid, cares for nothing, wants nothing and notices nothing. When asked a question in a loud tone of voice, the patient opens his eyes, gazes stupidly and steadily at the questioner, and then answers slowly, but otherwise will not talk.

Pulsatilla. Want of thirst; the patient constantly craves fresh air; changing sensations, the patient feeling now better and now worse; weeping mood; bad taste, the food does not have a good taste.

Rhus tox. The disease is disposed to assume a decidedly typhoid type. The patient is excessively restless, constantly tossing about to find a rest which is only momentary; sordes on the teeth and lips; the tongue is dry and cracked; great debility; the eruption seems to shrink and has a livid appearance; confluent small-pox.

Sarracenia purp. Has been highly lauded as a remedy for small-pox, but no reliable characteristic indications for its administration have been evolved. It is probably overestimated in value.

Secale corn. The patient cannot bear to be covered; is very thirsty; lies very quietly; the pocks have an unnatural and unhealthy appearance, and either fill with a bloody serum or dry up too soon.

Silicia. The stage of maturation is too long-lasting and exhausting; the pustules seemingly do not begin to dry up soon enough, and the stage of desiccation is delayed.

Stramonium. The eruption does not make its appearance; the patient lies quietly in an apparently natural sleep, but always wakes with an expression of fear; the face is red and bloated; there are frequent convulsions; retention of urine.

Sulphur. May be indicated during any stage of the disease, under certain circumstances, to facilitate the appearance of the eruption, the maturation, or the desquamation. It is particularly suitable also if there be threatening cerebral involvement or metastasis to other of the noble organs. The pustules fill with a pale bloody serum.

Tartar em. Nausea and vomiting; thirst for small and frequent drinks of water; the rash is slow in making its appearance; the patient is very drowsy, and vomiting commences again after sleeping. The eruption has been suppressed. The disease assumes a typhoid and putrid type.

Thuya. May be found useful in ordinary cases, after the eruption makes its appearance, especially if the pustules are painful to the touch.

Vaccininum and **Variolinum** have been employed with apparently good results in some cases.

Summary.

When there is hæmorrhagic complication: 1. Bell., Canth., Chin., Ipec., Merc. sol., Phos., Puls., Sulph. 2. Acon., Ant. cr., Arn., Ars.,

Bry., Carbo veg., Cham., Hyos., Rhus tox., Sec. corn., Sil., Stram. 3. Amm. mur., Bapt., Hamam., Hydrast., Phos. ac., Thuya.

When the pustules look dark and bloody: 1. Apis, Ars., Carbo veg., Hamam., Lach., Rhus. 2. Bell., Can., Chin., Hydrast., Phos.

Vaccination.

In performing vaccination, either the cow-pox lymph or humanized virus in the form of crusts is used. In making use of the tubed lymph, slightly scarify the arm by means of the sharp point of a lancet, break the end of the lymph tube and insert into it a fine needle, to the point of which a sufficient quantity will adhere to complete the operation. When humanized crusts are used, a portion of the crust should be moistened with a drop or two of water or glycerine, and the material thus prepared reduced to a creamy pulp by being compressed and ground between two flat pieces of glass. The arm should be scarified as before, or the epidermic layer scraped off, and a portion of the pulp laid over the spot and pricked in with the point of a lancet. Great care should be taken in performing this operation that the scarifications are not made so deep as to draw a quantity of blood, or the vaccination will not succeed. If the vaccination be successful, on the third or fourth day after the operation a small rose-colored blush or erythematous redness will be noticed, and on the fourth day, on running the point of the finger over the spot, a small kernel will be felt. The process then goes on, gradually developing the vaccination until it is completed finally by the falling off of the scab, which takes place sooner in some cases than in others. A dose of *Sulphur* should be given on the fourth day after the operation. If any unpleasant symptoms, such as eruptions—the offshoots of latent psora—are developed, give a single dose of a high potency of *Silicia*. *Psorinum* may be needed, or even some other remedy, according to the presenting symptoms, such as *Graphites*, *Petroleum*, etc.

The first vaccination should be performed as early as the fourth week after birth in favorable cases—that is, if the child is well established in the way of living. In general, it is safer to vaccinate again at the sixth or seventh year, and repeat twice afterward. Vaccination is a true prophylactic against small-pox. It is useless to go into any extended argument to prove this, as the statistics of the efficacy of vaccination are so abundant and convincing as to be entirely irrefutable.

Varicella—Chicken-Pox.

Varicella, or chicken-pox, is a mild, febrile, vesicular eruption. This affection seems to bear a similar relation, though in a far less degree, to varioloid that this latter eruption does to variola itself. If varioloid be taken for a bastard or spurious form of variola, then varicella may be considered a bastard or spurious form of varioloid, but with this difference (and this is the very thing which proves its hybrid nature), varicella is alike incapable of producing either variola or varioloid, or of propagating itself.

Varicella occurs much more frequently in those who have been vaccinated than in others, but its symptoms differ materially in different cases; in some the vesicles, which look like water-blisters or bullæ, desiccate early, the scabs leaving no cicatrices, while in other cases the vesicles are more or less fully maturated, the scabs adhere for a longer time, and leave indelible pits in the skin when they finally fall of. Still, while this disease has been the occasion of much dispute among medical men as to its relation to natural and to modified small-pox, its treatment with homœopathic medicines is at once simple and very successful. Study the following remedies :

Aconite. When much fever prevails.

Belladonna. If there be very red face and eyes, headache, etc.

Coffea. Very much restlessness and sleeplessness.

Mercurius sol. Salivation ; some thirst. The water-blotches turn yellow and maturate ; blisters form in the mouth.

Rhus tox. The eruption assumes the form of spreading blisters, itches very much, and the child is very restless.

Sulphur. The pocks do not heal ; they are inclined to itch and to ulcerate. Hartmann recommends this medicine with reference to the local symptoms.

Tartar e. The eruption fails to appear, and convulsions complicate the case.

Belladonna, Sepia, Dulcamara and *Clematis* should be carefully studied.

Mercurius, Sulphur, Hepar, Graphites, Calcarea and *Sepia* should be carefully compared in cases that degenerate, and where the bullæ change to ulcers.

Erysipelas Neonatorum.

Infantile erysipelas is said to be of very unfrequent occurrence in this country in private practice. Its appearance, when it does occur, is

usually only a few days after birth, in which case it may take its rise in umbilical phlebitis. Sometimes also it is congenital, of intra-uterine origin. It may attack the face, scalp and ears, and even the back part of the neck. In any case, this disorder must be regarded as very dangerous, and by the old school it is set down as almost invariably fatal, even when arising so late as the fourth month.

Symptoms.—The erysipelas may be preceded by fever and other symptoms of constitutional disturbance, but in most cases the first evidence of the peculiar disorder appears in a certain suspicious redness, which, commencing upon the pubes or about the umbilicus, gradually spreads over the abdomen and thighs, the parts occupied by the inflammation being swollen, hard and extremely tender to the touch, as indicated by the movements and cries of the child, who can scarcely bear to be touched. After twenty-four hours a few scattered vesicles make their appearance upon the inflamed surface, with inflamed livid bases, which rapidly terminate in gangrenous ulcerations. "When the redness extends to the hands and feet, these parts acquire a degree of redness and swelling far greater than that of any other part. The genital organs in some cases sphacelate, in consequence of the local inflammation, and in many acquire an emphysematous appearance. In place of appearing upon the pubes first, the erysipelas has been known to extend from the areola of a vaccine vesicle; less frequently from an accidental laceration of the skin, or from the excorations so common in the cutaneous folds of the groin and other parts." Sometimes the disease begins in the form of a dark-red, shining spot, which quickly extends in size and becomes of a purplish color; there is little swelling, but the skin becomes tense and hard. (See Induration of Cellular Tissue.) When the erysipelas commences in the abdomen, vesications, destruction of the cellular tissue and gangrene of the skin quickly follow; the genital parts are not unfrequently destroyed altogether. In such cases the fever is of a typhoid kind, and the whole disorder exceedingly malignant and capable of carrying off the child in a very short time. In this disease, even under its milder forms, it is easy to see that the vital forces are so greatly depressed, and the blood in such a depraved condition, that there is little power or hope of recuperation. Still, much may be done, even in malignant disorders, if we can remove the constantly sustaining cause. Where there is reason to think that the bad state of health of the mother or her general enfeebled condition is the cause of difficulty, the child should be provided with nourishment from other sources. Study the following remedies, and others which may be indicated:

Aconite. When a high state of febrile excitement prevails—a real synochal fever—this remedy alone will prove sufficient.

Apis. When the child screams out suddenly, as if from stinging pains; sleepless nights; the eruption inclines to spread all over the child, or to become gangrenous.

Arnica. When the disorder seems to result from bruises, or from rough handling of the umbilical cord.

Belladonna. The eruption is very red, and extends in radii from a centre; jerking, twitching and moaning; the skin seems to be very hot; delirium; evidences of cerebral involvement.

Bryonia. The inflamed parts seem indurated, pale and tender. Lips dry and parched. The least motion aggravates the suffering.

Graphites. The eruption assumes a vesicular appearance, or it exudes a transparent, glutinous fluid. Or the disease may assume a chronic form, and the child be very costive, with stools large and almost impossible to evacuate.

Kali carb. The symptoms are aggravated at or about three o'clock in the morning.

Lachesis. The affected part assumes a purplish hue; the patient talks deliriously on going to sleep; the erysipelas spreads from left to right.

Lycopodium. Erysipelas which spreads from the right to the left side of the body; the child gets worse every afternoon about four o'clock; red sand in the urine.

Mercurius. In cases of syphilitic origin; salivation; thirst.

Phosphoric ac. When the disease seems to be produced by injury to the periosteum. The child appears to be perfectly apathetic.

Pulsatilla. This remedy is often required when the disease appears about the buttocks, and inclines to spread all over the body.

Rhus tox. The erysipelas spreads, with a red margin; vesicular erysipelas or any other form of the disease; the erysipelas spreads from the left to the right side of the body.

Rhus rad. Phlegmonous erysipelas, spreading in the deeper tissues from below upward.

Ruta may be useful in erysipelas arising from wounds.

Sulphur. Useful in cases of strongly-marked herpetic constitution.

URTICARIA—NETTLE-RASH—HIVES.

The characteristics of this eruption upon the skin are found in the elevation of the patches, and in the burning, stinging nature of the pains, in their dependence upon some recent disorder of the stomach

or heat of the weather, in their usual sudden appearance and frequent equally sudden retrocession. By Dr. Condie urticaria is described as "an eruption of red inflamed patches (they may, however, be like white wheals) irregularly distributed upon different and often distant parts of the body; sometimes small in extent and number, at other times occupying a considerable portion of the skin." This eruption, both in external appearance and in the sensations which it occasions, remarkably resembles that produced by the application of stinging nettle, *Urtica urens*, to the skin. In such cases this medicine will be found capable of affording immediate and very sensible relief to the distress of the little patient. When the eruption seems to be principally brought out by the heat of summer, the warm bath will be found very useful in relieving the intense burning itching.

In some instances the eruption disappears from one part of the body to reappear almost immediately in another and quite distant part. Most cases of urticaria are comparatively trifling and evanescent, but with some appear concomitant symptoms of more gravity, such as burning fever, diarrhœa, etc. These symptoms may be found enumerated under the various medicines.

Mild cases of urticaria go by the common name of *hives* (*Lichen urticatus, essera*).

Aconite. Much fever, restlessness and anxiety.

Apis. Red, inflamed, raised patches, with burning, stinging pains; valuable and curative in many of the severest cases.

Arsenicum. Eruption worse at night, with much tossing. May be particularly suitable when the disorder is caused by unsuitable food.

Belladonna. Red face and eyes; the eruption is also very red; moaning and starting in sleep; head hot.

Bryonia. The eruption has been partially suppressed, so that it looks very pale, and there is oppression of the chest and difficult and rapid breathing.

Calcarea c. The eruption is white and elevated quite above the skin; it is hard and seems to itch very much, causing the infant great uneasiness.

Dulcamara. The eruption appears every time the babe is exposed to the damp cold air.

Hepar. Catarrh of the chest, head, etc. accompanies the eruption.

Nux v. Urticaria accompanied by gastric derangements, constipation, etc.

Pulsatilla. Urticaria with diarrhœa, worse at night.

Rhus t. When rubbing the parts affected seems to increase the eruption.

Sepia. The eruption makes its appearance in the cold air, and disappears in a warm room.

Sulphur. The child appears to suffer from a suppression of the eruption.

Urtica urens. When the eruption looks pale, like the stings of nettles, and requires to be rubbed all the time.

Eczema Capitis—Crusta Lactea—Porrigo Larvalis.

This eruption has been variously named by different authors, being termed *Porrigo larvalis, Impetigo larvalis, Eczema impetiginodes, Tinea muciflua* or *granulata*, etc.

Description and Symptoms.—This eruption is called *larvalis* when it involves the face and covers it like a mask. It usually occurs during teething, and appears to be much connected with that process. It commonly commences on the forehead and cheeks by the breaking out of a number of small yellowish pustules, confluent and crowded together upon a red surface. These pustules excite great itching, and are quickly broken, discharging a viscid fluid that subsequently concretes into thin, greenish-yellow scabs. The scabs are frequently rubbed off, but form again; fresh crops of pustules appear around the scabs, which quickly extend to the scalp and even the face. When the scalp becomes engaged, the lymphatic glands at the back and sides of the neck enlarge and sometimes suppurate. The eruption appears upon or behind the ears, and patches will sometimes appear also upon the neck or breast. The discharge from the pustules is caught by the hair upon the head, and concretes into small, irregular, friable masses, which may resemble the bruised yolk of a hard-boiled egg. The pustules, or *achores*, as the small superficial ulcerations which they form upon the skin are sometimes called, have an acuminated form, contain a straw-colored fluid, rest upon an inflamed base and are succeeded by a thin, brown or yellowish scab. There is much irritation, heat of the scalp and itching; the discharge is very profuse, and with so much itching that it is rubbed off, leaving the surface raw and excoriated. Wherever this discharge is brought in contact with the skin—in the face, where it trickles down, upon the breast, where it falls, and upon the backs of the hands, violently used by the child to rub with—it proves so acrid as to produce there a fresh eruption. The same is true even of the arms of the nurse upon which the child rests its head at night.

The itching and burning acridity of the eruption and discharge are much worse at night. All external applications should be sedulously avoided, even water. The application of water to the parts affected aggravates the case and delays cure. The recession of the eruption should thus be carefully guarded against, since it might be followed by hydrocephalus or phthisis pulmonalis.

Treatment.—Study the following remedies, and any others which may more accurately cover the symptoms and conditions present.

Indications will also be found among these medicines for various other forms of chronic cutaneous disease which have not been particularly described.

Aconite. Where we find much fever, restlessness, anguish, the parts much inflamed, Aconite may remove every vestige of the complaint, if we wait patiently upon its action as long as the improvement continues.

Arsenicum. Eruption very dry and scaly; it even seems sometimes to cause the destruction of the hair in such places as are affected, leaving the scalp rough and dirty-looking.

Baryta c. Particularly when the cervical, submaxillary and parotid glands become swollen and hard, as a concomitant.

Bryonia. In cases complicated with some other affection which is always made worse by motion. The scalp is very tender to the touch; the child cannot bear even a soft brush upon it.

Calcarea c. In children of leucophlegmatic temperament, eruption with thick scales and yellow pus underneath. Stools having a chalky appearance. Sometimes the eruption appears in the form of a ringworm.

Chamomilla. When the child has been kept too warm; it is very fretful; must be carried more than usual.

Cicuta v. Thick, whitish scurfs appear on the chin and upper lip; they secrete a dampness; sometimes scurfs from the nose.

Clematis e. There appears a dark, burning miliary eruption, with violent itching; a dampness constantly exudes from this, which dries into scurfs as the disease spreads onward.

Dulcamara. Indicated in thick brown herpetic crusts on the face, forehead, temples and chin, with reddish borders, bleeding when scratched.

Graphites. The eruption exudes a transparent, glutinous fluid, which causes the crusts to fall off, when more form, to fall again in turn; meanwhile the eruption extends over a still larger surface. It appears

more particularly on the chin and behind the ears, although no portion of the surface is entirely exempt.

Hepar. The eruption spreads by means of new pimples appearing just beyond the main disease, which finally become incorporated with those which came first.

Jacea. Violently itching eruption, worse every night, and urine smelling like cat's urine.

Lycopodium. When the eruption has a bad smell and bleeds very easily; the disease seems to spread from the right side toward the left.

Mercurius sol. Much salivation and scorbutic gums.

Phytolacca dec. Moist, fearful itching, with little raw tubercles on scalp, face and arms.

Psorinum. This remedy should be studied in seemingly intractable cases. Intolerable itching, scratching till it bleeds.

Rhus t. A bright edge of inflammation surrounds every portion of the eruption, and there is much itching, particularly at night.

Sarsaparilla. The entire base of the eruption is much inflamed; the child cries much and is very uneasy; also the crusts become detached in the open air, and the skin adjoining becomes chapped.

Sepia. Eruption very moist, almost constantly discharging pus-like matter; the child often jerks its head to and fro, seemingly from the itching.

Staphysagria. When the scales are yellow, moist, *offensive* and itch violently.

Sulphur. Where the eruption extends more or less over the whole body, with much itching, although the main affection appears upon the head.

Viola tri. Thick incrustations, pouring out a large quantity of thick yellow fluid, which agglutinates the hair.

Pityriasis—Dandruff.

This is a superficial, scurfy, bran-like eruption which appears sometimes on the forehead, but principally upon the hairy scalp of infants. The minute scales, exfoliation of the external cuticle, fall off, leaving temporarily a white surface, to be replaced presently by a similar scurfy formation; this process occurs again and again.

Treatment.—Study the following medicines, as well as those previously mentioned under Eczema capitis. Be careful in cleansing the child's head not to try to wash or rub off the dandruff. Cure the child, and that will disappear of itself.

Arsenicum. Eruption dry and scaly; scurf or scales constantly falling off, often destroying the hair.

Bryonia. When the scalp is extremely sensitive and the dandruff rough and uneven.

Calcarea c. The dandruff accumulates evenly all over the scalp, which is smooth and seems to become thickened. This remedy alone cures the most of such cases.

Dulcamara. Marked aggravations in the child's general symptoms occur with every cool change in the weather.

Graphites. Occasionally there is seen a transparent, glutinous exudation upon the scalp.

Lycopodium. The head smells very badly.

Mercurius. When there are general mercurial symptoms in connection with the dandruff.

Psorinum. This remedy will sometimes be required when Sulphur or Calcarea fails to cure.

Sepia. The dandruff seems to come in circles like ring-worm (annular herpes).

Silicia. This remedy is indicated in cases similar to those cured by Calcarea, but the child has less of the leucophlegmatic temperament.

Sulphur. General Sulphur symptoms with the dandruff.

Nævi Materni—Mother's Marks—Moles.

These spots are congenital, as their name indicates; and they are not only hardly ever amenable to surgical treatment, but have in many cases been rendered much worse by such injudicious interference. Some remarkable nævi reproduce upon the skin of the child while yet unborn the vivid impression made upon the mind of the mother. Another and more profound influence of the same kind, or one exerted in an earlier stage of pregnancy, results in actual deformities and monstrosities. *Nævi materni* may be arranged in three distinct classes, in the order of their gravity:

I. *Moles*, the most common of all, whose character and harmlessness are well known, and which are generally attributed to some alteration in the structure of the rete mucosum.

II. *Venous Aneurisms—Anastomosis of Venous Capillaries.*—These form a dark-red circumscribed stain, which generally appears on one side of the face, and is sometimes of considerable extent. These "marks," which appear to be simple dilatations of the sub-cuticular capillary vessels, may increase in extent till puberty, and then remain stationary.

III. *Aneurisms and Dilatations of the Arterial Capillaries.*—These form the most important of the nævi; they are apt to enlarge in after-life, especially when stimulated by external irritation, and they may give rise to dangerous hæmorrhage if improperly meddled with. They form slightly elevated spots, with well-defined margin and a granular surface, which consists of an erectile vascular tissue. These granulated tumors, raised above the skin, may in fact be constituted of venous or of arterial vessels. In the former case they may be of a dark-blue or livid color; in the latter, of a brighter red.

Treatment.—The following remedies should be carefully studied, in order to find the *simile* in each case: this being found, it should be given sufficiently high and at long intervals, in order to remove as rapidly as possible from the system the morbid condition which sustains these irregularities of the circulation, and to enable nature to remedy the deficiency in structural organization from which perhaps they originally sprung.

If the arterial capillaries are involved:

Belladonna. Will be indicated by red radii extending from the centre.

Calcarea c. In leucophlegmatic temperaments.

Lycopodium. In hypertrophied capillary tumors, both venous and arterial.

If the venous capillaries are involved:

Carbo veg. Particularly when the slightest irritation causes free hæmorrhage.

Phosphorus. "Small wounds bleed much;" this may be either venous or arterial. Study also *Nux v., Sulphur.*

Fluor ac. Most important of all, if they itch much.

ENCYSTED TUMORS.—For these tumors study the constitutional and concomitant symptoms and conditions of the patient, and select that remedy which is homœopathic thereto. The most frequently indicated are: BARYTA CARB., CALCAREA CARB., HEPAR, GRAPHITES, PHOSPHORUS, SILICIA and SULPHUR.

WARTS, WENS.—In the treatment of these excrescences the same plan should be followed as in encysted tumors, and will be found efficient. Amongst the remedies that will be found to be most frequently called for are: CALCAREA CARB., CAUSTICUM, DULCAMARA, LYCOPODIUM, NITRIC ACID, PSORINUM, RHUS TOX., SEPIA, SULPHUR and THUYA. FIGWARTS.—THUYA, LYC., DULC

Cephalæmatoma—Sanguineous Tumor of the Head.

Of the sanguineous tumors sometimes developed upon the pericranium and bones of the head of new-born children, the writer has met with quite a number, and he has always been successful in curing them in a few days with a single dose of *Calcarea c.*, high. Hartman recommends Arnica or Rhus[30].

If there should result an ichorous discharge and caries of the bone and prostration, the same author prescribes *China*, and afterward *Silicia*. But in my opinion *Calcarea c.*, given at the first, will save any further trouble.

Ecchymoses on the surface of the scalp of young infants are the result of contusion of the cranium in parturition. They disappear by absorption, but their removal may be hastened by the application of *Arnica* lotion.

Ranula.

This swelling under the tongue consists in an enlargement of the sublingual bursæ mucosæ, or of a dilatation of Wharton's duct from previous obstruction. The cyst contains usually a limpid or thick albuminous fluid, although there have been instances in which the contents were more solid concretions. The puncture of the tumor, although evacuating the contents, does no good, and should in no case be resorted to. The disease takes its rise in some scrofulous (or possibly syphilitic) dyscrasia, and can only be radically cured by remedies capable of removing such taint from the system.

Ambra g. Is recommended by Jahr.

Calcarea c. Should always be studied in connection with cases of this kind occurring in leucophlegmatic temperaments.

Mercurius. Much salivation. Suspicion of a syphilitic taint.

Natrum mur. In the opinion of Hartman deserves the preference over Ambra.

Rhus t. Has cured several cases under my care—a greater number, in fact, than any other remedy.

Sulphur. May also be studied when it appears to correspond to the disposition of the patient and to the cause of the disease.

Thuya. When the tumor is decidedly of a blue color or complicated with syphilis.

Intertrigo or Chafing.

Excoriation, soreness or *chafing* frequently occurs in those parts of the skin of infants which are either rubbed together in the natural

movements of the limbs, or are liable to be fretted by friction of the diaper or other articles of clothing. Thus, the groins, the surfaces between the genitals and the thighs, between the nates, behind the ears, the axillæ and even the folds of the neck in fleshy children, may become the seat of these excoriations.

Such tenderness of the skin is due in the first instance, in great part at least, to a psoric dyscrasia in the constitution, and for its complete removal it will require, therefore, a suitable antipsoric remedy. But this original disposition to such excoriation will be greatly increased by want of proper attention to the state of the skin, and by neglecting to remove as soon as possible all those excretions from the bladder and bowels, and from the skin itself, which alone are capable of originating such irritations and of causing them to proceed to ulceration. Very fat children are particularly liable to be troubled in this manner. The use of the gum-cloth diaper will also produce chafing, pustular eruptions and other infantile troubles. Physicians should caution mothers against its use.

Treatment.—Directly contrary to the general custom, no powder or other external application should ever be used to keep the skin from chafing. It will be far better to pay strict attention to cleanliness, to wash clean and dry the skin carefully and as perfectly as possible with soft towels, never using the first particle of powder. If the parts become very sore, omit washing entirely; use no external application of any sort whatever, not even dry linen; but with the greatest care select the most appropriate medicines, and do not wash, or wet the part even, till well.

Calcarea c. Will be suitable in leucophlegmatic constitutions; in very fat and fleshy infants.

Carbo v. If there is much rawness of the parts opposed, and a general disposition to excoriation, particularly in very warm weather.

Chamomilla. If the child is very irritable, cries much, and requires to be carried continually up and down the room.

Graphites. The affected parts discharge a quantity of transparent glutinous fluid, especially behind the ears and between the thighs.

Hepar. The intertrigo seems to extend by means of pimples which arise just beyond the raw surface; these become involved in the excoriation, and new pimples appear a little farther beyond.

Lycopodium. The excoriation becomes offensive and bleeds much; worse after four P. M., and better after eight in the evening.

Mercurius sol. The excoriation is much worse at night; it is very raw and bloody; the child does not sleep much.

Pulsatilla or Ignatia may be indicated and are recommended where much chamomile tea has been taken by the nurse.

Sepia. The skin is very delicate; the least injury tends to ulceration.

Sulphur. There is much itching of the skin in general and of the parts affected.

Induration of the Cellular Tissue.

This is more common in foundling hospitals than in private practice. It chiefly attacks the children of persons suffering from impoverished nutrition, and usually appears in the first five or ten days after birth. The infants in whom the induration of the cellular tissue is developed are weakly and often premature, and the difficulty is thought to result from imperfect expansion—*Atelectasis pulmonum*—or from subsequent collapse of the lungs. In many instances a livid redness of the whole surface is obvious from birth, but the appearance of a circumscribed hard spot on one or the other extremity, or on some prominent part of the face, as the end of the chin or the cheek-bone, is the first sign of the commencement of this affection. Other spots of a similar kind are soon discovered on different parts of the surface, and the body generally and the hardened spots in particular are found to present a temperature much below the natural warmth of the body. "The skin which covers the diseased part is slightly rose-colored, or purple, violet, or livid. If the disease runs a rapid course the temperature of the body decreases rapidly, the pulse is scarcely perceptible, the breathing becomes more and more labored, the child's cries diminish and gradually cease altogether; the face becomes livid, and the little ones die as of suffocation, generally on the third day. Sometimes the disease is more chronic, and passes off again from the fourth to the eighth day, but these cases are exceedingly rare, and under the old treatment most children die in a few days."—*Jahr*.

In this country, as in Great Britain, this disease is comparatively rare; its occurrence in the ill-ventilated wards of foundling hospitals in large cities on the Continent, especially in Paris, is more common. Jahr, who seems to have had better opportunity for observing this disease than any other writer of our school, affirms that it is readily cured under homœopathic treatment, and he recommends *Aconite*, *Bryonia* and *Sulphur*, to which may be added *Calcarea c.*, *Conium* and *Dulcamara*.

Induration and Swelling of the Breasts.

The breasts of female infants are liable to swelling, inflammation and induration, or suppuration, in consequence of the absurd practice in vogue with some nurses of squeezing them, on pretence that unless the milk is squeezed out of them they will subsequently prove useless for lactation. Such notions, remnants of old wives' fables and the fruits of erroneous views in physiology, cannot be too strongly discountenanced. But unless the physician is on the watch such things may be done. Such a course of procedure as squeezing the child's breast, should it result in suppuration, as is not unlikely, may, by causing structural disorganization of the gland, produce the very mischief it was intended to prevent. In these cases *Hepar* or *Silicia*, or even *Phosphorus*, may be needed. But the disorder may arise without any apparent cause, such as mechanical injury, and in such instances is doubtless due to constitutional taint thus manifesting itself; just as we see, in after life, when the woman comes to the process of lactation, sore nipples and a gathered breast in spite of the utmost care and the most skillful medication—the cropping out of the latent *psora*.

Treatment.—The disorder must be treated with reference to its cause and to the totality of the symptoms present.

Aconite. If there be much fever at the outset, this remedy may dispel the whole difficulty.

Arnica. If the breasts are merely hard, with no apparent inflammation, or if the redness has not yet appeared.

Belladonna. The inflammation is of an erysipelatous kind; it runs in radii as it extends to the adjacent parts.

Bryonia. The breasts are quite hard, and of a pale red color.

Calcarea c. This remedy will be found indicated in some cases of leucophlegmatic temperament, with very large fontanelles, light, fair complexion; breasts hard, but not red.

Chamomilla. The child is very fretful; it must be carried in order to be appeased; the breasts are very tender to the touch.

Hepar. Will be useful if matter or pus has already formed.

Silicia. This remedy will be needed sometimes after Hepar, particularly to heal the ulceration.

Syphilis Neonatorum.

The syphilis of new-born infants requires the nicest care for its management. The following remedies are mentioned because they

are most frequently called for in the treatment of this saddening affection; but the practitioner should gather together the symptoms and conditions which make up the totality of the case, and select a remedy in accordance therewith; the remedy being well chosen, its action should be continued, and not interfered with by another remedy.

Aurum. If the nasal or palate bones are affected. Ozæna syphilitica.

China or **Phosph. acid.** When the child appears very weak, and has great coldness of the skin.

Hepar. This remedy will be found useful when the mother has been allopathically treated with poisonous doses of Mercury.

Mercurius. When chancrous ulcers appear about the child.

Nitric acid. When the child has aphthæ or ptyalism.

SYPHILITIC OPHTHALMIA.—In this affection may be indicated MERCURIUS, THUYA, NITRIC ACID, CARBO VEGET. and PHYTOLACCA DEC. Study also the remedies under Inflammation of the Eyes.

SYPHILITIC CUTANEOUS AFFECTIONS.—These various forms of eruptive disease require, according to their accompanying symptoms and conditions, NITRIC ACID, HEPAR, THUYA, SULPHUR, PHOSPH. ACID, DULCAMARA and PHYTOLACCA DEC.

CONDYLOMATA.—In their severer form these excrescences present a red surface and hard base, and discharge an acrid, purulent, contagious matter.

Mercurius sol. When there are general mercurial symptoms.

Nitric acid. This remedy may be indicated in some cases where there is evidence of mercurial influence in the constitution.

Thuya. Indicated in a majority of cases.

Phytolacca dec. Itch fearfully.

COMEDONES—ACNÈ PUNCTATA.

These appear like little black points, in consequence of obstruction and enlargement of sebaceous follicles on the nose, chin or forehead. The following remedies may be studied in such cases:

EUGENIA JAMBOS, BRYONIA, CALCAREA C., NATRUM M., GRAPHITES, SABINA, SULPHUR and THUYA.

CHAPTER XXXVIII.

DISEASES OF CHILDREN—CONTINUED.

CYANOSIS.

THE patency of the foramen ovale, or imperfect closure at birth of the opening through which the blood in the fœtal circulation had passed directly from the right heart to the left, was formerly supposed to occasion a partial mixture of the venous blood with the arterial, and hence the cyanosis or *blue disease*. But more recent research has shown that this diseased condition may be due to a great variety of lesions of the circulatory apparatus, especially of the heart and principal vessels, such as obstruction of the pulmonary artery, malformation of the heart cavities, some of which are wanting; transposition of the pulmonary artery and the aorta, etc. A cyanotic condition may likewise result from any cause that interferes with or prevents the proper oxygenation of the blood; as, for instance, in atelectasis pulmonum. The cyanotic hue is frequently seen in croup, laryngismus stridulus and hooping cough.

In cases of cyanosis there is a general bluish or blue color of the integuments, but it is principally marked in situations where the skin is delicate and highly vascular, and in the extremities. The blue tint, when limited to certain spots, is a result of local congestion. A transient blueness of the skin has also been noticed in a few cases in various parts of the surface, but its internal cause is unknown.*

The term chronic cyanosis is used by Virchow to express the general venous congestion which is consequent upon chronic affections of the heart and lungs. Acute cyanosis, he states, occurs in acute affections of the lungs; as, for example, in pertussis. This eminent pathologist affirms, contrary to the opinion formerly entertained, as stated above, that cyanosis, even when produced by congenital malformation of the heart, does not arise from a commingling of arterial and venous blood, but from obstructions to the venous circulation.† This, however, would appear to depend upon the occasioning cause; in some instances, doubtless, it is due to venous congestion, while in others there is a mixture of the venous with the arterial blood; and, again, in a third class of cases there is both venous obstruction and admixture of venous and arterial blood.

* Rokitansky, iii., p. 71.

† *Cellular Pathology*, p. 372.

This affection generally destroys life at an early period, but sometimes the adult age may be reached, with some distress and impaired health. A very large proportion, however, die within a few weeks or months, or at most within a year or two after birth; some such disease as hooping cough or one of the eruptive fevers attacking the cyanotic patient is very badly borne, and is apt to terminate fatally.

Treatment.—An important part of the treatment of cyanosis is hygienic. Good nutritious food, plenty of fresh air, and in older children moderate exercise, will do much to correct the disordered circulation. In cyanotic infants the position recommended under laryngismus stridulus may be resorted to, because the action of the heart may be more free and unincumbered if the child lies upon its right side, with its trunk elevated at an angle of about 45°. One of the following medicaments may prove useful. Consult also the indications for remedies under Laryngismus stridulus, Croup and Atelectasis pulmonum.

Aconite. If at any time there should be much vascular excitement, heat or restlessness, this remedy may be needed; if so, let it act as long as the improvement continues, and it may entirely cure.

Arnica. In cases where there is hæmorrhage from the nose and mouth, and great strangling and suffocation. The case seems almost hopeless. In such cases a few doses of Arnica will do much good.

Arsenicum. The symptoms are much aggravated by the least exercise. Much emaciation; cold sweat; great debility.

Calcarea c. This remedy may be indicated in leucophlegmatic children, with large, open fontanelles; the head perspires very much.

Carbo v. The veins stand out very full, and are remarkably blue.

China. In some collapsed stages, with waxy paleness and coldness of the skin.

Digitalis. The child can hardly be turned or its position changed without causing fainting, or nearly so, and almost always causing vomiting. The eyelids, lips, tongue and nails become *very blue;* pulse unequal, or very slow.

Lachesis. When the suffocating spells and the increased blueness become worse after sleeping. Great tenderness of all the flesh; it is exceedingly difficult to handle the child at all; the least touch seems to hurt it, and to leave a deeper blueness, like a bruise.

Laurocerasus. This remedy, in my practice, has cured permanently some very bad cases of this disorder, with the following indications: A little exercise produces gasping for breath and increased blueness.

The ends of the fingers and toes are knobby, and larger than any portion of these extremities; the child is better when lying still.

Phosphorus. In very tall and slim children, with muel oppression of the respiration and swelling of the feet.

Secale c. In very thin, scrawny children with shriveled skin; especially when there are spasmodic twitchings, sudden cries, feverishness, etc.

Sulphur. This remedy will be found useful in many cases characterized by the real sulphur constitution.

Icterus Neonatorum—Jaundice.

The jaundice of new-born babes is scarcely to be considered an actual and distinct disease. It may indeed be caused by undue and prolonged exposure to cold of the tender and unprotected body of the infant immediately after birth. Often, however, it is the result of a more interior, physiological shock, which the system receives in changing from intra-uterine life to independent existence. From the second to the fourth day after birth the entire surface of the skin, and also of the conjunctiva, may assume the yellow hue peculiar to this affection; this, continuing two or three days, gradually fades away, until by the eighth or tenth day the natural, rosy-white color returns. The absence of other morbid phenomena, and the frequency of icterus among new-born babes, proves that this is not really a state of disease. Such at least is the opinion generally adopted, confirmed by the transitory nature of the affection itself. Seemingly it results from a slight interruption in the physiological action of the liver, or from the temporary hesitation which this organ experiences in adapting itself to the new order of things in the independent state of existence; for it may result from a temporary disturbance in the hepatic portion of the fœtal circulation from the same cause; and this condition will of course be particularly aggravated, as already stated, by exposure of the surface of the body to the cold air. The small amount of exercise that pregnant women take, and the costiveness that so frequently attends their condition, may have some influence in causing *Icterus gravidarum*, and in consequence in predisposing to the same condition in the new-born infant. Watson accounts for some supposed cases of this disorder in the following manner: "The *Icterus neonatorum* occurs, they say, a few days after birth; is not attended with any suffering or obvious disturbance of the bodily functions, and soon disappears. Now there seems reason

to believe that this is not icterus at all, and has no relation to the biliary organs. The surface of the infant at its birth is frequently of a deep red, from hyperæmia or congestion of blood, presenting a condition which falls little short of a mild but universal bruise. By degrees the redness fades, as bruises fade, through shades of yellow into a genuine flesh-color. Such, I am assured by those who are more conversant with these matters than myself, is the pathology of the Icterus infantum."

It has been claimed that, by allowing the effete blood, contained within the body of the child at the time of severing the umbilical cord after birth, to escape from the vessels—not ligating the cord—infantile jaundice will not occur, or rather is not nearly so likely to occur. We believe that non-ligation of the funis has some of the effect claimed for it in this direction, but there are not sufficient data as yet upon which to found an opinion.

Treatment.—If anything should be required, which is not always the case, a single dose of *Aconite* will in the majority of cases set all right. Should the case prove a true jaundice, and be complicated with constipation or other morbid symptoms, the remedies appended to this article should be attentively studied. Cases sometimes occur in which, from the unhealthy nature of the mother's milk, it proves so poisonous as to derange the liver of the babe, as well as its stomach and bowels. In such cases, however, by administering the proper homœopathic remedy, this disordered condition in the mother will be overcome, and the secretion of good, healthy milk will be secured. Should the mother become seriously ill, it may become necessary to remove the child from the breast, and have it committed to another nurse, or brought up by hand upon such diet as has previously been recommended in this work. Care must be taken to ascertain positively that it *is* the milk which disagrees with the child, as very often this appears to be the case when not so in reality. Then the child will, of course, require treatment.

Aconite. The infant is hot, restless, sleepless and in distress.

Arsenicum. Undigested, light-colored, offensive stools; dry scald-head; yellow skin.

Bryonia. Vomiting of food soon after taking it; the child wishes to keep perfectly still. Skin yellow.

Calcarea c. Yellowness of the skin; other symptoms similar to those put down for this medicine under Dentition (which see).

Chamomilla. A cold seems to have been the cause of the difficulty;

light-colored and offensive stools; the child is very fretful; wishes to be carried.

China. There is tenderness in the region of the liver; distension of the abdomen. Undigested and painless stools in large quantity.

Colocynth. Much colic, with writhing, twisting and doubling up.

Digitalis. The stools are almost white; scanty brown urine; frequent and empty retching; much debility.

Dulcamara. The child gets worse at every cool change of the weather.

Hepar. In children with dry, pimply eruptions.

Ignatia. The child is inclined to spasms as a prominent symptom; frequent sighing.

Ipecacuanha. Almost constant nausea.

Mercurius sol. General mercurial symptoms, such as salivation, swelling of the glands, slimy stools, abundant and strong-smelling urine.

Nitric acid. Urine scanty and strong-smelling; very restless after twelve o'clock at night.

Nux v. Constipation; sleeping toward morning; colic; the nurse is a high-liver or takes much coffee.

Pulsatilla. Entire loss of appetite; vomiting of mucus; no thirst; very changeable in appearance; worse toward evening.

Sulphur. The child wakens often; it inclines to intertrigo and to general papular eruptions.

HEPATITIS—CHRONIC DISEASE OF THE LIVER.

Hepatitis, or acute inflammation of the liver, may be developed, especially in those constitutionally predisposed thereto, in connection with derangement in other portions of the digestive apparatus, or it may arise and assume the intermittent form in consequence of the miasm which develops chills and fever. Fever, restlessness, loss of appetite, constant nausea, constipation, and a yellowness of the sclerotica and skin, constitute some of the principal symptoms of this condition. Palpation will discover enlargement and tenderness in the hepatic region; young infants will shrink from the pressure and cry.

CHRONIC DISEASE OF THE LIVER may be the result of the long-continued influence which causes the acute form. Or the liver may become enlarged by fatty deposit in its substance—fatty enlargement or degeneration—or it may become the subject of albuminoid enlarge-

ment. Such chronic diseases of the liver will always be found associated with, and measurably dependent upon, corresponding disorder in the stomach and intestines, and especially the glandular and tubercular diseases of the latter organs.

CHILLS AND FEVER—INTERMITTENT FEVER, may occur in young children, either in connection with liver complaints or independently of them, particularly after undue exposure to the night air in miasmatic regions. Under favorable circumstances these affections will be speedily removed by a single dose of the remedy (not too low) which is suited to all the symptoms of the chill and the fever, to the concomitant symptoms, such as thirst, pains in limbs, perspiration, etc., and to the attendant conditions, such as the aggravations or amelioration of time, place, circumstances, etc.

Treatment.—The following remedies will be found adapted to meet any of the above-mentioned conditions:

Aconite. Much fever; dry heat; restlessness and anguish.

Belladonna. Much moaning. Can't bear to be moved. Short breath; flushed face; red eyes; if able to explain its sufferings, there will be much pain in the right shoulder complained of.

Bryonia. *Very short breath;* cannot bear the least motion; dry lips and mouth; stools dark, dry and hard as if burnt.

Calcarea c. Leucophlegmatic temperament; perspiration about the head; stools like chalk.

China. The region of the liver is swollen and hard; much flatulency; undigested stool.

Digitalis. Stools very light, almost white; much debility; *nausea;* slow or irregular pulse.

Lachesis. Always worse after sleeping; awakens in distress.

Lycopodium. Much flatulency and rattling in the abdomen; this is a very characteristic symptom of this remedy in this as also in other forms of disease.

Mercurius. Tenderness of the abdomen; it is hard and tense. Mucous stools, or stools too light and very offensive. Salivation. Strong-smelling urine.

Nux v. Constipation of large difficult stools; no appetite; sleeplessness, particularly after three A. M.

Pulsatilla. In children of mild, gentle dispositions; pale face; blonde hair and blue eyes; no appetite. Or the case may be clearly traced to some gastric disturbance from eating rich or fat food.

Sulphur. The patient partially recovers, and then relapses; or there is a tendency of the patient to get worse, without any previous improvement.

SCROFULA.

Scrofula is a general name for various forms of disease arising in children of a psoric constitution. In the previous chapters we have seen how persons of a strumous or scrofulous or psoric constitution are peculiarly liable to suffer severely from the different disorders incident to infancy and childhood—how children of this class suffer far more than others in dentition and in all the accompanying disorders of the gastro-intestinal system, in those which affect in various ways the respiratory mucous membrane and adjacent organs, and finally in the eruptive fevers of all kinds. Many of the forms of cutaneous disease to which we have referred are but manifestations of the same psoric element in the system, and as such are properly as well as popularly termed "scrofulous humors."

In different families this psoric or "scrofulous" diathesis tends to develop itself in different ways, and the same is true of the different ages of life. Thus, not to repeat what has already been said of other external developments of scrofula, the same element in early childhood affects the glandular system which in other families, or in other individuals of the same families, and even in the same individuals at different periods of life, results in tuberculization.

"Scrofulous children are broadly divisible into two classes—those of dark, dusky, coarse features, heavy and sluggish in their movements, intellectually dull; and those of bright rosy complexion, fair, with fine skin and hair, highly nervous, susceptible, sharp and precocious. Both are easily fatigued by exertion or excitement; soon take cold; the stomach and bowels are easily deranged; the appetite is fitful and capricious; they rapidly lose flesh; soon get pasty and flabby, and they do not soon shake off any ailment of which they are the subjects."

The term *scrofula* as used in this section refers principally to disorders of the glandular system. The cervical glands are those most frequently affected—enlarged and ulcerated. Sometimes these produce deformity similar to goitre, but show no disposition to suppurate. The corresponding disorder of the mesenteric glands constitutes *Tabes mesenterica*, and their ulceration "consumption of the bowels."

The *causes* of scrofula—that is, of this especial development of the

inherited psoric diathesis—are to be found in scanty, unsuitable and too uniform food; in defective ventilation; in deprivation of light; in over-exertion, and in exposure to cold and dampness. Young infants imbibe the disease from their nurses' milk, or have it developed in them by other and unsuitable substitutes for it. Scrofula is, however, a very general term, and among what may be properly termed scrofulous diseases may be mentioned a large part of those to which the infantile life is heir. Some of these, such as Rachitis, Hydrocephalus, Spasms, etc., will be more particularly described.

Arsenicum. Great emaciation; waxy paleness; great fatigue on the least exertion; nocturnal restlessness. Can hardly go up stairs. Scrofulous atrophy.

Baryta c. Painful glandular swellings and indurations in the neck or near the articulations of the lower jaw. The mesenteric glands become affected, and atrophy commences to show itself.

Belladonna. Bleeding of the nose; distended abdomen; the throat frequently becomes sore; the eyes are often inflamed; bloated face; no good sleep; hears all that is going on at night.

Calcarea c. Head large; fontanelles open, or are unusually slow in closing; much perspiration about the head. Sympathetic swelling in the neck and in other places; enlargement of the abdomen.

Cina. I deem it not a little remarkable, and a fact that disproves many theories of old-school origin, that Cina[1000] so often cures scrofulosis in children who are continually boring with the finger in the nose, who are cross and exceedingly unamiable, whose urine turns milky on standing, whom nothing pleases, who are constantly turning and twisting at night, with frequent calls for water, and who are often ravenous for food.

Hepar. Is also suitable in many cases, as indeed are many other remedies, according to their characteristics. Compare *Rachitis.*

Iodine. This remedy is very frequently indicated when there are glandular swellings. Compare all the symptoms. Bromine is closely allied to Iodine.

Mercurius sol. Cold and clammy sweat upon the lower extremities at night. Night sweats; swollen and inflamed glands, with a tendency to ulceration. Salivation. Scorbutic gums. All the symptoms are always worse in cold, damp weather.

Mezereum. May be indicated when there is constant excoriation of the nose, and often of the throat also.

Psorinum. In many respects this remedy is similar to Sulphur.

Silicia. Useful in children with large bellies, weak ankles, much perspiration about the head, and inclination to uncover.

Sulphur. In children who are exceedingly sensitive to the open air or wind; they do not like to be bathed, to touch water, to have their hair combed or brushed, or made to look nice. Skin rough and scaly. Burning heat in the soles of the feet; short naps of sleep at night; papular eruptions.

RACHITIS—RICKETS.

Scrofulous disease affecting the bones—called rickets, curvature of the bones—is an affection of early childhood, being noticed usually toward the end of the first dentition, if not before. It presents itself in a great variety of degrees and forms. The disorder seems to consist in an excessive preparation for the process of ossification, which, from deficiency of assimilative force, fails to be completed. The bones of the skull seem to be the first affected, and with this is invariably associated some enlargement of the ends of the long bones. With this species of deformity of particular bones may also be found in some cases a general deformity of shape, as seen in those who are pigeon-breasted or affected with curvature of the spine; and in fact some of these latter deformities of general structure naturally grow out of the first-mentioned deviations in particular osseous formation. Besides these direct deformities there are others, such as bending or curving of particular bones, which arise indeed from mechanical pressure, from gravity or from muscular contraction, but which are in reality due to softness or incomplete osseous development in the bones themselves. The one general and sufficient cause for the innumerable variety of deformities which may be described under the head of Rachitis, including very slow development of the teeth, inability to walk, easy fracture and spontaneous luxation of the bones, is to be found in imperfect nutrition and unhealthy food, developing in these forms some dyscrasia inherent in the system, some weakness inherited from parents.

"The softening of the bones is fully accounted for by the diminution in the proportion of their calcareous salts. Thus, Jenner states as the mean of the analysis of several observers that the bones of healthy children yield about thirty-seven parts of organic and sixty-three of inorganic matters; whereas those of rickety children yield about seventy-nine parts of organic to twenty-one parts of inorganic matters. In addition to this, it would appear that the inorganic matters themselves undergo change."

The characteristic deformities of the bones are not produced at once, but are preceded, for a longer or shorter period, by a general cachectic condition of the system. This shows itself in various disorders of the digestive system, such as capricious or voracious appetite; diarrhœa; general sore feeling of the body, so that the child dislikes to be touched or moved; profuse sweating about the head during sleep or after every exertion; heat and dryness of the skin, the slightest covering being oppressive. In some cases there is a precocity of intellect, while in others there is more or less mental dullness. After these symptoms have lasted for some time the osseous system shows that it is being affected, and the various deformities of the bones present themselves, differing greatly in degree in different cases—such as bending of the femora and deformities of the head, spine, thorax and pelvis.

Rickets is not a fatal disease *per se*, but the condition of system which leads to it, and the depressing effect upon the vitality of the child produced by the rachitic condition, leave it liable to the supervention, in a severe form, of some secondary disease, such as chronic hydrocephalus, convulsions, laryngismus stridulus, and (particularly where the thorax is badly implicated) to diseases of the lungs and air-passages.

Treatment.—In no disease is it more important that the patient should have nutritious and easily digestible food than in rickets. If it be suspected that the mother's milk is not of suitable quality for the infant, it should be provided with a wet-nurse, or fed upon good cow's milk where that is not possible. The diet of larger children should contain a large proportion of animal food. If the teeth are defective, the food taken by the child should be chopped very finely. Plenty of pure, fresh air is also essential. Select one of the following remedies, or such other as may be indicated:

Baryta c. Will be found suitable to many cases in dwarfish children, *i. e.*, in those of imperfect development.

Bryonia. Lips dry and parched; vomiting immediately after eating; constipation, with stools dry and hard, as if burnt. Wishes to keep very quiet.

Calcarea c. In those children whose temperament, figure and symptoms correspond to this remedy it may be repeated once a week or month, according as the condition of the patient may require.

Ipecacuanha. Indicated by constant nausea.

Nux v. Sleepless, particularly toward morning; constipation, large, difficult stools.

Phosphoric acid. When there is a pale, sickly look; great debility; painless diarrhœa; tottering gait.

Ruta graveolens. Tottering gait, as if the thighs were weak, and there is much pain in them in walking.

Silicia. Much like Calcarea, only the temperament is less strongly marked and leucophlegmatic, and the osseous system is better developed.

Staphysagria. When the teeth turn black and crumble, with the progress of the disease, into little fragments.

Sulphur. Indicated when the child is subject to intertrigo, pimples, short naps at night, etc.

Veratrum. In cases complicated with diarrhœa or constipation, with cold sweat on the forehead.

OPHTHALMIA.

New-born infants and older children are subject to *purulent ophthalmia*, or inflammation of the eyes. The disorder is always serious, for, unless speedily cured—which it is not always easy to effect—the inflammation will result in opacity of the cornea, impaired vision, or even total blindness. And in neglected cases, especially those in which the necessary attention to cleanliness has not been enforced, ulceration of the cornea may take place, and the contents of the eyeball be discharged, causing permanent deformity as well as hopeless blindness.

"The first indication of the disease is generally the eyelids becoming glued together during the night, with swelling and redness externally. When the lid is raised there occurs a gush of tears, and its conjunctiva is found to be uniformly red, and slightly thickened, and covered often with a purulent, tenacious, transparent coating. As the disease proceeds the lids become more constantly agglutinated, and an increased secretion from the surface of the inflamed conjunctiva takes place of a thick, purulent matter, a portion of which exudes from between the lids, but the greater part is retained, causing a considerable bulging of the palpebræ, the integuments of which assume a dark red hue."—*Condie.* With the continuance of the disease the discharge becomes still more copious, and must be constantly wiped away from the exterior surface of the lids.

Gonorrhœal and *syphilitic ophthalmia* are the most rapidly destructive, and their treatment will require all the skill, caution and dis-

cretion of the physician, who must, however, avoid wounding the mother's feelings by suspicions, the statement of which, whether they are justly founded or not, can afford little help in prescribing.

So many cases of purulent ophthalmia occur in babes whose mothers are affected with leucorrhœa that we must conclude a discharge from the genitals of the mother is a very frequent cause of purulent ophthalmia in new-born infants. The matters discharged are very apt to be highly contagious, and it is but a dictate of prudence always to consider them so.

Scrofulous ophthalmia is one of the developments of the scrofulous diathesis. It generally attacks both eyes, going from one to the other. There is intense photophobia with this form of the disease, and the symptoms are consequently mitigated as night comes on, and aggravated during the day. Pressure upon the eyeballs, which the child often resorts to, seems to afford some relief. It is a disease very difficult to eradicate, and requires the most patient and accurate treatment to bring about a happy result.

Treatment.—The most scrupulous attention should be paid to cleanliness of the affected organs and of the whole body; let the temperature of the room be made perfectly comfortable; avoid fatiguing the inflamed eyes with too much light; carefully look after the health of the mother or nurse, and no less carefully select the remedy best suited to all the symptoms, circumstances and conditions.

Aconite. Where from exposure to cold air there arises a high state of inflammation; general fever, with restlessness, distress and sleeplessness.

Belladonna. The eyes look very red; cannot bear the light, opening the eyes only when in a dark place. Bleeding from the lids.

Calcarea c. In leucophlegmatic temperaments; excessive secretion of mucus in the eyes.

Chamomilla. Discharge of blood from the eyes; the lids are closed in the morning. If the inflammation be caused by exposure to cold, damp atmosphere, or if aggravated by every cold change in the weather.

Euphrasia. Great lachrymation, almost continuous.

Hepar. Little pimples surround the inflamed eye.

Ignatia. Inflammation of the eyes, something like that of Belladonna, but not so intense, with much sighing.

Lachesis. The eyes are always worse for a while after sleeping.

Mercurius. The eyelids are much swollen, and contain, underneath

them, much purulent matter, which pours out in quantities on opening the eyes. Compare Nitric acid.

Nux v. The eyes are always worse in the morning.

Pulsatilla. The eyes are always worse toward evening; better in open air.

Rhus t. The lids are principally affected; they look red and fiery, like erysipelas, and seem to itch much; protruding conjunctiva when shut.

Sulphur. There are pimples more or less diffused over the body; short naps; the eyes seem to itch very much, and to contain much mucus; the canthi appear raw.

Thuya. Hard inflammation of the eyelids; they seem indurated.

PAROTITIS—MUMPS.

This acute inflammation of the parotid gland, which has likewise been termed *Cynanche parotidea*, differs from an ordinary glandular swelling in being epidemic and contagious, and in not tending to suppuration. The disease appears in the form of an external swelling, which occupies the gland of one side, and, as the inflammation declines in the one first affected, it commences to develop itself in the other in many cases, but not in all. The swelling, which was at first remarkable and circumscribed, soon becomes extensive and diffused, often involving the maxillary glands in the inflammation, and continuing to increase till the fourth day. The pain is very considerable—a steady and severe aching, as stated by those old enough to express their feelings—but the general fever is comparatively unimportant. The duration of the swelling is variable—from five or six days in some cases to a fortnight in others. The metastasis of the disease from the parotid to the mamma, testicle or brain—rare in proportion to the tender age of the patient—would seem scarcely possible under judicious homœopathic treatment.

Baryta c. If the swelling becomes very hard.

Belladonna. In cases characterized by red eyes and face; fever in the afternoon; tendency to erysipelatous inflammation; lethargy and delirium, and pain in head on disappearance of the tumor. The swelling is red and shining, the redness running in rays from the centre; especially when the right parotid is affected.

Carbo veg., Conium and **Coccus cacti** are very useful in these cases. Carbo veg. if the swelling is bluish or purple; Conium if it be excessively hard.

Lachesis. If the swelling commences on the left side, and afterward affects the right gland.

Lycopodium. Commences in the right side and goes to the left.

Mercurius. This is the remedy in the majority of cases, particularly if they are apparently caused by a cold, and in cases where there are chills and fever and thirst at night; sweat at night; no appetite; cannot open the jaws; difficulty of deglutition; some salivation.

Pulsatilla. If metastasis to the mammæ or testicles takes place. Nux or Mercurius may also be suitable for this condition in some cases.

Rhus. Where there is much restlessness at night, and in cases complicated with erysipelatous inflammation.

Hepar, Silicia, Arsenicum or **Rhus** may be required if *suppuration* takes place.

Hiccough.

Singultus, or hiccough, belongs to the class of inspiratory convulsions, and has usually been deemed an affection of the diaphragm alone. But Romberg affirms that its cause not unfrequently resides in the central nervous organs; this, however, is most probably true rather of adults than of new-born infants. Hiccough consists of attacks of sudden jerking *inspiration* with a peculiar sound, followed by a short expiration. And in each of these respects it is exactly opposite to hooping-cough, in which the *expirations* are quick, noisy and jerking, while the inspirations are anxious, protracted and still more noisy.

This affection may be very readily relieved sometimes by giving the child the breast or by a few teaspoonfuls of warm water. The following remedies have been recommended, and that one which is most indicated will certainly relieve the little ones suffering from this form of nervousness, except in those cases in which it results from exhaustion of the vital powers, and is thus evidently symptomatic of approaching dissolution:

Belladonna. Flushed face; red eyes; crying on account of pain from the hiccough.

Hyoscyamus. Twitching and jerking of the limbs as an accompanying symptom.

Ignatia. Frequent sighing as an attendant symptom.

Ipecacuanha. Much and constant nausea with the hiccough.

Nux v. Constipation attends or causes the hiccough.

Pulsatilla. Hiccough occurring mostly at night.

HERNIA.

Infantile hernia may be congenital or developed subsequent to birth, and a predisposition to this affection may sometimes be observed in children whose parents are similarly affected. The hernial tumor may occur on either side, constituting inguinal hernia: this, developed to its fullest extent, becomes scrotal hernia in males, while in female children the corresponding tumor appears in the labia pudendi. Exomphalos (umbilical hernia) is also a common form of infantile rupture: in such cases the tumor appears at the navel, as indicated by the name. Besides, there may be femoral hernia, which appears more frequently in female than in male children.

It is very important for the physician to detect an infantile hernia at as early a period as possible, especially before it occasions serious mischief by becoming strangulated. This latter accident indeed but seldom occurs in very young children, except in consequence of severe fits of crying in those already ruptured, or in cases of hooping-cough, in which the violent paroxysms may have induced the rupture in the first place. Thus, when, either from its own observation or from that of the mother or nurse, any tumor or unusual formation is detected, the child should be as carefully examined as an adult would be in case of suspected hernia. The most difficult to detect, and at the same time one of the most common forms of hernia, is that which may be developed in the scrotum of the male infant not long after its birth. In these cases of congenital hernia "the intestine or omentum passes out of the abdomen, accompanies the testicle in its descent, and becomes lodged in the pouch of the peritoneum, which accompanies the tunica vaginalis testis, before its communication with the general peritoneal cavity has become obliterated. In the encysted variety of congenital hernia the communication between the cavity of the tunica vaginalis and that of the abdomen is closed at its upper part, but the former is unusually large and continues high on the cord, containing more or less serous fluid; behind this the hernia descends invested by the ordinary peritoneal sac." * In the femoral variety the hernia appears in the groin, where it may readily be distinguished from tumors resulting from other causes by accompanying symptoms and by the condition and history of the case. Besides these varieties, the intestine may effect its passage through the parietes of the abdomen at other points, constituting ventral hernia.

The strangulation of the protruded intestine will give rise to similar

* Helmuth's *Surgery*, p. 571.

symptoms of pain, colic, vomiting and obstinate constipation, or obstruction of the bowels, in young infants as in adults. And while such strangulation is far less apt to occur, it can always be traced to some definite cause, such as violent straining in crying or in severe paroxysms of coughing. And both the hereditary predisposition to rupture and the congenital or subsequently developed hernia may be entirely remedied by the administration of the appropriate medicine in single doses, and not too often repeated. And even in severe cases of strangulation the physician will have the satisfaction of witnessing the happiest effects from the homœopathic treatment. By extensive observation I am persuaded that it is never useful to apply bandages or trusses in these cases, whether the hernia be congenital or otherwise. The properly selected homœopathic remedy is always sufficient to cure the case.* Study the following remedies:

Aconite. There is a constant fever; uneasiness and distress by spells; the parts are very tender to the touch.

Antimonium c. A great deal of crying; white tongue; vomiting; diarrhœa; cough.

Borax v. The child cannot bear a downward motion; it is very nervous; cries much day and night. Even when it is sound asleep the downward motion of putting it into the bed or cradle will surely awaken it.

Calcarea c. In children of leucophlegmatic temperament, with large, open fontanelles; much perspiration about the head; the child cries much. It may have two or three ruptures, yet in such cases Calcarea alone will effect a perfect cure in a few weeks or months.

Chamomilla. The child is very fretful, and finds quiet and comfort only in being carried about up and down the room. Constant diarrhœa.

Cina. Very restless even during sleep. It will not lie awake five minutes without crying. It must be rocked, carried or dandled upon the knee constantly, day and night; the mother and nurse are worn out taking care of the child till it gets Cina, when it becomes quiet and the hernia subsequently gets well.

Lycopodium. Much croaking, rattling and commotion in the abdomen day and night; colic and crying. Red sand in the urine; screaming when passing water. Always worse soon after 4 P. M.

Nux v. The child has much colic; it draws up its feet, and then thrusts them down again. Constipation, the stools being large and

* Vide *Hahnemannian Monthly*, vol. ii., p. 8.

difficult. Poor appetite; crying much at night. The hernial tumor looks blue. Nux is indicated oftener than any other remedy.

Opium. Redness of the face; abdomen hard and distended; the child is soporous.

Silicia. Frequent colic, relieved by the discharge of offensive flatus. Tenderness about the hernial tumor; vomits much milk after nursing.

Stannum. The child is relieved by pressure of the knee, shoulder or hand upon the abdomen.

Sulphur. Scurfy skin, which is easily abraded; sleeps only in short naps; other Sulphur symptoms generally. Is very frequently called for in these derangements.

Sulphuric acid. When some general, deep-seated dyscrasia prevails, and the child is weak and exhausted, and there are no other more particular symptoms.

A great variety of other remedies may be indicated in these cases. The Materia Medica should be carefully scanned.

Tongue-Tie.

This deformity, which differs greatly in degree, is produced by the insertion of the frænum being too far forward toward the tip of the tongue, which it sometimes reaches. It interferes with lactation very greatly when extensive, and in such case should be removed at once. But where the tongue-tie is slight, it will be better to wait until the child is two, three or more months old before resorting to operative procedures. In order to remove the deformity the tongue should be raised and the frænum transfixed by a bistoury, which should then cut outward toward the child's gums and away from the tongue. Or a suitable instrument, having a groove to accommodate the frænum, snould be passed under the tongue and the organ raised. Then with a pair of scissors cut through the frænum a sufficient distance, cutting in a direction a little downward and backward toward the floor of the mouth. In this way no blood-vessels of consequence will be wounded.

Worms—Vermicular Affections.

"Worms," in popular language, constitute one of the most common disorders of children, and people imagine that if the worms are expelled their children will be cured. This, however, is a great mistake, for children are not ill so much because they have worms, as they have worms because they are ill. Consequently, the violent

medicines, drugs, and even mechanical means—such as dolichos and tin filings—used to destroy and expel the worms, either entirely fail of their object, or, in effecting it, inflict still greater injury upon the health.

The indications afforded by the symptoms enable the homœopathic physician to prescribe the remedy for the entire disordered condition which leads to the development of the symptoms themselves. Besides, in many cases of supposed "worms," they in reality do not produce the sufferings, or they may even be entirely absent. Hence is seen the importance of prescribing for the patient to restore him to health; not to attempt to destroy worms by means which in many instances but add to the existing disorder.

There is a very great variety of animal parasites infesting the human body, both *entozoa* and *ectozoa*, and there is scarcely a tissue of the body that has not been invaded by one or more of these. Those, however, which especially attract attention as "worms," and are by far the most common, occupy the intestinal canal, and are of three varieties—viz., *Oxyuris vermicularis*, or small thread-worm; the *Ascaris lumbricoides*, or long round worm; and the *Tænia*, or tape-worm, less common than the other varieties, and very rarely affecting children until after the third year.

The *Oxyuris vermicularis*, which was formerly called *Ascaris vermicularis*, and is sometimes denominated the "maw-worm," usually occupies the rectum, is thread-like, white, from one-sixth to one-half inch in length, the male worm being much smaller than the female. It gives rise to an intolerable itching and burning about the anus and rectum, which prevents the child from sleeping sometimes, and makes it very cross and fretful, and almost beside itself; constipation and tenesmus; depraved appetite; rubbing and picking of the nose; foul breath, etc. The local irritation may spread to the vagina in little girls, or the worms themselves may crawl there, and give rise to inflammatory state of the parts and a mucous or bloody discharge; or, by crawling into the urethra, may occasion severe urinary symptoms, such as urging, scalding and strangury. When these parasites either directly or indirectly attack the genital organ, the itching and titillation they sometimes occasion may lead to masturbation. The *Trichocephalus dispar*, or long thread-worm, is usually found in the cæcum and large intestines, is about two inches in length, and gives rise to few or no symptoms by which its presence can be known.

The *Ascaris lumbricoides* bears some resemblance to the common earth-worm, but is generally longer, and sometimes of a much paler

color. It inhabits chiefly the small intestines, but sometimes visits the stomach and is vomited up, or the lower bowels and is voided with the stool, and even visits other situations, such as the gall-bladder, œsophagus and the air-passages. It varies in length from six to twelve inches. The following symptoms indicate approximately its presence: Disturbed sleep, with tossing about, groaning, and grinding of the teeth; fœtid breath; great thirst; pallor of the face and general unhealthy appearance of the skin; enlargement of the abdomen, which is usually tense and hard; falling away of the limbs; depraved appetite—now voracious hunger and now aversion to food; diarrhœa, with slimy stools, or constipation, or alternation of these states; itching of the nostrils, which occasions rubbing and picking at them; tenesmus; itching of the anus. Sometimes nervous symptoms likewise present themselves, even chorea or convulsions. A dry and hacking cough is a not infrequent accompaniment of the other symptoms.

The *Tænia*, or tape-worm—the principal varieties of which are the *Tænia solium* and *Tænia medio canellata*, the latter being the most common—exists in the small intestines, and varies in length from five to thirty feet, being from one to five lines broad. It consists principally of a series of jointed segments. It does not produce any very marked symptoms by which its presence may be certainly known, and in fact its existence is usually not suspected until portions of the worm are passed with the evacuations. There are in some cases, however, constant craving for food, pain in the stomach, loss of flesh and debility, and itching about the anus and nose. The *Tænia solium* is said to be the mature form of the *Cysticercus cellulosæ* or pork "measle," while the *Tænia medio canellata* is the mature form of the *Cysticerus bovis*, or beef and veal "measle." The *Bothriocephalus latus*, or broad tape-worm, is a variety met with in special localities, such as Switzerland, Sweden, Russia, Poland and Ireland.

Treatment.—The diet of the child affected with worms should be carefully regulated, the food chosen being easily digestible as well as nutritious. Pastry and sweetmeats should be especially avoided. Select one of the following remedies:

Aconite. When a real synochal fever prevails, or there is much itching of the anus; worse at night; much fear manifested, the child being even afraid to go to bed.

Argentum nit. In many cases of tænia and thread-worms; the latter particularly when there is much and violent itching of the anus.

Asarum. The child passes shaggy masses of mucus full of oxyuri.

Belladonna. Involuntary discharges of fæces and urine; violent startings; flushed face; red eyes; moaning; delirium.

Calcarea c. In leucophlegmatic children; the itching at the anus becomes very great toward and in the evening. Also causes tape-worm to disappear when indicated by the symptoms.

Carbo veg. When a peevish wrathfulness becomes developed; the child wishes to vent itself in rage; it strikes, kicks, bites, etc.; nightly fear of ghosts; the weakness of the limbs becomes more and more developed.

China. Painless diarrhœa. Abdomen much distended, particularly after every meal; tremor and debility.

Cicuta virosa. Fever, colic and convulsions, with the other symptoms of worms.

Cina. Boring at the nose; exceedingly unamiable, nothing pleases the child. Short, hacking cough; frequent swallowing, as if to swallow down something. The urine turns milky. Tossing during sleep. Is often sullen and unwilling to play during the day.

Digitalis. Stool in the evening, passing great quantities of thread-worms.

Ferrum aceticum. Much itching about the anus, and slimy stools with worms. Vomiting of food, and a flow of water from the mouth.

Filix mas. Has been highly lauded as a remedy for tape-worm.

Ignatia. In many cases where there is itching of the anus at night; the child is nervous and spasmodic.

Ipecacuanha. Itching of the anus; nausea and retching.

Lachesis. Itching of the anus in the morning or always after sleeping.

Lycopodium. Worms, with much rumbling in the bowels or red sand in the urine. Itching about the anus.

Mercurius sol. Worms creep out of the anus, and can be seen on the perineum and buttocks, even at night in bed. Lumbricoides escape easily and freely; the abdomen is hard and distended.

Nux v. Picking at the nose; loss of appetite; constipation; sleeplessness in the latter part of the night; pain in the abdomen.

Phosphorus. Itching in the anus, and at times sharp shooting pains, causing the child to scream out. These troubles come on worse toward evening.

Pulsatilla. The child has vomiting of mucus; bad smell from the mouth; slimy passages from the anus; eructates a watery fluid.

Sabadilla. Itching of the anus, nose and ears; much pain in the abdomen. Worse every fourth day.

Silicia. When worm fevers assume a slow, chronic form in scrofulous children with large bellies and much perspiration about the head. Worse with the change of the moon.

Spigelia. When the child refers to the navel as the most painful part. The action of its heart seems unusually violent. Very pale face, and a yellow margin around the eyes.

Stannum. The child has spells of abdominal pain, during which it wishes to lean over on something hard for relief; there are many other symptoms, but this condition forms a reliable key-note for Stannum.

Stramonium. Abdominal spasms and frequent desire for stool. On awaking the child shrinks from the sight of objects, even from those with which it is perfectly familiar.

Sulphur. When there is redness and rawness about the anus much of the time; papular eruptions on the skin; the skin has a rough or scaly look.

Teucrium m. v. The irritation produced by the thread-worms comes on at regular periods every day, and is followed by nightly restlessness and sleeplessness.

Urtica urens. Loss of appetite; itching of the anus; itching of the nose; nocturnal restlessness. Stinging, burning sensations in any part.

Valerian. Nightly itching; muscular spasms; sleeplessness.

Veratrum album. Attacks of vomiting and purging, with cold sweat on the forehead, and symptoms of worms. Selected from these symptoms, this remedy has cured tape-worm.

Viola odorata. May be given in cases calling for Cina when this remedy fails to relieve.

Urinary Difficulties.

There are not uncommon in babes and young children a variety of urinary difficulties. These various disorders are so obvious as to need but little description. Their most prominent symptoms will be found stated in their proper places under the indicated remedies. In some cases the babe passes no water during the first few days after birth.

Dysuria.—Young infants and little children frequently suffer with difficulty of urinating. This is very easily recognized, and will be

greatly relieved by the timely administration of the most suitable remedy.

RETENTION OR SUPPRESSION OF URINE.—This difficulty will be less easily observed in very young children. The bladder may be unusually distended, and there may be evident distress, and even convulsions. The mother or nurse should of course be able promptly to inform the attending physician if there is any difficulty of this kind—*i. e.*, if the child's urine is scanty or suppressed. If there is no malformation the proper remedy will afford prompt relief.

Aconite. This medicine may be given if the babe passes no water in the first few days after its birth.

Arnica. If the difficulty—ischuria or retention—appears to have been caused by an injury, such as a fall or a bruise.

Belladonna. If there is much moaning, distress, a sudden crying out, in retention of urine.

Cantharis. If a few drops only flow, with much screaming.

Colocynth. Dysuria; ineffectual straining; worse before, during and after urination; urine is scanty.

Dulcamara. The retention is caused by damp, cold air.

Ipecacuanha. Ischuria, with convulsions.

Lycopodium. Dysuria, with much rolling and rumbling of flatus, and a reddish and sandy deposit with the urine.

Nux v. When there are retention and constipation.

Opium. The child is very drowsy and sleepy, the face is bloated.

Pulsatilla. If Aconite or Nux fail to relieve.

Sulphur. In scrofulous children in whom the retention occurs every time the child takes cold.

Compare the patient's symptoms, in case they do not seem to be met by either of the above, with STRAMONIUM, HYOSCYAMUS, CANNABIS S., ARSENICUM, APIS M., PETROSELINUM, MERCURIUS SOL., RHUS TOX., SEPIA, PLUMBUM, NITRIC ACID, CAUSTICUM, etc.

DIURESIS—PROFUSE URINATION.

Muriatic acid. Passes large quantities of urine, accompanied each time with a small stool.

Phosphoric acid. When the trouble is worse at night, and the urine is rather offensive.

Rhus tox. Very restless at night.

Silicia. In large-bellied children, who perspire much about the head.

Study also ARGENTUM NIT., SPIGELIA, SQUILLA and VERBASCUM.

INCONTINENCE OF URINE—WETTING THE BED.

Calcarea c. In leucophlegmatic temperaments, with open fontanelles; much perspiration about the head.

Causticum. In weakly, feeble constitutions.

Cina. In those affected with vermiculous symptoms, picking at the nose, etc.

Creasote. In children who are very hard to awaken.

Lycopodium. Red sand is found on the sheets or in the diaper.

Phosphoric acid. Very large quantities of urine are passed at night; the bed is literally flooded.

Sepia. The bed is wet almost as soon as the child goes to sleep—always during its first sleep.

Silicia. In children with enlarged abdomens (pot-bellied) and other symptoms similar to those of Calcarea.

Thuya. The child has fig-warts or condylomata.

Study also ARSENICUM, BELLADONNA, BENZOIC ACID, CHINA, CONIUM, CARBO VEG., GELSEMINUM, PULSATILLA, SULPHUR, GRAPHITES, HEPAR, RHATANIA, SARSAPARILLA, PHOSPHORUS, CANTHARIS, etc. There is hardly a remedy in the Materia Medica but may be useful in this complaint if the other symptoms correspond; *all the symptoms must be collated* and the prescription made accurately.

URINARY CALCULI—GRAVEL.

Sometimes children appear to be attacked with a severe colic, in paroxysms or in continued distress, which may last for hours. This may be from an actual wind-colic, from indigestion, from the passage of gall-stones through the hepatic duct, or from the passage of gravel or calculi through the ureters or urethra. When the difficulty arises from the last-mentioned causes the fact will usually be evident from the attendant symptoms, and great relief will be derived from the exhibition of the appropriate remedy. The following have most frequently been indicated in such cases:

Lycopodium. Much pain, even to screaming, before passing water. Red sand or gravel upon the diaper or in the urine.

Phosphorus. Much gray sand in the urine.

Sarsaparilla. Much pain at the conclusion of passing water.

SILICIA, BERBERIS VULG., CALCAREA C., PHOSPHORIC ACID, ALUMINA should also be studied in these cases.

INFLAMMATION OF THE BRAIN—MENINGITIS.

By this term is understood a simple inflammation of the brain and its membranes which is not produced by tuberculosis. It occurs most frequently in children between the first and ninth year, and for that reason has been associated with the process of dentition. It also occurs more frequently in boys than in girls, while strong and hearty children are more likely to be attacked by this form of cerebral disease than are more delicate children; the latter being more liable to become the victims of tubercular meningitis.

The causes of the disease are rather obscure. It may be due in some instances, as above remarked, to the irritation produced by dentition, to injuries, to exposure to the rays of the sun, and it may result as a complication of some other form of disease. It occasionally appears as an epidemic.

Sometimes this disease sets in very suddenly, a prolonged convulsion being the first intimation the parents of the child may have that anything is wrong,—the slight malaise which precedes scarcely exciting the attention. The convulsions are accompanied or followed by a high degree of fever and quickness of respiration, and, if the patient be old enough to describe symptoms, severe headache will be complained of. "After a while the convulsions cease, and the child remains for the time in a state of quiet somnolence or coma, when they return with renewed violence. The returns of the convulsions generally take place at intervals of one or two hours or more. In the intervals between the crises the child is restless or drowsy, or in a state of partial *stupor*, attended with tremulous movement of the extremities; there is *strabismus, contraction of the pupils, trismus*, and sometimes *hemiplegia*. The skin retains its warmth, the pulse is accelerated, irregular and unequal; the face is pale; the stools are spontaneous. It is unusual to see the child regain its consciousness so as to recognize objects in the intervals between the convulsions, or after the appearance of coma and other cerebral symptoms. This form of the disease has been termed the *convulsive*.

In other cases the disease shows itself quite as suddenly, but the convulsions come on at a later stage. Here the first symptoms are—fever, with shortness of breath, almost constant drowsiness, followed by a high degree of nervous excitement, staring eyes, loud cries or screams, dilated pupils and sometimes vomiting.

Another form of the disease, which has been termed the *phrenitic*, commences usually with a chill, followed by fever, *violent frontal headache*, great sensibility to light and noise, profuse bilious vomiting, loss of appetite and great thirst. "About the end of the first day generally, or, in rare instances, after two or three days, appear various disorders of the intelligence. The first symptom of this kind is observable in the expression of the face, which becomes a little wild or wandering, and sometimes grimacing. Soon afterward occurs restlessness, which is sometimes extreme, and in succession delirium, somnolence, and, late in the attack, coma. The restlessness and somnolence often alternate early in the case, though the former generally predominates, and soon passes into delirium, which is usually violent. When in this condition the child seldom recognizes any one, and either refuses to answer questions or answers incoherently. In connection with the disorders of the intelligence there exist also trismus, grinding of the teeth, subsultus tendinum, partial convulsive movements, stiffening of the extremities or trunk, retraction of the head, strabismus, contraction first and then dilatation of the pupils, and in some cases violent convulsions, followed by deep coma. Frequently at this period death relieves the little patient of suffering, but in other instances the disease goes on, developing other and more profound symptoms, some of those which first appeared subsiding or disappearing, until the child falls into a state of collapse, and thus dies, or a violent convulsive fit ends the scene."

The *prognosis* of this form of cerebral disease is of course very grave, but is far from being hopeless.

Treatment.—On page 909 *et seq.* are given the indications for a great variety of remedies suitable for the treatment of the various forms of meningitis and hydrocephalus, from one of which the appropriate remedy should be selected. In this special form of disease the following medicines are most likely to be appropriate: ACONITE, APIS M., BELLADONNA, BRYONIA, CIMICIFUGA, GELSEMINUM, CAMPHOR, CUPRUM ACETICUM, HELLEBORE, HYOSCYAMUS, OPIUM and STRAMONIUM.

TUBERCULAR MENINGITIS—ACUTE HYDROCEPHALUS.

"This disease is characterized by violent cerebral symptoms, dependent upon the existence of tubercular granulations in the pia mater, as the essential anatomical lesion, accompanied, in the great majority of cases, by coincident inflammation of that membrane, by softening of the central parts of the brain, by effusion of serum into

the ventricles, and in many instances by tubercular deposits in other organs."

That portion of the pia mater which lines the ventricles is the most frequent seat of the disease at its onset, but in some instances it is developed at the base of the brain, and is termed *basilar meningitis.* Children of a scrofulous (tubercular) diathesis are most frequently attacked, especially between their first and eighth years, and in such children there are generally to be found evidences of tuberculous disease elsewhere. The disease may be excited by a blow or fall, by the systemic irritation of dentition, in consequence of the repeated cerebral congestion induced by paroxysms of hooping-cough, or by some of the exanthemata, such as measles or scarlatina.

The disease may come on either insidiously or suddenly, and in the majority of cases the former is the case, there being usually well-marked prodromata, lasting variously from ten or fifteen days to two or three months. During this prodromic period there appears to be a general running down of health; the child loses its appetite, or it becomes capricious, grows thin and pale and does not care for play; complains of being tired or weak, the debility sometimes becoming excessive; is very restless at night; complains of headache, and sometimes of pain in the abdomen. These symptoms having lasted for a longer or shorter period, others set in which are more marked and alarming, and which are usually the first to which the attention of the physician is called. Many of these symptoms are common to the various forms of cerebral disease, such as headache, squinting and grating of the teeth during sleep, sensitiveness to light and noise, twitching of the muscles. Other symptoms are—"*Vomiting,* not after eating, but especially *on being raised up,* with *constipation of the bowels; the abdomen is hard and sunken in; the pupils are generally contracted; the pulse is hard and quick.* After exudation has taken place we observe *a very peculiar piercing shriek* (*cri hydrencephalique*), which is repeated occasionally, and which, if heard once, is scarcely ever forgotten. The head is bent backward into the cushions, and is rolled from side to side. In this stage of the disease convulsions frequently occur, and the children bring their hands frequently and automatically to their heads; they become insensible to light and noise; the vomiting ceases; the pupils dilate; the eyes squint; the pulse becomes quite slow, falling down to sixty or less in a minute; respiration is irregular; sometimes the breathing seems to cease altogether, followed by a deep, long, sighing inspiration. The face frequently changes color—now pale, and again red—and sometimes one side is pale and

the other red. The blood-vessels of the eyes become injected, especially those of the inner canthi. The anterior fontanelle, when not closed, protrudes."—*Raue.*

As a general thing, there is little or no disturbance of the intellectual faculties during the first few days of the disease; the child is either dull or irritable by turns; shuns the light; is unusually sharp of hearing. Diplopia is occasionally present in the earlier stages, and excites marked attention. Convulsions rarely occur in the first days of the disease, and delirium does not set in until about the sixth or seventh day, or even later. Trousseau refers to a red line which will remain upon the skin of the abdomen or forehead after the finger has been drawn across it, and to which he gave the name of "*tache meningitique*" or "*tache cerebrale*," which may serve as a diagnostic mark of the disease.

The duration of this disease differs greatly in different cases, although it seldom lasts a shorter time than ten or a longer time than thirty days; yet in some cases it is very lingering. The *prognosis* is decidedly unfavorable.

Treatment.—This disease will require for its treatment such remedies as ACONITE, APIS MEL., APOCYNUM CANN., ARGENTUM NIT., ARNICA, BELLADONNA, BRYONIA, CALCAREA CARB., CALCAREA PHOS., CUPRUM MET. and ACET., HELLEBORE, OPIUM, SILICIA, SULPHUR and ZINC. Refer to the indications for these and other remedies on page 909.

CHRONIC HYDROCEPHALUS.

The term chronic hydrocephalus is applied to a disease characterized by the accumulation, either within the ventricles of the brain or the sac of the arachnoid membrane, of a larger or smaller quantity of serous fluid in excess of that which is normal. It may be either congenital or acquired, and has been divided into external and internal; the former term indicating that the fluid has accumulated within the sac of the arachnoid, and consequently lies exterior to the brain substance; while in the latter the effusion takes place within the brain —into the ventricles.

The most marked of the symptoms of this disease is the enlargement of the head, which in some cases appears even monstrous, its circumference measuring as much as twenty-three inches or more. When the disease sets in before the ossification of the sutures has well advanced, the bones of the cranium are separated by pressure of the accumulating fluid, the parietals are pushed outward, the occipital

bone backward and the frontal bone forward, so that the forehead projects beyond and overarches the face, which is usually pinched and diminished in size in consequence of the general atrophy which usually accompanies the disease. In such cases fluctuation may be detected in the track of the sutures and under the fontanelles, and the scalp in these situations very frequently projects beyond its natural level. As a general thing, the hydrocephalic condition is preceded by symptoms of disordered nutrition, such as impaired digestion, debility and wasting, and by nervous disturbances of various kinds. Some of the symptoms of chronic hydrocephalus depend upon the impaired condition of the system which gives rise to the watery effusion, while others again are due to the pressure exerted upon the brain by the effusion itself. When the disease is congenital there are evidences of cerebral derangement noticeable at birth or shortly afterward, such as strabismus, convulsions, etc. In acquired cases either the intelligence of the child remains unaltered, or is even increased, while in others there is a gradual decline of intelligence and derangement of vision. Sometimes the patients are troubled with attacks of laryngismus stridulus; in others there is more or less complete paralysis or tonic contraction and rigidity of the whole or a part of the extremities. The sufferings of children afflicted with this disease do not appear to be very great, or, at all events, not very acute; but it is difficult to pronounce positively upon this point.

"Children born with this complaint frequently die during birth or shortly afterward. Others show in the first weeks no signs of this malady; even during the whole of the first year it may be overlooked, until the inability of the child to hold up its head calls attention to it. But even then there may be no enlargement of the head visible, yet the child is slow in all its mental developments; it does not make any attempt to talk or walk; it remains uncleanly and its actions look strange; when in joy or fear it makes antics and struggles with its extremities; frequently such children are thrown into convulsions."—*Raue.*

"The *general condition* of children suffering from chronic hydrocephalus varies greatly. In some cases they preserve their appetite and digestion, and appear well-nourished and strong to a late period in the attack, but more frequently they present marked evidences of impairment of nutrition. The appetite may indeed remain, but the child loses both flesh and strength; the bowels are irregular, usually constipated, but alternating with temporary attacks of diarrhœa. In the majority of cases, perhaps, these symptoms are not sufficiently pro-

nounced to establish the character of the attack until the increasing size of the head becomes manifest and the child acquires the distinctive physiognomy of hydrocephalus. Even after marked enlargement of the head has occurred, however, the advance of the case is far from being uniform. In almost every instance there are pauses of the most variable frequency and duration, during which the child seems free from pain, improves in general condition, and the development of the head is temporarily arrested."—*Meigs and Pepper.* Tanner thus sums up the symptoms and course of this disease, in addition to the enlargement of the head: "Subsequently emaciation, great appetite, dullness, peevishness, disordered digestion, muscular weakness, squinting, rolling of the eyes, weak sight, great weight of head, staggering gait, screaming and grinding of the teeth occur, to be followed by stupor, alteration of the pupils, great prostration, convulsions, paralysis and death in the one instance, or an abatement of the symptoms when recovery is about to take place in the other."

It is wellnigh impossible to *diagnose* this disease during its earlier stages, the prodromic symptoms being of that character common to almost all forms of cerebral lesion, and, indeed, to other diseases having reflex action through the nerve-centres; but when effusion is advancing, and the head begins to enlarge and the face to look smaller, it is almost an impossibility that any error of diagnosis should be made. The *prognosis* is decidedly unfavorable, especially where there is evidence of large serous accumulation and of serious cerebral lesion; but where the accumulation is not so great, and the functions of the brain remain unimpaired, hopes of recovery may reasonably be entertained, especially in children who exhibit a good degree of vitality and strength, and more especially under homœopathic treatment. Death often takes place in consequence of some intercurrent malady which apparently has no connection with the brain disease; in other instances the children die of marasmus and exhaustion; while in others, again, they die suddenly from convulsions or a sharp aggravation of the disease.

Treatment.—The same remedies as have been mentioned as most likely to prove useful in the treatment of acute hydrocephalus may be required in this disease, but the reader is especially referred to the list of remedies on page 909 *et seq.* We must here especially enjoin, however, that in a disease of this nature, which has its origin in the dyscrasia of the mother, and is implanted in her offspring as *disease*, or as disease-germ, so to speak, the practitioner must not limit himself in choosing remedies to the simple array we have presented, but the

whole Materia Medica should be scanned rather than a prescription be made that is not strictly homœopathic to the *tout ensemble* of the individual case. And we may remark that this is also true regarding the treatment of all other forms of cerebral disease and of all diseases.

Hydrocephaloid Disease.

Hydrocephaloid, or hydrencephaloid disease, was first described by Dr. Marshall Hall. It is a secondary brain affection, resulting from exhaustion of nervous vitality and anæmia of the brain, the results of debilitating diseases, such as cholera infantum, diarrhœa, or any other malady which severely drains the system. Its symptoms resemble to a very great extent those of hydrocephalus, and the condition may be divided into two stages—viz., first, the stage of irritation, and second, the stage of torpor.

The stage of irritation, or the premonitory stage—which sometimes comes on insidiously and lasts for some time, and at others appears suddenly, and is very soon followed by the stage of torpor—is characterized by restlessness, feverishness, sudden starting from noise or on being touched; bloating of the abdomen; diarrhœa; starting suddenly from sleep and giving utterance to a piercing cry; grinding of the teeth; quick pulse; hot and dry skin.

The stage of torpor sooner or later follows the first stage, and has the following distinguishing symptoms: Apathy; pallor of countenance, with coldness; the eyes are half closed, frequently "turned up in the head," and unsteady; they are unmoved by the approach of light or of objects, such as flies; the breathing becomes irregular and sighing; the voice is weak and husky, and there is sometimes a troublesome cough; the pulse is quick and small, gradually becoming weaker and more wiry; coldness gradually spreads over the body, commencing in the face; and if the disease runs on to a fatal termination complete coma and collapse supervene.

The disease is one of cerebral anæmia, the cerebral circulation being lessened. The fontanelles are depressed, instead of being elevated as in hydrocephalus.

Treatment.—In this disease there is a marked necessity for proper nourishment and an abundance of fresh air. The effect of these important hygienic measures is very noticeable in some cases, and many children's lives are saved by a resort to them. Indeed, we have seen the condition of a child changed from one of apparent hopelessness to one in which there was good reason for making a favorable prognosis, by merely changing the foul and heated air of a pent-up city neigh-

borhood for the bracing atmosphere of the river. the parks or the sea-shore. Such remedies as CHINA, PHOSPHORUS, CALCAREA CARB., CALCAREA PHOS., PHOSPHORIC ACID, ZINCUM and others are suited to this condition. Consult the remedies below.

REMEDIES FOR DISEASES OF THE BRAIN.

Aconite. This remedy will be indicated especially in the earlier stages of these diseases, when there is marked febrile excitement, great heat and dryness of surface, nervousness, particularly fearfulness, restlessness and distress.

Æthusa cyn. Where the disease seems to have supervened upon long-continued indigestion, especially that form in which milk does not agree with the stomach, and the child almost invariably vomits soon after taking the breast or the bottle. Great irritability, or the little patient lies stretched out in a semi-comatose condition; pupils dilated and insensible to light, as are the eyes to the approach of objects; the features are expressive of great anguish; pulse very feeble; mouth very dry or very moist; the child is very weak and cannot hold up its head.

Apis mel. This remedy is especially suited to cases of hydrocephalus. There is great restlessness at night; the child screams out very sharply and shrilly during sleep or when awake—*cri cérébrale*—especially during the latter part of the night; the urine is generally scanty, though it may be quite profuse.

Apocynum cann. "Sutures opened; forehead projecting; sight of one eye totally lost, the other slightly sensible; stupor; constant involuntary motion of one leg and arm; urine suppressed."—*Raue.* Hydrocephalus, especially acute hydrocephalus.

Argentum nit. This remedy has been recommended by *von Grauvogl* for the last stage of hydrocephalus. Convulsions, with great restlessness between the attacks, or every successive spasm is announced by a very marked degree of restlessness.

Arnica. This remedy is indicated by the fact that the brain disease has originated in a blow, fall or other mechanical injury. A characteristic symptom is, that while the head is hot the rest of the body is comparatively cool or even absolutely cold. *Traumatic cerebritis.*

Arsenicum. Great depression of the vital forces, manifested by great prostration; emaciation; pallor; the face, and sometimes the whole body, has a waxy look; thirst, the child desires cold water often, but drinks but little at a time; sometimes the child strikes its head with its fists, as though for temporary relief.

Artemisia vulg. While the left side is paralyzed, the right is in a state of clonic spasm; the child lies in a sleepy or dreamy state, and yet will drink large draughts of water without being entirely aroused; the surface of the body is cold; the child passes stools involuntarily.

Belladonna. This remedy is suited to all forms of brain disease during certain of their stages. It is especially useful in inflammation of the brain, and if given early enough—*i. e.*, during the cerebral congestion—will often cut off the attack. Great headache; redness of the face and sparkling eyes; throbbing of the carotid arteries; dilated pupils; injection of the sclerotica; great heat of the head and of the surface of the body, from which the heat seems to radiate; almost constant moaning; the child lies in a drowsy or semi-comatose state, is constantly starting and jumping, bores its head backward into the pillow, or tries to bend its body backward.

Bryonia. Almost constant motion of the jaws, as though the child were chewing something; the lips are dry and parched; the bowels are constipated, and the stools passed are very dry and hard; the child evidently desires to be kept still, and when it sits up or is held erect it is attacked with nausea and a faint feeling.

Calcarea carb. This remedy will be indicated in cases of brain disease originating in, and apparently depending upon, a "scrofulous" or "psoric" diathesis. Children of leucophlegmatic temperament, whose fontanelles are unusually large and are very slow to close, and who sweat very heavily about the head and upper part of the body; the child has frequent spells of screaming without apparent cause.

Calcarea phos. The reader is referred to the very full indications for the use of this remedy given under the article on Dentition.

Camphora. Great coldness of the skin, and yet the child cannot bear to be covered.

Carbo veg. Great prostration and collapse; Hippocratic countenance; cold breath and coldness of the limbs, especially the knees; the patient wishes to be fanned all the time.

China. Hydrocephaloid, or any other form of cerebral disease, which has grown out of a severe drain of fluids from the body, such as diarrhœa, summer-complaint, loss of blood, etc. The symptoms appear to undergo an exacerbation every other day; offensive, painless stools, or lienteria, with much distension of the abdomen.

Cimicifuga. Delirium and wild fancies; intense pressing and throbbing in the vertex and occiput; feeling as if the brain were too large, and as if the top of the head would be forced off; pain in the eyes.

Cina. The child gives indications of being troubled with worms

picks its nose or picks at the bed-clothes, has a bloated abdomen, passes milky-looking urine, is cross and peevish, vomits frequently, although its tongue is quite clean, and wants to be in motion almost constantly—to be rocked or carried about.

Cuprum acet. Convulsions and cramps are marked features of the case requiring Cuprum. The cerebral disease is the result of metastasis during an attack of catarrhal or exanthematic fever. The spasms and cramps commence in the extremities, and especially in the fingers and toes. Inability to hold the head up. Grinding of the teeth.

Digitalis. The characteristic slow pulse of this remedy, or irregular pulse; white evacuations from the bowels; bilious vomiting.

Gelseminum. Feverishness; dark-red hue of face; vertigo, drowsiness, stupor or apathy; convulsions; occurring during dentition.

Hellebore. The urine is scanty and dark-colored, and deposits a sediment looking like coffee-grounds; involuntary throwing or whirling about of one arm and one leg; rubbing of the nose; strabismus; dilated pupils; wrinkled forehead, which is bathed in a cold sweat; great irritability; soporous sleep, with screaming spells; dryness of the nostrils; the lower jaw hangs down, or there is a motion of the jaws similar to that of chewing; the child drinks water greedily.

Hepar s. c. In many cases this remedy is superior to Arnica in trismus of infants and children, arising from *traumatic cerebritis.* Also convulsions from the same cause.

Hyoscyamus. Delirium; jerking of limbs; watery diarrhœa; red face; wild, staring look; throbbing of the carotids; drowsiness and unconsciousness; muttering, indistinct speech, picking at the bed-covers; distorted eyes, with diplopia, convulsions, frothing at the mouth.

Ignatia. The child sighs and sobs frequently. (See Ignatia indications under Spasms and Convulsions.)

Ipecacuanha. The case is characterized by an almost constant nausea, from which there is scarcely a moment of relief.

Kali carb. There is a daily aggravation of the symptoms at three o'clock in the morning; the hair is dry and brittle; swelling above the upper eyelids; the child cannot bear to have its feet touched.

Mercurius sol. Scorbutic condition of the gums; salivation; glandular enlargement; slimy or clay-colored evacuations; cold and clammy sweat upon the thighs and legs, especially during the night; moist tongue, with great thirst; grayish ulcers on the mucous lining of the cheeks, lips, gums, tongue and palate; the child is very sensitive to pressure on the lower abdomen and epigastric region.

Nux vomica. The child has been having too much meat and highly-

seasoned food; it sleeps badly, and is particularly wakeful and restless after three o'clock in the morning; there is an aggravation of all the symptoms in the morning; frequent calls to stool; the child is very irritable and wishes to be alone; it constantly passes its hand over its face, as though trying to brush something off; spasms, which are renewed when the feet are touched.

Opium. This remedy is sometimes called for in the early stages of cerebral disease, though usually indicated at a later period. The child goes off into a heavy and stupid sleep, with red face, or it seems to be dull and drowsy, as though under the influence of morphia or laudanum; the child is stupid after waking; the hearing in some cases is inordinately acute; the child seems to be afraid of something, and starts as if in affright; the bowels are constipated, the fæces passed resembling little black balls.

Phosphorus. The child is dull, and inclined to sleep almost all the time; is no sooner roused than it wants to go to sleep again, there being nothing unnatural in the character of the sleep; after the water which it drinks remains in the stomach long enough to get warmed it is vomited; coldness of the feet and legs; green-colored stools, or white stools, which are sometimes watery, and gush out like water from a hydrant; loss of hearing; hydrocephaloid disease.

Phosphoric acid. The child is perfectly listless and apathetic, does not want to do any thing or to talk, will hardly answer questions, and having done so, relapses into its apathetic mood; passes large quantities of colorless urine, especially during the night.

Pulsatilla. The child whimpers and is ready to cry at any little annoyance, shedding tears copiously; the child is of a gentle and yielding disposition; the symptoms are somewhat changeable, and the child seems occasionally better and then worse; the symptoms are aggravated as evening approaches; the child seems to have a craving for fresh air, and cannot bear warmth; scanty urine; absence of thirst.

Sepia. The child is in a torpid condition, with great depression of the vital power; the urine has a putrid odor, and deposits a clay-colored sediment, which adheres to the vessel or the diaper.

Silicia. The child grasps at its gums continually, as though they were painful; profuse sweat about the head at night; the child is of the scrofulous diathesis.

Squilla. The child rubs its face and eyes a great deal, especially its eyes, as though to relieve itching; profuse urination; passes much urine.

Stramonium. The child, when it awakens, seems to be afraid of

the objects near it, or it does not notice surrounding objects at all; stupor; great loquacity; merry delirium; desire to escape from the bed and room; grinding of the teeth; glittering eyes; staring look; the stools are dark-colored or black; during a convulsion the head is jerked up from the pillow and falls back again alternately.

Sulphur. In cases when the suppression of an eruption or of otorrhœa has preceded the disease; scrofulous or psoric dyscrasia, which not only has led to the disease, but overshadows the little patient, and seems to prevent his convalescence; flashes of heat; the child gives evidence of having occasional sinking spells, and these come on with great regularity about the middle of the day; great hunger; redness and excoriation around the anus; the child sleeps almost all the time, although only in short naps.

Veratrum alb. The child's forehead is constantly covered with a cold and clammy sweat, and the general surface is cold and damp; the pulse is very small and weak, and the child is greatly debilitated; the child is very thirsty, and desires only ice-cold water or ice; great prostration after a stool.

Veratrum vir. Cold sweat on the face, hands and feet; the skin is shriveled; the child bends its body far backward, amounting to opisthotonos during a spasm; very quick pulse; nervous symptoms.

Zinc. The child has its feet in *constant* motion; distension of the abdomen; constipation, with hard and dry fæces; on awaking the child gives evidences of fear, and rolls its head from side to side; it cries out, starts and jumps during sleep.

Cerebro-spinal Meningitis—Spotted Fever.

Natural History.—As to its scientific determination, Cerebro-spinal Meningitis, or inflammation of the meninges of the brain and spinal cord, is comparatively a new disease. Although described by Sydenham as *Typhus petichialis novis* more than two hundred years ago, it was originally designated as a distinct epidemic disorder by Vieusseux as late as 1805. Its first appearance in America was in Medfield, Mass., in March of the following year. And since then, in Europe, in Africa and upon this continent, it has prevailed as an epidemic at intervals of a few years—sometimes in successive years; besides the numerous sporadic cases which may or may not have been recognized as such by the attending physicians. It has been chiefly observed in young persons and males, although not confined to any age or to either sex. Infants are often seized with this disorder, which destroys life in many cases almost before the physician has time to

ascertain the nature of the affection or notify the parents of the exceeding danger. In some children, and adults even, it has proved fatal in from six to forty-eight hours.* Fortunately, it is neither infectious nor contagious.

Etiology.—The exact nature of the cause or causes of cerebro-spinal meningitis is unknown, as well as its period of incubation. Niemeyer affirms its miasmatic character from observation and experience in Europe.† According to Dr. H. M. Paine, this disorder is especially prevalent in warm and damp seasons; this, together with other similar facts, points to a malarious origin. It appears in the latter part of winter and spring much more frequently than in any other seasons of the year. In Alabama a very large proportion of all the cases occurred in low, moist localities and during wet weather. In Missouri it prevailed with great fatality in a region that had previously been overflowed by the river; and in many places in New York State its origin was clearly ascribable to miasmatic influences.‡ Dr. Kempf, of Indiana, observed that it seemed to be checked by mild weather—that is, as a spreading epidemic—but reappeared upon the occurrence of a damp, chilly atmosphere.§

Drs. Watson || and Woodward ¶ discountenance the idea of the malarious nature of the cause of this disorder. But the two following practical observations may be deemed sufficient to sustain the opinion already advanced: First, the disorder is developed in hot and dry tempera-

* Dr. Armstrong (allopathic) states that in his very extensive observation of the disease among the soldiers and laborers in and around Mobile, he never saw a single case recover.—*Am. Jour. Med. Sci.*, 1866, p. 280.

Of over one hundred cases of cerebro-spinal meningitis which occurred in Lewis, Clay county, Indiana, in the spring of 1873, only thirteen recovered, and these were saved, not by the "regular" practice, but "by a sweating process with boiled corn."

In a report made to the Boston Medical Society in 1866, it is stated that in two hundred and seventy-eight cases allopathically treated, one hundred and seventy proved fatal.

Per contra, Dr. S. Lilienthal reports having treated, during the winter and spring of 1872, ten cases of this disorder, of which only one was fatal.—*Trans. Am. Inst. Hom.*, 1872, p. 330.

Dr. J. H. Baker reports the care of about sixty cases in all stages and in all degrees of malignancy during the past seven years in Western New York, losing none.—*Hahnemannian Monthly*, vol. viii., p. 42.

† *Text Book of Practical Medicine*, New York, 1870, vol. ii., p. 219.

‡ *Trans. of N. Y. Hom. Med. Society*, 1864, p. 132.

§ *Am. Jour. Med. Sciences*, July, 1866, p. 55.

|| *Trans. of N. Y. Hom. Med. Society*, 1864, p. 127.

¶ *U. S. Med and Surg. Journal*, July, 1872, p. 401.

tures as well as in those warm and moist,* and this is equally true of diseases confessedly malarious. Second, the almost invariable commencement of the disorder with a chill, the more or less constant recurrence of the chills in protracted cases, and the seat of the chill itself—taking its rise in the posterior spinal nerves, and finding much of its ultimate development in the liver—would seem to afford sufficient cumulative proof of the malarious nature of this form of meningitis. And it has often been the experience of the writer to see in malarious districts cases of this kind which were at first mistaken for simple intermittents. This great similarity of the two diseases—which goes far to prove the miasmatic origin of the former equally with the latter—has been remarked by many observers. Says the Indiana physician already quoted, "I have visited patients in whom the analogy between intermittent fever and the disease under consideration was so perfect that the most circumspect would be deceived. The intermittent character of the disease, the herpes about the mouth, and the 'spots' or petechiæ which appeared in the epidemic intermittent fevers of the summer and fall of 1865, would seem to indicate some kind of relation between the two diseases—cerebro-spinal meningitis and intermittent fever." † One more circumstance which should be borne in mind in considering the etiology of this form of meningitis we state in the language of Dr. Comins of Massachusetts: "I have found, on careful examination of about one hundred cases, both by personal observation and the assistance of others, that about ninety-five *per cent.* of the cases in New England were of strumous diathesis." ‡

Course.—In those cases which are sufficiently protracted to allow a progressive development of the symptoms, the orderly course of this disease very much resembles its analogue, simple meningitis, the more remarkable difference consisting in the earlier addition of cervical and spinal affections, such as tenderness and opisthotonos, which, indeed, may appear almost from the very first. Cerebro-spinal meningitis is, however, so much more immediately violent and prostrating that many of its symptoms of the first forty-eight hours equal in severity the corresponding symptoms of pure meningitis of a whole week's duration. In its simplest form, cerebro-spinal meningitis is a conges-

* According to Dr. Wolford, spotted fever prevails most extensively when the atmosphere is unusually clear and dry.—*North Am. Journal of Hom.*, xiii., p. 145, quoted by Dr. S. Lilienthal, *Trans. of Am. Institute of Hom.*, 1872, p. 328.

† *Am. Jour. of Med. Sciences*, July, 1866, p. 62.

‡ *Trans. of N. Y. State Eclectic Med. Society*, 1869–70, p. 492.

tive fever, ushered in by a chill, and resulting in effusion with its ultimate consequences. The reaction, like that of other fevers, may be of higher or lower grades—simulating the inflammatory, the typhoid or the typhus form—according to the quantity and quality of its producing cause, and to the nature of the individual constitution in which it is developed. Hence the immense variety of the symptoms, far exceeding what may come within the observation of a single physician—exceeding even the totality of those presented in any particular epidemic.

This variety—which we have endeavored adequately to represent by collating the reports of many observers, in addition to what we have ourselves witnessed—is rendered still greater by the extension of the disorder through a nervous centre that involves the entire system. The manner in which this extension naturally produces symptoms so various and universal is well illustrated by those resulting from pressure artificially applied to different portions of the affected spine. "Pressure made upon the cervical portion of the spine produces pain in the head, frequently darting to the forehead, eyes and temples, and also to the top of the sternum. Pressure on the dorsal vertebræ produces pain in the middle of the sternum, at the epigastrium or in the abdomen, according as the pressure is exerted at a higher or lower portion of the spine."* Whatever section of the meninges is primarily affected, it would seem that the *posterior* or *sensory* spinal nerves are implicated—producing hyperæsthesia and intense pains—before the disturbance of the *anterior* or *motor* spinal nerves results in muscular contractions, spasms or paralysis. And in this direction is observed much of the analogy between intermittents and cerebro-spinal meningitis which so strongly indicates the malarious origin of the latter disorder.

Complications.—Hahnemann has shown that two dissimilar diseases cannot exist together in the same system ;† but in later times we have seen the combination of different disorders, which, however unlike in their original cause, have a similar development. Such is the case with scarlatina and diphtheria. And just as two dissimilar and even antagonistic chemicals will combine in the presence of a neutral *tertium quid*, so may these two diseases, and others, in like manner,

* Wm. H. Watson, A. M., M. D., *Trans. of N. Y. Hom. Med. Society*, 1864, p. 127.

† *The Homœopathic Medical Doctrine, or Organon of the Healing Art.* A System of Physic. Translated from the German of S. Hahnemann, by Charles H. Devrient, Esq., with notes by Samuel Sutten, M. D., Dublin, 1833, pp. 121–126 (first English edition of the Organon).

find simultaneous entertainment and development in a scrofulous constitution. But whether in the case of some great disease the concomitant presence of another disorder be owing to dissimilarity of cause or to similarity of development, it becomes important in such cases to be aware not only of the complications most likely to arise, but also of all that may appear.

In addition to the particular morbid affections and conditions whose *tout ensemble* makes up the disorder called cerebro-spinal meningitis, and which we have arranged under the head of "Symptomatology," there are other distinct groups of symptoms or forms of disease, which may have existed in the system previous to the accession of this disorder, and so continue on with it, or which may arise during its course. These additional affections cannot but complicate the whole case in such a manner as to render the diagnosis more difficult, the prognosis more doubtful and the treatment itself more dangerous; for in these severe and mixed diseases the conscientious physician finds himself embarrassed at every step, lest the remedy, however carefully selected to suit the whole case, should mitigate one class of symptoms only to intensify and render fatal another.

The pre-existence of *ague*, which in some instances seems to run into this form of meningitis, leads to a very troublesome complication. Difficult *dentition*, whether considered as a cause or as a concomitant merely of the disease in question, by reason of its persistence is still more to be dreaded. Of ninety-eight hospital cases reported by Dr. Githens,* four were complicated with *bronchitis*, of which one proved fatal; three with *pneumonia*, two of the right side, of which one proved fatal; one with *pleuro-pneumonia* of the right side, fatal; one with *pneumonia* and free epistaxis, fatal; one with pre-existing *pneumonia* of the right side and *puerperal convulsions*, fatal; one with *double pneumonia* and *pericarditis*, convalescent on the thirteenth day; two with *puerperal peritonitis*, both fatal; one with *scrofula* (white swelling of the knee), fatal; one with *pharyngitis*, convalescent on the fourteenth day; one with *circumscribed pneumonia*, coming on in the second week, convalescent on the twentieth day; and two with *delirium tremens*, one convalescent on the fourteenth day, the other in four weeks —deafness remaining for both.

Diagnosis.—The diagnosis of cerebro-spinal meningitis varies in difficulty and in the indications upon which it depends according to the age of the patient and the stage of the disorder itself. In the case of young infants, especially when first attacked, there may be

* *Am. Jour. of Medical Sciences*, July, 1867, p. 17.

little else than the excessive painfulness on being touched or moved, and the constant moaning and distress, to show the exact nature of the disease. But these symptoms will suffice to excite suspicion, particularly when the case is otherwise obscure, and to render the physician doubly cautious in his prescription. To start right is obviously of the first importance, or else by the time the error is discovered it may be too late to save the little sufferer. In children and older persons there are but two symptoms which, taken by themselves, may be considered as pathognomonic; these are the peculiar *soft white fur on the tongue, with clean tip and edges*, and the *opisthotonos* or *torticollis*. But with either of these symptoms will usually be found plenty of others corroborative; while both of them may be wanting in cases where the totality of the symptoms leaves no room to doubt the nature of the disease. The remarkable violence of the primary attack, conjoined to the great obscurity of the whole case or total absence of any sufficient cause, may lead to the apprehension of the disorder in question. When the initial symptoms are still more pronounced and severe, although no one or even two of them may determine the nature of the disorder, the whole will speak in language too plain to be misunderstood by any physician, however inexperienced in this kind of pestilence, who shall have perused the résumé of symptoms presented in a subsequent portion of this article.

From diphtheria, which resembles cerebro-spinal meningitis in its prostration and certain cervical symptoms, the latter disease may be distinguished by the absence of false membrane in the fauces; from typhoid fever by the petechial eruption appearing very much earlier in the former disease than in the latter;* and the same early and even sudden onset of the gravest symptoms which characterizes severer forms of this disorder will also serve to distinguish it from the more gradually-arising simple meningeal or cerebral affections. The unusual sensibility and rigidity of the cervical spine will preclude the possibility of mistaking the nature of any cases presenting these symptoms. Of course there is little danger of such a mistake during the prevalence of the epidemic disorder. Indeed, so powerfully does the epidemic cerebro-spinal meningitis influence the general health that, in the language of Dr. O. P. Baer, "From the commencement of this disease to the present time all our diseases of whatsoever type

* In cerebro-spinal meningitis the eruption may appear in the first two or three days, seldom before the third week in typhoid fever. Dr. William Cole, London, 1702, mentions a case of epilepsy reported by Dr. Hobart, in which "the paroxysm ends in a great many red spots upon the forehead, which in a day or two turn black."

or order have had more or less of its marked characteristics, such as sudden attacks of stupefying, paralytic pain in the nape of the neck and down the spinal column, accompanied with violent, throbbing headache extending from the occiput to the coronal region, often sending radiating pains around the whole chest, and even down the arms." *

The real need of accurate diagnosis is for those sporadic cases which, arising unsuspectedly, occur in constitutions most predisposed to this kind of disorder, and therefore most liable to succumb to its influence. It is in order to provide against such contingencies that we have arranged in a schedule, corresponding to that of the Materia Medica, the symptoms compiled from more than two hundred cases hitherto recorded or occurring in our own practice. From cases reported by allopathic physicians those symptoms alone are taken which presented themselves before any treatment was commenced. In some few instances, as will be observed, mention is made of the day on which the particular symptom first made its appearance. This plan, if carried out, might show the progressive development of the disorder in the less violent class of cases, but it would be found of little practical utility on the whole, since in many instances the gravest symptoms, those apparently of the most advanced stages, appear on the first day or two, sometimes even from the very onset of the disease.

Prognosis.—The prognosis of cerebro-spinal meningitis should always be very guarded. Much will depend upon the skill and experience of the attending physician. The extremes of allopathic mortality and homœopathic success may be found stated in notes at the beginning of this chapter. Recently we were called to treat a babe of nine months who had vomiting and diarrhœa, cough, excessive sensibility of the abdomen and whole body, intense thirst, bending backward of the head, stiffness of the neck and spine, petechial eruption and convulsions; these latter, however, were not very prominent, and seemed to result from debility; the mother could not lift the child from the cradle without bringing them on. As convalescence set in the little patient was tormented, especially at night, with a bad cough and soreness in the lungs, but at the end of the second week he was able to be placed on the floor by himself. This case is given to show the possibility of recovery even under hopeless circumstances. We add another, reported by Dr. J. F. Baker of Batavia, New York:

"A lad of eight years, when at school, suddenly grasped his knee

* *Medical Investigator*, vol. ix., p. 530.

with his hands and screamed fearfully. Immediately afterward he was seized with convulsions and insensibility, the head being permanently retracted. There were high fever, vomiting, dilated pupils, double vision, ashy paleness of the face, one diarrhœic stool, and then constipation. Cicuta v.^{2c}, once in two hours to once in twenty-four hours, cured in four days." *

Pathology.—From notes of ninety-eight cases of epidemic cerebro-spinal meningitis,† reported by Dr. Githens, we take the following pathological résumé: "The post-mortem examination of several cases revealed marked evidences of blood-poison, with inflammatory tendency. The membranes of the brain were congested, there was serum in large quantity in the subarachnoidean spaces, at the base of the brain and within the membranes of the spinal cord. Fibrin was deposited along the margins of the longitudinal fissures of the brain, about the commissure of the optic nerve, in fact, freely all over the base of the brain; and in one case it could be separated in masses weighing from three to five grains from within the fissure of Sylvius, where it had firmly glued the two surfaces together. The quantity of this deposit of fibrin, its color, consistence and strength of attachment, were influenced chiefly by two causes observed during life. In some cases where the inflammatory symptoms were of an active character, as shown by the congestion of face and eyes, the character of the pulse and the violence of the delirium, death occurred early, and an autopsy showed little or no deposit of solid lymph, but a large quantity of serum, and in one case pus, in all the serous cavities connected with the brain and spinal cord, with turgescence of all the vessels of the pia mater and nervous substance. If, on the other hand, death did not intervene so quickly, there were deposits of fibrin, becoming larger, firmer and more adherent in proportion to the grade of inflammatory action and the time allowed for its coagulation. The deposits were of the same character as those found in the cavity of the abdomen after an attack of peritonitis. No particular lesion of the cord itself was noticed; the membranes were congested, and there were small deposits of fibrin about the roots of the spinal nerves. The erector-spinæ muscles were darker than normal, and softened. The blood was fluid, of the color and appearance of port-wine lees; under the microscope the corpuscles were shriveled and crenated, and there was a space apparent between them, as they were arranged in rouleaux. There were, in two cases, white, firm fibrinous heart-clots extending

* *Hahnemannian Monthly*, vol. viii., p. 42, August, 1872.

† *Am. Jour. of Med. Sciences*, July, 1867.

through both ventricles and auricles, and into the vessels leading to and from the heart."

The particular results of post-mortem examinations in three cases are thus summed up by the same author: 1. "Very extensive deposits of fibrin and about five ounces of serum at the base of the brain; spinal cord congested, with deposit of fibrin beneath the arachnoid; a small quantity of pus round the cord in the cervical region." 2. "Large masses of closely adherent lymph at the base of the brain and on the medulla oblongata." 3. "Large quantities of tough, adherent lymphy deposits at the base of the brain."

"I have ascertained," writes Dr. J. H. Bennett, "that what is generally called a recent layer of coagulable lymph covering the convolutions in meningitis is in point of fact a layer of pus."*

Sequelæ.—In order to bring the "symptomatology" in closer proximity to the "therapeutics" of cerebro-spinal meningitis, we place both the "pathology" and the "sequelæ" out of the natural order.

Parotidis, pneumonia, and even *bed-sores,* have been mentioned as among the consequences of this disorder. But the more direct and constant sequelæ may be arranged in three classes: The first, including all *paralytic* symptoms—of "the lower limb," "left foot" or other parts—reminds one of the analogous effects of diphtheria. The second (*deafness*) is equally suggestive of typhoid fever. The third (*loss of memory*), as a permanent result of acute disorder, is believed to be peculiar to the disease under consideration.

Symptomatology. — *Sensorium.* — Delirium. Muttering delirium. Wild raving delirium. Wild and at times uncontrollable delirium, with jactitations, startings and incoherent cries. Constant delirium (first day); seems terrified with fearful apprehensions of impending evil. Wakes delirious; her mind wanders; she is apparently delirious, but on being questioned rouses up and answers correctly. Slightly delirious all night, talking quietly about his family and business. Talkative delirium. Walking and talking delirium. Delirium on the evening of the first day, with frequent spasms during the night. Violent mania the second day; constant moaning and talking for forty-eight hours; the spine was completely arched, the hands thrown wildly about, and he screamed so that he could be heard some blocks away. Mind perfectly clear in an adult, although

* *Clinical Lectures on the Principles and Practice of Medicine.* Third edition. Edinburgh, 1859, p. 345.

For further discussion of the various products of disease in the base of the brain, see *Hahnemannian Monthly,* vol. iv., pp. 194–197.

there is a slight deafness; face wears a peculiar anxious expression; the corners of the mouth are drawn down; eyelids widely open, giving the eyes a staring appearance; the patient watches very narrowly the motions of his attendants, moving the eyes to keep them in view, although the head remains in one position. Delirium, usually cheerful, singing or laughing, occasionally, however, screaming loudly, then relapsing for a short time into low muttering; he had many short lucid intervals, and then was usually free from pain. Gentle, wakeful delirium, or comatose, with low muttering. Stupor; never speaks except to answer questions, and then quite slowly. Sight, hearing and consciousness are evidently seriously impaired, and he appears to be verging upon a complete comatose and tetanic condition. Muttering and talking aloud all night until 9 A.M., fifth day —a patient that finally recovered. Stupid; answering slowly when spoken to; perfectly indifferent to all surroundings; half conscious; moaning while asleep; complains of general *malaise;* pulse weak; expression stupid and heavy. Stupor, with low muttering delirium; sensitive to light and noise. The child screams from the violence of the pain. Trembling as if the child were frightened and on the verge of spasms. (Verat. viride.)

Loss of memory and *deafness* as sequelæ.

Head, Neck and *Back.*—Headache; obstinate headache; *violent headache;* headache increasing during the day; became almost insupportable toward evening; the pain is constant, very severe, lancinating, "jumping," in all parts of the head, especially in the region of the ears. Frontal headache; stupefying headache, with pressure in the eyes. Intense cephalalgia, with a feeling in the frontal region as if the head would burst; the pain was continuous and increased by light and sound. Fulness in the occiput—the veins feel as if ready to burst; no pain in the forehead. Sensation in the occiput as if he had received a blow. Headache sharp and neuralgic, varying in location at first, but soon becoming settled in the occiput, followed by the backward drawing of the head; severe chill; terrible headache, extending from the occiput all over the brain, especially severe in the temporal regions; inability to bear the least noise or light; *head drawn backward;* complained of headache, and was delirious; head drawn back upon the shoulders. *Violent spasms; head drawn back upon the shoulders.* The pain in his head, he said, resembled the compression of a band of iron. Pain and tenderness in the neck along the back; pain in the head described as very intense, and located in the occipital and temporal regions; continued intense headache; *vertigo.*

Pain at the first cervical vertebra, with sensibility to touch; tonic spasms of the muscles of the neck, drawing the head back, and great tenderness of the cervical region of the spine; muscular pains in the neck and back, with stiffness of legs and back. *Neck rigid.* Neck stiff and sore; pain on pressure over sixth cervical and second dorsal vertebræ; hips very painful and drawn back.

Rigid spine. Pain on pressure over the lumbar vertebræ; pain in the head, back, shoulders and legs on pressure over third dorsal vertebra; muscular pains in limbs, back and neck; head, neck and back involved; the disorder commences with a violent chill, darting pain through the head, pain along the spine and bilious vomiting; *pain on pressure along the entire length of the vertebral column;* the whole spinal column stiff and immovable, and severe pain in the head; pain and soreness in the back of the neck and occiput; neck rigid and drawn back upon the spine; strongly inclined to opisthotonos; the face is turned to the right side, and cannot be moved without greatly aggravating the pain (fourth day). *Opisthotonos,* in various degrees in different cases. Slight opisthotonos with subsultus. Marked opisthotonos, body forming an arch. *Opisthotonos so marked that the body formed a bow, resting on the head and heels. Torticollis,* neck stiff and sore; face turned to the left side and back upon the spine, strongly tending to opisthotonos (seventh day). Pain commencing in the back and progressing upward toward the head; lies almost constantly upon his back; is unwilling to be moved (fifteenth day). He lies on his back with his face turned to the left side, and his head cannot be moved to its natural position or raised from the pillow without producing great pain; his right arm describes almost a complete circle several times a minute; it is raised from his side to his head, the dorsal surface of his hand passing across his forehead, and then down to his side, where it is allowed to remain for a few seconds; his right lower extremity is almost incessantly in motion; it is flexed, then extended outward, rendering it extremely difficult to keep him covered or in bed (third day).

Picture of a closing scene, a man who died on the 22d day: "at three P. M., unconscious since morning; head thrown back; retroversion of the eyes; sclerotica much inflamed; left side paralyzed; *right hand in constant motion;* would swallow to 7 P. M.; hiccough constant; breathing stertorous; vomiting and subsultus tendinum; death at 11 A. M. *Face and body became spotted all over soon after death.*" *

Eyes.—Intolerance of light. Eyes congested. Eyes injected, with

* *U. S. Med. and Surg. Journal,* July, 1872, p. 497.

a brilliant and wild look; pupils contracted and very sensitive to the light. Eyes injected and rolling about the sockets, with vacant expression. Chemosis of the right eye; ecchymosis of the left. Conjunctiva injected, and the whole surface of the body acutely sensitive. Conjunctiva deeply congested, with photophobia and a secretion of pus around the corner of the right eye; beneath the conjunctiva occurred a large effusion of blood, disappearing on convalescence. Pus flowed from the eye on the third day.

Eyes closed; pupils contracted. Eyes tightly closed; marked photophobia, pupils very much contracted. "Pin-head pupils." Pupils contract and dilate unequally. Pupil contracting and dilating by turns; on the approach of light it would contract for a moment, then immediately dilate again. The right pupil contracted, the left dilated, and appeared to dilate more under the influence of light. Eyes wild and injected; the pupils contract, but oscillating. Pupils dilated, and next contracted on exposure to light. *Double vision.* Pupils fully dilated, but contract upon the application of strong light, to which the eyes are quite sensitive (first day). Pupils largely dilated, but there is no photophobia (second day). During the first week the patient was excessively annoyed by double vision; one or both eyes were most of the time turned toward the inner canthus. Photophobia so great that he kept his eyes closed almost constantly. *Relief from keeping the eyes closed.* Double vision; eyes have a peculiar vacant look (sixth day). Sight and hearing both much impaired. Eyes prominent and *staring*, and corners of the mouth drawn down. Wild look of the eye. Eyelids partially closed; eyes injected and rolling about the sockets; pupils contracted. *Twitching of the muscles of the eyelids*—not of the eyeballs. Bright spots before the eyes; disposition to become frenzied with headache, with pricking and numbness of the hands and feet. *Strabismus*, indicating an advanced stage or very severe form of the disease. Loss of vision; eyes no longer sensitive to the light. Total blindness and deafness several days before death.

Ears.—Intolerance of sound in the earlier stage. Partial deafness (sixth day). Total deafness in the last stage of the disorder. Considerable pain in the right ear, rather more than in the other parts of the head. Left ear deaf (eleventh day). The parotid glands were inflamed and suppurated; the right opened spontaneously into the ear; the left was lanced, very free discharge; deafness. Deafness is a not uncommon sequela.

Nose.—Epistaxis, two or three times in the night (third day).

Repeated epistaxis. Frequent and constant epistaxis. Epistaxis and pneumonia as a complication.

Face.—Face flushed. Expression dull and anxious. Countenance stupid and heavy, and seems indicative of pain. Eruption of erythema and petechiæ on the face only. Petechial spots on the face and thorax, on the face and other parts. Ashy paleness of the face.

Mouth, Tongue, Teeth and Jaws.—Corners of the mouth drawn down. Lips dry and cracked. Tongue red in the centre, white on the borders. Tongue feels so sore that she cannot eat. Vesicles on the tongue. The tongue is at first clear, moist and enlarged, and covered with a white skin; soon it becomes coated with a black, dry crust; sordes form on the teeth. Constantly grating his teeth (second day). *Tongue coated with soft white fur, but clean on the tip and edges. Tongue coated with moist white fur, but clean at tip and edges; afterward dry and brown* (age 46; pulse 125; died on the third day after admission to hospital). Tongue brown and dry, with clean edges. Tongue dry and brown in a case resembling typhoid fever, but with eruption which was petechial in character from the very first. Tongue pointed, dry, cracked and tremulous, but coated with a thick tenacious mucus. Tongue brown, dry and bleeding. Tongue brown and pasty. May be fissured or cracked. Tongue and breath cool, the former swollen and slightly coated. Tongue slightly coated and yellow. Tongue first whitish, then thick, brown and dry. The jaws were set firm part of the time, then they could be pried open.* Pain in the inferior maxillary bone. Does not articulate distinctly; speech slow and thick. Dumbness. In the more grave and malignant form of the disease the tongue may be broad and flabby, and indented round the edges by the pressure of the teeth. Tongue coated brown in the centre; brown and flabby; broad and flabby. When requested to put the tongue out, did so, but allowed it to remain without returning it. Tongue, previously clean, is covered on the third day with a light-brown coating in the centre, with white edges. Large, flabby tongue. Tongue coated light brown; increased flow of viscid saliva. Tongue coated white, moist, quite swelled and sore on the right side, as if it had been injured. Excessive flow of viscid saliva. Considerable secretion of thick, viscid mucus from the mouth (nineteenth day).

Throat and Larynx.—Sore throat is frequently a premonitory symptom. Dysphagia. Dryness in the throat with dysphagia. He

* H. Bennett, M. D., *N. A. Jour. of Hom.*, August, 1867, p. 9.

complained of sore throat, and on inspection a deep blue color of the whole mucous surface of the pharynx was discovered.

Severe dry cough, often a precursory symptom. Cough, with pain in the hypogastrium. Cough excited by irritation in the chest. Cough and headache, with high fever in the early stage of the disease. Cough aggravating the pain in the head and neck. Coughs more at night. Cough with expectoration of blood, at first coagulated, then bright. Expectoration of mucus and yellowish matter streaked with blood.

Appetite—Thirst.—Loss of appetite. Appetite very good at intervals of the unconscious state, even in the advanced stage of the disease and in hopeless cases.* Thirst.—Slight but continual thirst which water would not relieve. Severe thirst. *Insatiable thirst.*

Stomach.—Distress in the stomach, nausea and bilious vomiting. Vomited (first day) every hour or two during the night, until 8 A. M., a green watery fluid; vomiting of very green fluid commenced in the P. M. of the second day. Vomiting all day. Frequent vomiting. Daily vomiting. Nausea, with severe chill. Nausea on motion. Occasional vomiting of bilious matter, with pain commencing in the back and progressing upward toward the head. During the night he vomited occasionally a green bilious matter. Vomiting of dark-colored matters (toward the last).

Abdomen.—Abdomen, chest and thighs thickly covered with a reddish-brown petechial eruption. Abdomen covered with an eruption consisting of small round reddish-brown spots about one-quarter of an inch in diameter. Petechial mottling on the abdomen and thighs. Slight hyperæsthesia over the abdomen. She complained of pain in the head and lower part of the abdomen—the latter not very acute. *Marked abdominal hyperæsthesia.* Abdomen rather sunken in. "Abdomen caves in." "The belly is sunken." Bowels perfectly flat and shaped like a boot.

Stool.—Constipation. Constipation, although diarrhœa preceded the vomiting at first. Five small but thin and dark-colored stools daily. Diarrhœa. Involuntary evacuations.

Urine.—Urine normal. Urine scanty and high-colored, and retained in some cases. The urine continues to be secreted, but the bladder becomes insensible to its presence, necessitating the use of the catheter. Urine dark, sufficient in quantity (fifth day). Suppression of urine (fifth day). Eleventh day, dysuria, milky, scanty urine. The third and fourth weeks were marked by entire inability to

* Compare a similar condition in meningeal tuberculosis, *Hahnemannian Monthly* vol. vii., p. 207.

urinate; the secretion was abundant, however, and was removed by means of the catheter. Incontinence of urine from paralysis.

Chest.—Respiration increases to thirty or forty per minute. Respiration irregular and very laborious. Respiration labored and very noisy. Mean range from twenty-four to forty per minute. Very irregular in many cases; sometimes slow. A few rude and moist râles in different parts of the chest. Complicated with bronchitis; death on the twelfth day from choking up of the bronchial tubes with thick mucus. On applying the ear to the chest the bronchial sounds were dry and metallic. Most violent bronchial cough, with expectoration and blood, in an old man. Irritation of the chest, exciting cough. Complicated with double pneumonia and epistaxis. Bronchial complication in many cases. Coma, with labored, stertorous respiration.

Female Sexual Organs.—Great and distressing bearing down. Menstruation comes on, from which she had but just recovered the week before. *

Extremities.—Pain in one or more of the extremities of a violent character. Some hyperæsthesia of the upper limbs, but no impairment of motion. Hands constantly clasped together. His right arm describes almost a complete circle several times a minute; it is raised from his side to his head incessantly. (See "Head, Back," etc.) *Subsultus tendinum* lasting for a week in a man who recovered. Great sensibility of the lower extremities and pain in them; some sensibility of the upper extremities; moans. Extreme sensibility of the lower extremities; cannot bear the slightest touch on any part of them; screams when they are touched. Muscular pains in legs and arms. Pains in the calves of the legs, gradually traveling upward through the thighs and back until it reaches the head. Extremities cold, except in the exacerbation of fever. *Coldness of the lower limbs;* coldness of the surface; hands cool; skin cold and clammy; hands and feet cold. (See "Fever" and "General Symptoms.") Very restless, constant motion of the arms and limbs; rapid movement from side to side (third day). Spasmodic twitching of the extremities while asleep. Slight twitchings of the extremities. Paralysis, with pain and soreness of the feet and limbs, from the fourth to the eighth week. The child grasps or pulls at its hair with its hands.† Frequent picking at the bed-clothes and reaching after imaginary objects (third day). Paralysis of the left foot as a sequela. Constant picking at the bed-

* Chas. H. Carpenter, M. D., *Trans. of N. Y. Hom. Med. Soc.*, 1869, p. 768.

† H. F. Adams, M. D., *Trans. N. Y. Hom. Med. Soc.*, 1868, p. 379.

clothes and other clothes and whiskers of her husband while near her; seems to be reaching for something. *

Sleep.—Slept uneasily, moaning while asleep; when aroused would grasp her sister with a sort of spasmodic movement, then become quiet and fall asleep again (when first taken). Complains of being unable to sleep day or night. Sleep comatose, or very distressing and exhausting on account of frightful dreams. Morbid vigilance, ending in coma. Coma, with labored, stertorous respiration. Convulsions and coma alternated (third day). Stupor and coma were constant several days before death. Appears to be asleep, but if spoken to opens her eyes and replies.

Fever—Pulse.—High fever, pulse 130 and small. Pulse increases from 95 in the A. M. to 110 P. M. Pulse 140 to 150. Pulse slow and of little volume—not over 50 per minute. Temperature low. Pulse very slow, sinking sometimes to 48 or 50 per minute. *Pulse perfectly normal* (when comatose, blind and deaf), a very unfavorable symptom. † The pulse is at first slow, then accelerated, but diminished in volume and strength; respiration is slower than natural in many cases; the skin has almost always at the beginning an abnormally low temperature. Pulse strong and irritable, varying from 116 to 120. Pulse 100 in A. M., 112 P. M. Pulse entirely imperceptible. Pulseless, with unconsciousness and cold surface.

When first taken he was suffering from a very intense and prolonged chill, his teeth were chattering, and he was trembling with cold; the whole surface of the body was blue. Chill every second day, followed by high fever; then fever followed by sweat. Frequent recurrence of chills in the course of a protracted case; chill in the P. M. of the 7th, 16th, 18th and 24th day in a patient who recovered.‡ This disorder may follow and apparently result from intermittent or malarious fever. Some cases, however, which were at first supposed to have originated in ague, are found to have been in reality spotted fever from the first, the chill being no more than belongs to this latter disorder.

Great coldness of the surface. Remarkable coldness of the lower limbs (afterward of the whole body), and yet the child will not bear to be covered; if the clothes are drawn over her, even when she is apparently asleep, she immediately becomes restless and kicks everything off.

Skin.—Purple spots on the legs; dark, petechial eruption in pretty

* J. T. Wallace, M. D., *Trans. N. J. Hom. Med. Soc.*, 1870, p. 442.

† *Am. Jour. Med. Sci.*, July, 1866, p. 56.

‡ H. M. Paine, M. D., *Trans. of N. Y. Hom. Med. Soc.*, 1867, p. 132.

large spots all over the body. Early in the disease, in some cases, the first symptoms pointing to a grave form of the disease are the appearance on the face and thorax, also on the extremities, of petechial spots, varying in size and number; in some instances there are but few spots, and these rather obscure; in others the whole surface is covered. In a few cases this eruption was absent until after death, and in one or two cases it was not observed at all.* The eruption appearing only after death will mostly occur in the case of young infants, whose delicate systems succumb to the disorder before its ultimate pathological changes are manifested. The petechial spots are due to the failure of nerve-power to carry on the capillary circulation.†

Eruptions of bright cherry spots over the whole surface of the body, more numerous on the hands and arms; chest and abdomen thickly covered with an eruption consisting of small round, reddish spots about one quarter of an inch in diameter; chest, abdomen and thighs thickly covered with a small petechial eruption, not at all raised, or disappearing on pressure. Eruption of erythema and urticaria in a case in which the other symptoms were well marked. *Eruption of erythema and petechiæ.* Copious eruptive exanthem, changing to petechiæ. Surface cool, and mottled with purple spots, some as large as a split pea, others again as large as a fifty-cent piece; surface bluish, presenting a mottled appearance; cool and bedewed with damp perspiration. "Dark spots like bruises would appear on the body and limbs, and in some cases in twelve or twenty-four hours the attack would terminate in apoplexy and death."‡ The surface may be dry, or moist as if with some little perspiration.

"On the morning of the ninth day, the third after the chill, numerous irregular, deep-red spots were observed on the whole surface of the body. They varied in size from a pin's head to half an inch in diameter, and were more numerous on the hands and arms than on any other part of the system. The color did not disappear on pressure, neither were the spots sensitive to the touch. They remained four or five days, gradually turning to a deep mahogany color, and finally disappeared." This case proved fatal on the twenty-first day.§

General Symptoms.—Complains of feeling sore and tired in all parts of the system (third day). "So tired" (fourth day). Profound pros-

* B. F. Joslin, M. D., *Trans. N. Y. State Hom. Med. Society*, 1870, p. 430.

† *Hahnemannian Monthly*, vol. iv., p. 251.

‡ L. Stanton, M. D., "Spotted Fever" of Carthage, Jefferson co., New York, of 1865: *Trans. of N. Y. Eclectic Med. Society*, 1868–69, p. 483.

§ H. M. Paine, M. D., *Trans. N. Y. Hom. Med. Soc.*, 1867, p. 134.

tration, much greater than the other symptoms would seem to warrant. Utter prostration and terrible headache. General feeling of uneasiness, with thirst and loss of appetite. *Hyperæsthesia* general or in particular places, sometimes confined to one side or limb. Anæsthesia. Complains of general *malaise*. Every movement is painful. Great suffering, frightful screams and groans almost continuous. Suffers from pains, a buzzing in the head and soreness. Feels cold; skin cool. No pulse to be felt; great prostration and great sensibility to the touch. At intervals the child would appear perfectly well and free from any distress or morbid symptom. Symptoms of the most formidable character may present themselves at the very outset of the disorder, and intermissions of a periodic nature—apparently complete relief from all sufferings—are not uncommon in its course. Involuntary twitchings of the muscles and want of prehension. Restlessness, with much tossing. The child has constant crying and restlessness; head hot, extremities cold; clonic spasms. *Aggravation from being moved.* Cannot be moved on account of extreme sensitiveness to the touch. Remarkable coldness of the lower extremities, subsequently extending over the whole body. Spasms. Unconscious; face flushed; cold extremities, with drawing back of head to right side; spasm about every ten minutes, during which the head would be drawn completely down on the shoulder, also rigidity of the whole body. *Opisthotonos*, with hands clenched and occasional cramps of the extremities. Marked opisthotonos, the body forming an arch. Paralysis. Vital force worn out; death from exhaustion.

Characteristics.—As already stated, some few of the symptoms of cerebro-spinal meningitis are pathognomonic almost individually. Such are the peculiar *white furred tongue with clean tip and edges; tongue swollen, broad and flabby, the early appearing petechiæ, opisthotonos* and *torticollis.*

Of the following, no one or two would necessarily indicate this disorder, but several occurring together would do so very strongly: Headache. Delirium. Sensibility at the base of the brain and painful stiffness of the cervical spine. Eyes congested, staring, double vision, early loss of sight. Deafness. Tongue brown and dry, with clean tip and edges. Sore throat. Cough. Bilious vomiting. Abdomen sunken. Constipation. Great coldness of the lower limbs. Pulse slow or *very quick.* Commencing chill. Severe pains. *Hyperæsthesia excessive*, general or local. Aggravation from being moved, not from self-movement. Prostration. Restlessness; constant motion.

Paralysis, deafness and loss of memory as sequelæ.

Treatment.

Aconite. At the onset of the disease, when there is *much fear manifested*, restlessness, no position is satisfactory, thirst for cold water, active inflammatory symptoms, particularly in plump and full-blooded patients.

Æthusa. Very nervous. Delirium, particularly with visions of dogs and cats. Lancination and throbbing in the occiput. Feeling of contraction of the hairy scalp. The head inclines to fall backward; brilliant, injected eyes; fixed look; lancinating pains down the back. Linea nasalis. Features express great anguish; face puffed and spotted with red. Aphthæ and pustules in the throat. Violent vomiting of frothy matter, sometimes white. Abdomen tight and hard. Constipation; anxious respiration; dark spots more or less numerous all over the body. Great prostration. Irregular or imperceptible pulse.

Apis mel. Great restlessness and tossing which affords no relief. *Crying out* and *screaming* loudly as from stabbing pains. Irritable disposition; *great* pain in the occiput. Sensation of stiffness in the neck and back. *Scanty urine*; great dyspnœa, and sensation as if every respiration would be the last; seldom any thirst; numerous spots or little elevations all over the body, red or purplish. Smoky opacity of the cornea and obscuration of sight. *Constipation.* Stupefaction and stertorous respiration, with an occasional start as if from a sharp pain. Aggravations at night, especially after twelve.

Argentum nit. If there be epileptiform convulsions, each one of which is preceded by great restlessness.

Arnica. Great heat of the head, while the body is comparatively cool. Very restless; sensation of soreness as if bruised. Diarrhœa, often involuntary. Purple spots appear here and there. Frequently awakens with much heat in the head. A low state of the system.

Arsenicum. Great restlessness and frequent calls for cold water, only a sip of which is taken; aggravations at night, after twelve particularly; *much exhaustion* after every movement; cold, chilly, wishes to be covered, even when very warm. Purple spots appear on the skin. At night the delirium, the tossing and the expressions of anguish are truly alarming. There is often cold perspiration and sometimes *cold breath.*

Belladonna. Face is flushed; eyes injected; throbbing of the carotids; skin hot, so as to impart a burning sensation to the hand; great muscular jerking and twitching during sleep; grinding of the teeth; inclination to bite.

Bryonia. Aching all over; head aches as if it would burst; *desires to keep very still; dreads motion, because it hurts, though he must move occasionally.* Very thirsty for large drinks of cold water; worse in the evening till after twelve at night. Pain in back of neck, in the back, at the shoulders and under the shoulder-blades, particularly the right. Purple spots appear on the skin. Constipation of hard, dry, black stools.

Bufo sah. Great anguish; lancinations in the occiput inclining the head to fall backward. Beating of the heart reverberates in the ears. Red or purplish streaks in the neck, back, or in other parts.

Camphora. When there is great coldness and paleness; the skin seems cold as marble, yet the patient does not desire covering; often cramps in stomach, and the pulse small, weak and slow.

Cicuta vir. Moaning and complaining; pupils dilated or contracted; dumbness; deafness; dysphagia; ashy paleness or bluish face; cramp in the muscles of the neck, with inability to move or turn the head; head drawn back, with stiff neck. Trembling or starting and jerking of limbs; irregular respiration; starting at the least noise; violent jerks in any part or throughout the whole body; rigidity of the spine; strangulation on attempting to drink; violent convulsions, after which the patient lies as if dead for some time; trismus in some cases.

Cantharis. Paroxysms of rage and fury; pain deep in the brain, with an expression of great suffering in the countenance; the base of the brain is the chief point of pain. Urine dribbles or passes in drops, with burning, cutting pain.

Cocculus Indicus. Violent headache with persistent vomiting; vertigo and semi-consciousness; painful stiffness of the neck when moving it; complete paralysis of the lower limbs.

Cuprum. When the convulsions commence distinctly in the extremities.

Gelseminum. When the attack is ushered in by blindness, then headache and a feeling as if a band were around the head; hardness of hearing; loss of speech or very weak voice; trembling and weakness of limbs; drowsy; itching of head, face and neck; if perspiration sets in, it relieves the symptoms.

Glonoine. Pains seem to ascend from the chest and neck to the occiput; pain the whole length of the spine; oppression of the chest; blindness, with faintness and nausea; congestion to the head with sense of expansion. Can't bear heat about the head.

Hydrocyanic acid. Insensibility, with half-open eyes, dilated, immova-

ble pupils; roaring in the ears; bloated and bluish face; tongue paralyzed and sometimes protruded; loss of speech; rattling, slow respiration; heat in the head; general coldness of the body; great prostration.

Hyoscyamus. Indomitable rage, horrible anguish; complains of having been poisoned; loss of consciousness; loquaciousness; staring and distorted eyes; cannot see; bluish or brownish-colored face; trismus; foam at the mouth; inability to swallow; retention of urine; stiff neck, sometimes with torticollis; brown or black spots or vesicles on the surface of the body.

Lachesis. Great depression of spirits and apprehension of death; aggravation of the symptoms as soon as sound sleep is obtained; the neck is stiff, and so sensitive that the least touch is painful; blue spots or blue blisters on the skin; epistaxis; hæmorrhage from the bowels, of decomposed blood; great prostration, and very great weariness.

Lycopodium. Desire for company; irritable and peevish on awakening from sleep; headache, with pain extending down the neck; great weakness, lower jaw often hanging down; acuteness of hearing and smell; swelling of tongue; much flatulency; red sand in the urine; pain in back before urinating.

Nux vomica. Tendency to paralysis of the limbs; fear of sleeping on account of the frightful character of the dreams; sudden shocks from some one portion of the body to the brain; hypochondriasis, with irritability of temper.

Opium. Stupefaction; eyes fixed and half closed, immovable pupils; staring, glassy look; face bloated; twitching of the lips; stertorous breathing; intense thirst; abdomen hard and bloated; opisthotonos; hot sweat; twitching and jerking of the limbs.

Plumbum. Great sinking of the pulse, even down to 40, and early paralysis of the limbs.

Phosphorus. Where there are pneumonic combinations indicating this remedy.

Pulsatilla. Mild, gentle disposition; inclined to weep; very restless; no thirst; wishes to have the doors and windows open; pain in the back on swallowing; stiffness in back of neck; much pain in turning the head to either side; sleeplessness with great desire to sleep; almost constant crying out or moaning; cough, with pain in the back; pain in the back at every motion.

Rhus tox. Great restlessness, when every change of position affords temporary relief; feels very tired; bleeding of the ears and nose; pain in the back as if sprained; tearing pain down the legs; feeling of stiffness in muscles and joints; eruptions, with itching.

Stramonium. The patient is either in a supplicative mood, pleading for help, or is very irritable, with raving and disposition to strike, bite, or injure others; staring eyes; shrinking look, as if from fear; raising of the head from the pillow and falling back again; desire for light and company; loss of voluntary motion, stiffness of the whole body, or there may be violent motion of the limbs.

Sulphur. When patients are very liable to relapse.

Tartar emetic. Great drowsiness; nausea; cough with much rattling of mucus; pulse full, hard, quick and trembling.

Veratrum album. Cold sweat all over the body, vomiting, with cramps in the stomach; great thirst for icy cold water; muscles of the neck too weak to support the head. Pulse irregular, very weak and slow; coldness predominates; great debility persistent; there may be also cramps in the legs; wants to escape from the bed; heavy, comatose sleep. Consult also the remedies, and their indications, laid down for *Diseases of the Brain*, page 909.

In this grave disease I have the best success from using remedies ranging from the 200th to the 40^{m}, always withholding the remedy at every amelioration, and usually repeating at every aggravation.

Chorea—St. Vitus's Dance.

Chorea is a disease characterized by irregular spasmodic contractions of different muscles or sets of muscles, especially those of the upper and lower extremities; these irregular movements being not altogether involuntary, while they exhibit an inability to properly co-ordinate muscular movements. It occurs most frequently in children from five to twelve years old, and in girls much more frequently than in boys. The generally rapid growth and the accession of second dentition within the above years are supposed to be, and no doubt are, the chief predisposing causes of chorea. It occurs, however, most frequently in connection with, or as a consequence of, rheumatic fever. "M. Sée asserts, after much examination of this subject, that one-half of the cases of chorea are dependent upon the rheumatic poison. Thus, of one hundred and nine cases of rheumatism admitted into the Hôpital des Enfants, he found that sixty-one were complicated with chorea. Trousseau also states that in his experience rheumatism was undoubtedly the most marked cause of chorea. M. Henri Roger asserts their connection even more strongly, and states that 'the coincidence of chorea and rheumatism is so common a fact that it ought to be regarded as a pathological law, just as much as the coincidence of heart disease and rheumatism.'" Exciting causes are—terror,

irritation, violent mental emotions, such as anger, onanism, dysmenorrhœa of puberty, injuries to the head, worms, etc. The disease has also been known to occur during, or to follow after, attacks of various acute diseases, such as typhoid fever, pneumonia, etc. Pregnancy is a not unfrequent cause of chorea, but the disease thus occasioned has been referred to elsewhere.

The pathology of chorea is very obscure. As yet there has been no anatomical lesion determined with sufficient accuracy to be acceptable as a solution of the singular phenomena presented by the disease. The general results of post-mortem examinations, so far as ascertaining the cause of the disease is concerned, have been decidedly negative.

Symptoms.—The agitation of the muscles is generally confined to a group, usually amongst those of the upper part of the body; sometimes but one side is affected; sometimes an arm of one side and a leg of the other. Sometimes the jerking and twitching, which commences with a single group of muscles, extends until the whole body becomes violently agitated. The patient loses control over the affected arms and legs; cannot convey food to the mouth; walking is more or less difficult, and sometimes even impracticable. The child often falls while walking, or runs in an irregular and zigzag direction, as though by fits and starts. "The convulsive movements of the face and head are not less singular than those of the limbs. The face is distorted into all kinds of expressions, so that it assumes by turns that of the most opposite emotions—sadness, terror, joy or grief. The mouth is opened and shut, or its corners drawn apart, with the greatest irregularity; the tongue is occasionally protruded between the teeth, and sometimes moved rapidly in the mouth, so as to cause a clacking sound; the lower jaw is depressed and elevated, or moved in a lateral direction, and with such violence perhaps as to injure the tongue and teeth. In consequence of the irregular motions of the tongue and mouth, articulation becomes difficult, and the child either stutters or speaks slowly and badly, or can pronounce only monosyllables. . . . While the face and limbs are contorted, the head is moved rapidly from side to side, or backward and forward, or undergoes constant rotation. In severe cases the choreatic movements affect the trunk also, so that the patient cannot lie upon a bed, but rolls and twists about the floor with such violence as to bruise and excoriate the skin."—*Meigs and Pepper.*

The above account describes a well-developed case of chorea, but in some instances the symptoms are developed in a milder degree, while in others they are much worse than those described.

Chorea, as ordinarily developed, will run along for a longer or shorter period if left to itself, until it reaches its height, when the symptoms will gradually subside, and finally disappear. Under homœopathic treatment, however, the disease is greatly mitigated and health is restored, while in others, again, the attack is cut off short by the appropriate medicament, and a cure effected in a few days. Relapses are quite common. It is sometimes a fatal malady, however, especially when attacking very delicate children, or when there is serious cardiac or other involvement. "In fatal cases the symptoms are constantly aggravated; the movements become so violent as to make it necessary to secure the child in bed or in a strait-jacket; the patients, deprived of sleep, become feeble and emaciated; the respiration becomes difficult; intelligence is abolished; the pupils are contracted, and the child dies."

Treatment.—The following remedies are especially useful in the treatment of chorea, but the practitioner should not confine himself to the list here given:

Acon. After a fright and the child remains unnaturally timid; unusual fatigue may have been the cause; much trembling of the extremities; it may have resulted from exposure to a very cold, dry atmosphere.

Agaricus m. Itching spots on the skin like chilblains; a variety of involuntary movements in the waking hours; perfect freedom from them during sleep.

Bell. The motions of the body are generally backward, sometimes quite extreme; boring of the head into the pillow; grinding of the teeth; moaning; injected eyeballs; flushed face usually attends the development of other symptoms.

Calc. c. In leucophlegmatic children; after a fright the child falls down easily; during second dentition.

Caust. Child not exempt at night; often prevents sleep; right side of face and tongue often paralyzed; twisting and jerking of limbs; constipation.

Cina. Very peevish and irritable; picking of nose; ravenous appetite; urine turns milky on cooling; child loses its playfulness, and has no pleasure in anything.

Cicuta. The attacks twist the child into the most curious and sometimes frightful contortions, sometimes causing it to scream out.

Cimicifuga. Besides the twitching and jerking there are nervous tremors apparent; the motions are constant, but confined to one side;

all quiet during sleep; great difficulty in swallowing; often confined to left side, particularly when following rheumatic fever.

Cocc. Right arm and right leg principally affected; all quiet during sleep; legs become more and more useless.

Crocus. Jumping, dancing, laughing, whistling; very affectionate, wants to kiss everybody; nose-bleeding, of dark stringy blood.

Cuprum. The twitchings and jerkings are often perceived to commence in the fingers; cramps often attend; often affect only one side; the attacks are often painful; attacks one side, and then spreads over the whole body.

Hyos. Seems very silly and laughs at everything, sometimes immoderately; head seems to fall from side to side; don't care to be dressed or covered.

Ignat. After fright with grief; worse after eating; relieved by lying on the back; sighing and sobbing are often characteristic.

Laurocerasus. The child seems violent and destructive in its motions; the speech becomes indistinct when the child seems angry because not understood; it can neither stand, sit nor lie on account of the incessant motion; gasping for breath; wasting away.

Lycop. Red sand in the urine or the urine stains everything red; very feverish and fretful, particularly on waking from sleep.

Nat. mur. Paroxysms if jumping up high; jerkings of the right side and of the head; from a fright or the suppression of eruptions of the face.

Nux v. Loss of appetite and constipation; worse in the early morning; despondency.

Opium. Convulsive movements of one or the other arm to and fro; the left arm trembles in paroxysms; constipation of round black balls; the twitchings continue during sleep.

Phosph. During rapid growth tall and rather slender; walks like one paralytic; very weak.

Secale. The muscular twitchings usually commence in the face and spread thence all over the body, sometimes increasing to dancing and jumping.

Sepia. Ringworm eruptions on the skin; stammering speech; constant desire to change from place to place.

Sticta. The disease seems to develop itself mostly in the feet, causing one to dance and jump around; even when lying down the feet move about in the air.

Stram. The motions are rather violent and crosswise; inclination to

pray and beseech; stammering speech, or loss of speech; often puts the hands to the genitals.

Sulphur. Particularly after suppressed eruptions, or if the skin is full of eruptions itching much on warmth; faint, hungry spells.

Tarantula. Chorea, when the movements are very irregular and violent—sometimes cannot speak, swallow, sit, stand or walk, but must lie constantly. Sometimes only right side is afffected.

Veratrum viride. Unusual twitchings and contortions of the body, unaffected by sleep; a little froth constantly at the lips; chewing of the teeth during sleep; difficulty in swallowing.

Zinc. Fidgety condition of the feet whilst lying in bed; jerks through the whole body during sleep, sometimes with screaming.

Infantile Remittent Fever.

That form of disease long known as infantile remittent fever might more properly be designated *typhoid fever*. It is, at all events, a fever having a typhoid type and tendency, whatever may be its occasioning cause, but differing greatly in degree in different cases. It is a disease very frequently met with, particularly during the fall and spring months, seldom attacking children under two years of age, and proving, in some instances, very intractable, even under the most careful management.

The disease commences with languor and debility; the child complains of feeling tired, and will leave its play to lie down on the sofa or floor; there is general malaise and want of childish cheerfulness, loss of appetite, more or less coating upon the tongue, and in some cases there is diarrhœa, while in others constipation exists. After these symptoms have lasted for a few days or a week or more, febrile symptoms are ushered in, frequently commencing with flushes of heat, alternating with coldness and shivering; the pulse is quick and full, there is nausea and sometimes vomiting, headache, drowsiness, red eyes or a heavy appearance of the eyes; moaning, starting and crying out during sleep; muttering delirium; the urine voided is dark-colored and scanty, and if there be diarrhœa the stools are usually dark-colored and offensive, sometimes worms being passed with the stools; the abdomen is distended, and sometimes tender of pressure; the tongue usually becomes red at the tip, and dry. As the fever runs higher the body becomes very hot, the heat being especially great in the palms of the hands, and often in the soles of the feet, and the respiration is short and quick. Sometimes a slight moisture may be perceived upon the skin, which, however, lasts but a short time, and there are frequent remissions of the symptoms, especially the fever, and then a con-

tinuance for some time longer, to be followed by other temporary remissions or gradual recovery. These remissions do not amount to a complete apyrexia, but during their continuance the child seems better and brighter in every way, although in some cases there is more irritability during these periods, with picking at the lips, tongue and fingers, and picking and boring at the nose until it bleeds. After the disease has lasted for ten days or two weeks there may be a more decided period of remission, which will continue into convalescence, or the fever will return with its former force, together with the other symptoms, and the disease will run on again. If convalescence sets in, the pulse runs down gradually from 160 or 120 beats per minute until it approaches the normal standard; the skin becomes softer and moist with perspiration; the tongue gradually cleans off; the urine loses its high color and begins to deposit a sediment, and there is a general cooling of the body. The thermometer will be very useful in determining the degree of remission, as well as heralding the onset of convalescence. If the disease lasts for any great length of time, the patient becomes very much emaciated.

Frequently cases presenting most, if not all, of the above symptoms in a much milder degree are met with, in which there is a remission almost amounting to complete apyrexia every day, generally in the morning, and the child may be comparatively well and as cheerful and playful as usual during the morning, until toward noon, when it will begin to droop again, the fever will come on and run very high until after midnight or toward morning again, when another amelioration and remission of symptoms will occur. This form of fever is especially associated in the minds of the people with the presence of "worms" in the intestinal canal, and in such instances the common opinion is generally correct. Such a fever—*worm fever*—may be mild or otherwise, even reaching to the intense degree we have first described.

This disease may not only be complicated with the presence of worms in the alimentary canal, but with other diseases, such as aphthous sore mouth, violent and prostrating diarrhœa, inflammation of the lungs or bronchia; and symptoms resembling hydrocephalus may arise during its course, increase its gravity, and render a fatal termination not unlikely.

Its *causes* are of course both predisposing and exciting. Children of a scrofulous diathesis, and whose organs of digestion give evidence of being weak, are most liable to be attacked by the disease. Living in a damp house or in a neighborhood exposed to the influences of

marsh miasmata or of stagnant water is also a predisposing, and may be an exciting, cause. Worms and other forms of intestinal irritation and exposures to cold and wet are the chief exciting causes.

Treatment.—In most cases this disease, especially when it sets in mildly, may be cut short by judicious medication. The following remedies are most frequently required for its treatment, from which that one should be selected which is homœopathic to the case:

Aconite. Hot, dry skin; thirst; sleeplessness; restlessness and distress during the febrile stage.

Antimonium c. White tongue; frequent vomiting and watery diarrhœa, or lienteria.

Apis. Red points scattered over the body here and there; absence of thirst.

Arsenicum. Much restlessness and tossing after twelve at night; putrid, undigested stools; symptoms of nervous exhaustion set in, with unquenchable thirst; great heat in the bowels; aphthæ.

Belladonna. Much moaning, starting and jumping; very flushed face; red eyes; great heat of the head, and other symptoms of cerebral congestion.

Bryonia. Parched lips; dry mouth; dry and burnt-looking stools, which are passed but seldom; wants to be kept very still; cries if moved; the symptoms are worse at night; the child gets giddy and sick if raised up; there is a typhoid tendency.

Calcarea c. Leucophlegmatic constitution; open fontanelles; swelling at the pit of the stomach, like a saucer turned bottom up; profuse sweat about the head.

Chamomilla. Wants to be carried all the time; one cheek red, the other pale; cross and irritable; stools smell like rotten eggs, or are green and yellow; very sensitive to pain; dyspnœa; bilious vomiting.

China. Worse every other day.

Cina. Picks its nose; desires many things, which it refuses when they are offered; nothing pleases or satisfies the child; after standing a while the urine turns like milk; cerebral symptoms, with dilated pupils, shrieking out during sleep; squinting; alternate paleness and redness of the face; colic, costiveness and vomiting; worm symptoms.

Colocynth. Spells of colic pain, in which the child curls up double, and writhes and cries very hard.

Gelseminum. The symptoms are worse at night; the face is dark red or has a dusky hue; there is a great deal of nervous restlessness; vertigo, the child complains that it is falling; sensitiveness to light

and sound; defectiveness of sight and hearing; inability to move the limbs in obedience to the will.

Ipecacuanha. One constant nausea, not relieved by the vomiting; loss of appetite; general gastric derangement.

Magnesia c. Constant, sour, rather whitish, watery diarrhœa.

Mercurius. Tenderness of the pit of the stomach and abdomen; green, slimy stools, with tenesmus; is not much relieved by perspiration; yellowish tinge of the countenance; the urine is dark and offensive; sore mouth.

Muriatic acid. The fever assumes a low type; the patient is very much prostrated, and sinks down in the bed; there are evidences of intestinal ulceration.

Nux v. Always worse toward morning, and in the morning; no appetite at any time; the child is very cross and irritable; flatulence and pain in the abdomen; better in the morning; constipation, large, difficult stools.

Pulsatilla. Vomiting of mucus; stools variable in color; worse toward evening; no thirst; the child refuses the breast.

Phosphorus. When there is much cough and rather a typhoid type seems to threaten; diarrhœa; distension of the abdomen.

Rhus t. The tongue appears dry and brown, and the child seems very weak, and very restless through the night; trembling of the hands; pains in the back and limbs.

Sulphur. The fever seems to exacerbate in alternate flushes and paleness; the child has weak spells; the skin is scaly; intertrigo is easily provoked.

Tartar e. Much nausea and vomiting, day and night, with drowsiness; red, itching rash over the body, developed by the fever; diarrhœa.

DIPHTHERIA.

Diphtheria is an epidemic specific disease, and is to some extent infectious. It runs a very rapid course; is characterized by remarkable prostration, the formation of a false membrane on the tonsils, uvula, palate, the nares and other parts of the body, and in some cases with remarkable nervous symptoms. In some epidemics of this disorder there is an equally characteristic external eruption, "which appears in the form of a rash and is sometimes of a dark or purplish color, bearing a close resemblance to that of measles; at others, bright and scarlet, as in scarlet fever."* There may be considerable swelling in the external throat and sides of the neck; such cases are

* Ludlam on Diphtheria.

usually severe, if not malignant. Diphtheria is a disorder which may be very mild or exceedingly malignant, and almost universally fatal. To what extent this disease is infectious and contagious does not yet appear to be a settled question. It occurs at all seasons of the year, but is particularly prevalent during the fall and winter months, the minimum of cases occurring in Philadelphia in June.

Bretonneau, who was one of the earliest writers on diphtheria, regarded the disease as a local affection, and the constitutional disturbance manifested during its course as secondary. It is, however, now generally admitted that diphtheria is a "blood disease," with very decided systemic disturbance, which is very generally of a decidedly asthenic character. Bouchut, in his treatise on diseases of infants, divides diphtheria into two varieties, one of which he regards as false and non-infectious, or a mere pseudo-membranous sore throat, while the other he regards as true diphtheria, which is a constitutional disorder, involving the entire system, having infectious powers.

The pseudo-membrane of diphtheria, which is one of its most constant and remarkable phenomena, is a fibro-plastic membrane, which commences as a sero-mucous, transparent and viscid exudation, which gradually acquires color and consistence until it becomes a somewhat dense and strongly adherent membrane, which is, however, very friable. The color is variable, according to the seat of the deposit and the length of time which has elapsed since its formation; it is, however, generally of a white, grayish-white or yellowish hue. "In severe cases there is usually a bloody sanious fluid effused which imbues the pseudo-membrane, discolors it and promotes its decomposition, so that it forms dark-colored shreddy patches, exhaling a fœtid gangrenous odor. Sometimes the mucous membrane of the throat is seen to be reddened and swollen before an exudation takes place, and when the membrane is detached it has the appearance of being raw and somewhat bloody. In most cases the mucous membrane itself is not ulcerated, but only inflamed and swollen. There are cases, however, in which very extensive ulceration and sloughing of the throat-tissues occur.

All cases of diphtheria may be divided into those which are mild and those which are malignant. Fortunately the mild cases are most numerous, and yield readily to appropriate treatment. They are characterized by slight membranous deposit and a mild form of constitutional disturbance, with more or less difficulty of deglutition, pain in the throat, pains in the limbs, etc. It generally comes on insidiously; the fever sets in, but the appetite remains good and the strength is not impaired. Sometimes, in these mild cases, there is

very little or no complaint of difficult deglutition or pain in the throat, and this the physician should bear in mind, otherwise mild cases of diphtheria may be allowed to assume malignant proportions or to run into diphtheritic croup, with perhaps a fatal termination. These cases are generally very amenable to treatment, and the only danger arises from the possibility of the exudation extending into the larynx in consequence of the true nature of the disease not having been detected in time to prevent it. Beware of taking cold.

The more malignant form of diphtheria is ushered in with severe rigors and high fever, vomiting, and sometimes purging, great restlessness, anxious expression of countenance and great prostration. Soreness of the throat, with difficulty of swallowing, is complained of, and upon examination the diphtheritic condition is detected. The fever subsides, leaving the surface of the body pale and of an unnatural coolness, the pulse remaining quick, but weak and compressible; and there is a general appearance of a profound depression of the vital forces. The child's mental condition is usually not much disturbed, although it may be dull and indisposed to play; during sleep there may be muttering delirium. There are few symptoms indicative of gastric disturbance excepting loss of appetite. The urine is generally scanty, and often albuminous. The submaxillary glands usually become enlarged, sometimes to a very great extent, but do not often suppurate; salivation is generally present, the saliva being somewhat offensive; or there may be a discharge from the nostrils, which is sometimes acrid and makes the skin which it touches sore, and it is sometimes offensive. The voice may be husky and nasal, or even hoarse, although the larynx may not be involved; cough may be present, and, as before remarked, an eruption resembling that of scarlet fever may make its appearance upon the skin. It has been thought that in this latter case the poisons of diphtheria and scarlet fever were acting conjointly upon the system.

"The further course of these cases varies widely. If the result is to be unfavorable, the depression and loss of strength increase rapidly; the surface grows pale or sallow, and is below the natural temperature; the pulse becomes exceedingly frequent and feeble; the fauces assume a gangrenous appearance, from decomposition of the false membranes; the swelling of the cervical glands increases, and the patient often refuses to make the effort to swallow, though deglutition is still generally possible. There is a constant fetid discharge from the mouth and nostrils; the breath is horribly offensive, and death ensues amid the most profound prostration. Or at a much earlier

period of the disease the fatal event may be precipitated by the extension of the exudation to the larynx. If, on the other hand, the case tends toward recovery, the false membrane becomes detached and thrown off, the strength improves, the pulse becomes fuller and stronger, and the appetite returns."

A very quick and feeble, or, as is sometimes found, a very slow, pulse, persistence of the vomiting, drowsiness and delirium, bleeding from the nose and suppressien of the urine may be regarded as symptoms indicative of danger, whether they supervene upon mild attacks or occur in those of a more severe character.

This disease presents itself occasionally in a more malignant form than has yet been described, in which the symptoms are of the most asthenic type. Occasionally epidemics of this character have appeared, in which a very large proportion of all those attacked died. In these cases, "the anginose affection, though it may be severe, rarely attracts much attention. The pseudo-membranes in the fauces are soft and pulpy, and when examined microscopically highly corpuscular and granular; they soon decompose and become discolored by the blood which exudes from the mucous membrane. There is, moreover, a strong disposition for the exudation to extend to the posterior nares, or to appear on various portions of the external cutaneous surface. The breath and the discharge from the mouth and nostrils are indescribably fetid. In some cases true ulceration, and even gangrene, of the fauces occurs. There is, however, less pain complained of, and less indisposition to swallow, than in many lighter cases, owing probably to the depression of the nervous centres from the poisoned state of the blood. There may be high fever during the first few days, but this soon disappears, and is replaced by a deadly pallor of surface; extremely feeble, running pulse, and at times low muttering delirium. Passive hæmorrhages from the mouth, nostrils, rectum or other mucous passages are of frequent occurrence. The result of these cases of profound diphtheritic infection is almost invariably fatal, death resulting quietly from pure exhaustion, without the development of any complications."—*Meigs and Pepper.*

The *prognosis* of diphtheria is generally favorable in its milder forms; though no case, however mild, is entirely free from danger, inasmuch as a fatal termination may be reached either by the false membrane extending into the larynx and bronchial tubes, by diphtheritic croup, by *heart-clot,* or by the supervention of some sequela which may have a fatal termination. But even in the more malignant cases, and even in these we have last described, a favorable result may

be attained by careful and judicious medication, especially under homœopathic treatment. Usually, under the most favorable circumstances, the disease will last five or six days or a week, or it may continue for ten days or two weeks, or be prolonged for a much greater period, through its sequelæ.

The *complications* and *sequelæ* of diphtheria are not very numerous, but are all of a very serious character. We have already referred to *albuminuria* as a possible complication. *Heart-clot* may be the means of taking the life of a diphtheritic patient otherwise favorably situated. *Endocarditis* may complicate diphtheria, and continue as a serious malady long after all other symptoms have disappeared.

Paralysis is one of the most common and most important of the sequelæ of diphtheria. It does not usually show itself until all the anginose and other symptoms have disappeared, and is progressive, affecting first the muscles of the parts that were involved by the disease, and thence spreading to the face and finally to the extremities unless arrested. There is frequently impairment of vision, deafness. "The paralysis is rarely confined to loss of motion, but, in a majority of cases, sensation is either much modified or lost; and indeed in some instances there has been no loss of motion, the sentient nerves alone being affected. In other cases the sensibility has been found exalted, or there has been in the same case hyperæsthesia in the upper, with anæsthesia in the lower extremities." In some cases this post-diphtherial paralysis takes the form of *progressive locomotor ataxia*, in which, while there is little or no loss of muscular power, there is a partial or complete inability to co-ordinate muscular movements, especially when the patient is in the dark.

Paralysis after diphtheria is very rarely fatal. It generally yields, though oftentimes slowly, to appropriate treatment.

Treatment.—Local applications are always inadmissible. Avoid fatiguing the patient by *too much treatment;* do not force food upon the child, but try to please its appetite; allow as much ice or iced water as may be desired. Select the remedy with the greatest accuracy, and good results may be looked for in most cases, and often will be met with in even the worst forms of the disease.

Apis mel. Great debility characterizes the case even from the onset; absence of thirst; scantiness of urine; the membrane has a dirty-gray color; the pulse is very quick—at least 140; puffiness about the eyes; an eruption appears upon the skin, which itches and stings.

Arsenicum. The membrane is dry-looking and wrinkled, and may

cover the entire fauces; very fœtid breath; great dysphagia; very great prostration; the child frequently wants water, but in small quantities at a time; great restlessness, particularly after midnight; warm drinks are sometimes desired instead of cold drinks.

Belladonna. The throat has a highly inflamed appearance, is very red and shining; drowsiness; the eyes are very much injected; the face is flushed, there is throbbing of the carotids; the pulse is very rapid; the child complains of chilliness occasionally; great difficulty in swallowing, with pain running up into the ear.

Bromine. When the disease commences in the larynx and comes up into the fauces, and in some cases in which it runs down into the larynx and produces a croupy cough, with much rattling of mucus. In either case there is rattling of mucus in the larynx on coughing, and the cough has a croupy sound.

Capsicum. When—if a description can be given—the throat smarts as if from Cayenne pepper; the diphtheritic deposit covers a considerable portion of the fauces. There is a sensation of constriction on swallowing.

Cantharis. There is marked disturbance of the urinary organs; frequent desire to urinate, with burning and cutting pain; the membrane appears in patches upon the posterior wall of the throat, with burning in the throat.

Kali bi. The disease extends into the throat (and bronchia), producing a croupy cough, in paroxysms, with expectoration of viscid, tough mucus, which may be drawn out into long strings; tough and stringy discharge from the nostrils; pain in the left ear; swelling of the parotid and submaxillary glands; eruption upon the skin which looks like that of measles; the tongue is red, raw and shining.

Lachesis. When the disease first makes its appearance in the left side of the throat, and there remains, or extends from thence to the right side. The throat is very sensitive to touch or pressure.

Lachnanthes. If the child *has a very stiff and painful neck, drawn to one side,* with diphtheria.

Lycopodium. When it appears first on the right side, and from thence inclines to spread to the left, or it begins in the nose and extends down into the throat.

Mercurius sol. Profuse salivation; profuse perspiration; offensive breath; swelling of the submaxillary glands.

Mercurius prot. Great difficulty in swallowing, with great pain in the throat; the salivary glands are very much swollen and painful;

very offensive smell from the mouth, and fœtid discharge from the fauces and nares; swelling of the cervical glands.

Sulphur. The whole back part of the throat, posterior to the palatine arch, appears to be in a condition of ulceration and sloughing; very quick pulse; flashes of heat; frequent sinking spells.

PHOSPHORUS, PHYTOLACCA DEC., CROTON TIGL., CUBEBS, MURIATIC ACID, CARBOLIC ACID, PERMANGANATE OF POTASH, BAPTISIA TINCT. and AMMONIUM CARB. have likewise been recommended in the treatment of this disease, and may prove useful when indicated by the symptoms.*

SPASMS—CONVULSIONS.

Even in very young infants *spasms,* or general convulsions, are of frequent occurrence. They are present at the commencement of many diseases of children, and they attend the fatal termination of nearly all. Convulsions may be occasioned by morbid conditions of the nervous system—*idiopathic convulsions*—or they may be merely sympathetic, symptomatic of disorders in other organs, especially in those of the alimentary canal. Among the former may be enumerated those which arise from primary disease of the brain, or other large nervous centres, and those which result from general exhaustion of the vital forces, as in cases of difficult dentition and in the advanced stages of whooping-cough. Among the latter class, or *sympathetic convulsions,* may be enumerated those cases which arise from the irritation of intestinal worms, from the presence of unwholesome food, such as curdled milk, and from the influences which are about to develop eruptive disorders, or typhoid fevers. The convulsions, or rather local spasms of the glottis, which constitute laryngismus stridulus, seem to result either from direct pressure upon the trunk of some nerve or from irritation of its peripheral extremities.

Convulsions or spasms may be *tonic,* where the muscles are permanently, involuntarily contracted, or *clonic,* when the contraction more or less rapidly alternates with the relaxation. Tonic spasms are called *tetanus;* and if confined to the muscles which raise the lower jaw, they are called *trismus.* Spasms of separate muscles are called *subsultus tendinum;* these are clonic, and may be seen in severe nervous fevers. Clonic spasms are more frequently observed and less dangerous than the tonic. Convulsions which appear immediately after nursing, and especially if there is vomiting of curdled milk, may be attributed to the unsuitable character of the milk. Such cases occur in the children even of mothers perfectly healthy, if they

* For additional remedies, see APPENDIX, Note 4.

give suck while in a state of high physical excitement or moral distress. In cases which come on suddenly and without apparent cause, especially if the convulsions are associated with fever, stupefaction, and vomiting, there may be reason to apprehend the accession of some eruptive disorder, such as scarlatina, variola, etc.; and this opinion will be strengthened by the prevalence of one or the other of these epidemics at the time. Many cases of encephalic disease commence with vomiting and convulsions; in such instances, upon minute inquiry it will always be found that some indications of cerebral disorder have been present for several days, and there is usually severe pain in the head immediately before the attack.

In general, clonic convulsions may be considered dangerous when the paroxysms become more and more prolonged, when they return after shorter intervals, and when, from the gradual development of opisthotonos or of emprosthotonos, the irritation is seen to extend itself along the entire course of the spinal cord. In most cases it will not be difficult to find out the exciting cause of the spasms, which may be suppression of some cutaneous eruption or its too tardy appearance in the first instance, direct injury of the head or some portion of the nervous substance, fright of the child, or even of the nurse, a feverish condition of the mother's milk, the influence of some epidemic miasm, the onset of some form of cerebral disease, etc., etc.

Treatment.—Remove as far as possible the exciting cause, whether it exists in the nurse or in the child itself; do not place the child in a warm bath; avoid every excitement, and keep the child perfectly quiet and free from every disturbing influence of noise, light, etc., and very carefully administer the remedy which appears to be indicated by the nature of the case and by the attendant conditions.

Aconite. The febrile excitement is very great; hot, dry skin, anxiety and anguish.

Arnica. Where the spasms arise in consequence of a fall or other injury. (See Hepar if Arnica fails.)

Æthusa cyn. Spasms, with stupor, delirium; turning of the eyes downward.

Agaricus mus. Spasms, with tremor of the body.

Arsenicum. The child lies as if dead; pale but warm; is breathless for some time; finally it twists its mouth first to one side, then to the other; a violent jerk appears to pass through the whole body, and its respiration and consciousness gradually return. These spasms

return at longer or shorter intervals, unless relieved by this remedy, until death closes the scene.

Belladonna. Starting from sleep with a wild look, dilated pupils, heat of the head and hands, red eyes and flushed face; soporous after the spasm.

Bryonia. When the spasms recur from the repercussion of measles.

Camphor. When the spasms result from suppressed catarrh, either of the head or chest.

Causticum. Convulsive motions of the upper part of the body, with feverish heat and coldness of the hands and feet. Convulsive motions of the extremities in the evening when the child is sleeping, with disturbed eyes and icy coldness of the body.

Chamomilla. One cheek red, the other pale; very cross and fretful; jerking and twitching in its sleep; or the nurse may have had a fit of anger which causes the convulsions in the child.

Cicuta vi. Violent shocks through the head, arms and legs, which cause them to jerk suddenly. Spasmodic rigidity of the body, either opisthotonos or emprosthotonos. The child seems well and in great spirits, when suddenly it becomes rigid; then relaxation sets in, with much prostration.

Cina. The child exhibits vermiculous symptoms; discharges worms; picks its nose or anus; has a hacking cough, continually making attempts at deglutition, as if to swallow something down; is very difficult to be pleased with anything.

Coffea. The attack has been brought on by excessive laughing and playing. The child is very excitable and weakly, and in consequenec frequently suffers with spasms.

Cuprum met. The spasm is often preceded by violent vomiting of phlegm. After the convulsion the child screams and turns and twists in all directions till another spasm occurs; the spasms commence in the extremities.

Cuprum aceticum. When the spasms result from retrocession of the eruption in scarlet fever.

Helleborus. The urine is very dark and has a sediment like coffee grounds; intense and intolerable pain in the head.

Hydrocyanic acid. When the muscles of the back, face and jaws are principally affected, and the body assumes a bluish tint.

Hyoscyamus. Every muscle in the body is convulsed—the eyes, the eyelids, the muscles of the face, and all—and there is frothing at the mouth.

Ignatia. The spasms return at the same hour every day. Screaming

and violent trembling all over. Single parts seem to be convulsed—the muscles or single limbs.

Ipecacuanha. Much nausea and vomiting, either before, during or after the spasm; the child is spasmodically drawn in some direction.

Creosote. When the convulsion occurs from the swelling of a gum over a tooth which is not quite through.

Lachesis. The spasms come on during sleep.

Laurocerasus. There is much gasping for breath, either before, during or after the spasm, and there may also be a bluish tint of the skin.

Mercurius sol. Much salivation; swelling of the gums; hard, distended abdomen. May generally be relied upon when spasms occur from suppressed salivation.

Nux v. The spasm appears to result from indigestion; there is constipation, or the nurse lives high, making use of coffee, wines and rich food. The spasms are reproduced whenever the feet are touched.

Opium. If the spasms occur from fright, or if in new-born babes there is screaming before or during the spasm.

Secale c. Twitching of single muscles; twisting of the head to and fro; contortion of the hands and feet; labored and anxious respiration.

Silicia. *Spasms which return at the change of the moon.*

Stannum. In some form of vermicular affections (see also *Spigelia*), when neither Cina nor Silicia seem indicated. There is more excitability, more disturbance of the brain and more fear.

Stramonium. Suppression of an eruption is the cause, or the eruption does not come out sufficiently. The child seems afraid, and shrinks back from objects on first seeing them.

Tart. e. Spasms caused by repelled eruptions, with paleness of the skin and much difficulty of breathing.

Veratrum a. When a cold sweat appears on the forehead after or during the spasm.

Zinc. The child cries out during sleep, and if awakened expresses fear, and rolls its head anxiously from side to side. The child has been cross and irritable for days previous, with hurried motions, distended abdomen and more frequent passages of urine than usual.

APPENDIX.

NOTE 1, page 214: *Suspended Animation of Newly-born Children.*

One of the best methods of promoting the return of animation is as follows: Seize an ankle of the child with the left hand in such a manner as to turn the palmar surface of the foot upward, and with the right hand slap it powerfully and rapidly for a few times; then take the other foot and operate upon that in the like manner; proceed in the same way on each hand, and then return to the feet. So alternate with hands and feet for some time. The sympathy of the entire nervous system with these palmar surfaces is well known. I have succeeded in this manner when the chances seemed almost hopeless, and it is now my favorite operation in such cases.

NOTE 2, page 570: *Hysteria.*

Gelseminum. Hysteria from grief, from fright or from mental shocks. When there is blindness or great dimness of vision.

Graphites. Great indifference toward everybody and everything. Great sense of fatigue. Obstinate constipation, stools very large in size. Frequent attacks of violent hemicrania.

NOTE 3, pages 788 and 799: *Diarrhœa and Cholera Infantum.*

Elaterium. *Dull olive-green stools.* Discharges of dark masses of bilious mucus. Constant nausea and disposition to vomit.

Gumm. gutt. (Gamboge). Stools thin yellow or greenish watery, mixed with mucus or blood. Strong urging, causing stool to pass quickly and all at once.

Leptandria. Very profuse, black, fetid stool that runs in a stream. Very profuse black stool, the consistence of cream.

TREATMENT OF OVARIAN TUMORS.

Much of practical worth has been brought to light within the past twenty years in the treatment of ovarian tumors. A great variety of remedies has been applied to an equal variety of these complaints, and with the result of cure in all cases reported. Apis, Ars., Bell.,

Bryonia, Calc. c., Carb. an., Colocynthis, Creosote, Graph., Kali bro., Kali carb., Lachesis, Lilium, Nat. sulph., Platina, Podoph. pelt., Rhododendron and Rhus tox. have all been successfully used.

Arsenicum. The patient feels worse after twelve at night; is easily fatigued; ascending fatigues. Scanty urine. Drinks water frequently and little at a time; a reasonable amount of cold water disagrees with her. May be sense of burning in tumor.

Bry. Feels best when keeping very still. A deep inspiration causes pain. Unreasonably anxious about her condition. Toward evening there is more swelling and the tumor seems larger than in the morning.

Calc. c. Leucophlegmatic temperament. Menses too frequent and too profuse. Sensation as of a ball in the ovarian region, causing her constant pain. Sleeps with the arms stretched over the head, which position is quite unnatural to her. Feet feel as if cold, damp stockings were on them. Fatigue and loss of breath and vertigo on running up stairs.

Colocynth. When the paroxysms of pain are so severe as to cause her to bend double. Can't walk erect or properly assume the upright position without pain.

Graph. Has been used successfully when prescribed quite empirically, simply because it has cured enlarged testicles. This is not a sufficient reason; it will cure when its pathogenesis corresponds with the symptoms of the patient. It may be thought of when there are delaying menses, accompanied with terrible headache and constipation.

Kali carb. The case is characterized by much flatulency, the passage of which affords great relief. Stitching and shooting pains in abdomen.

Lach. When these tumors are developed at the critical age or when they appear soon after this period of life. Sufferings are always worse on awakening from sleep. Chills at night and flushes of heat by day. Feels very forlorn and dispirited on awakening in the morning. Severe constipation.

Lilium tig. Sensation as if the abdominal contents were dragging her down even from the chest and shoulders. Feels the need of a support to hold up the abdomen. Abdomen exceedingly tender to the touch.

Platina. Horrifying thoughts. Painful pressing as if the menses would appear, ceasing in the evening, but returning in the morning; this troubles her much. Sometimes causing inclination to stool. Stools are inclined to stick in and about the anus like clay, and on this account are discharged with difficulty.

Rhus tox. The case can be traced to a strain. Restless at night. Change of position affords relief for a time.

In the management of these cases we should allow one dose and one remedy to act just as long as possible before repeating or making a change.

NOTE 4, page 947: *Diphtheria.*

Ignatia. Much swelling of the glands in the neck. Soreness and pain in the throat worse between the acts of deglutition. Frequently complains that the throat hurts. In sleep at night there is much delirious manifestation and calling for help. Breath quite fetid. Difficulty in swallowing either solid or liquid food. Stitches from throat to the ear.

Lac. cann. In malignant cases particularly, with great prostration and entire loss of appetite.

Phytolacca. Particularly when a sensation as if a hot substance were in the throat continually; as though a red-hot ball of iron were lodged there. Cannot take hot fluids. Much frontal headache. Great prostration. Pains all over and feels very weak.

We are *perfectly* satisfied that no sequelæ of any kind will follow cures of this disease when the highest potencies are used.

DIET DURING SICKNESS OF ANY KIND.

So many distressing cases of malpractice in the way of diet have come to my notice that I cannot refrain from making mention of the subject in this edition of my *Obstetrics*. I consider the proper course of diet to be fully as important as medicine itself.

In sickness kind Nature usually restrains the desire for food; in fact, sometimes renders the simplest article of nourishment absolutely disgusting, that the organism may be protected from such injurious influences. Under circumstances like these the stomach is utterly incapable of digesting, and the assimilative function is equally impaired. It is very apparent, then, that nourishment should not be urged in these cases, as it would certainly oppress the stomach like a foreign substance, fermenting and causing incalculable mischief. Persons tolerably well refuse food sometimes for this very reason; they need a proper remedy, not food. The *patients* are the proper judges in these matters, and it is my *invariable* custom to consult and adopt their wishes as far as possible. If nothing but pure cold water is desired, it is allowed *ad libitum*, and all other nourishment forbidden—no *wine*, *brandy* or spirituous liquors of any kind whatever. Next to water, milk is the

least objectionable article of diet in all forms of illness, and especially in febrile diseases. Meat and meat food in any form are the most objectionable, particularly in fevers of all kinds. Fruit, vegetables and farinaceous foods may almost universally be allowed. In affections of the brain, and also in diseases where there is delirium or loss of consciousness, cold water is always the safest and most appropriate nourishment, and should be frequently and plentifully given, as it absolutely favors recovery. If patients want and enjoy food, and if it seems to do them no harm, moderate quantities of the proper kind may be allowed, but *never* urge or force one morsel. I am perfectly satisfied that great and irreparable injury is often done by pressing food upon unwilling stomachs. I have many times been called in consultation where patients, though in an unconscious state, were being literally crammed with all sorts of fanciful nourishments—were really being killed by *malpractice in diet.* For convalescing patients desiring animal food beef and mutton are decidedly preferable to all other kinds. Preparations of broth, tea, soup or essences may be made, or the meat may be broiled, and partaken of judiciously. Oysters, clams, fish and eggs should be used with care, and universally prohibited to lying-in women.

Diet during Pregnancy.

I know from ample observation and experience that diet is a matter of much importance during pregnancy. There is a small work, entitled *Parturition without Pain,* that gives some very valuable hints upon this subject; and, though I do not agree with all the theories which are therein advanced in regard to the effect such diet has upon the osseous structure of the offspring, yet I believe proper diet has a very beneficial effect upon the mother, and also upon the child in general healthfulness. Pregnant females who subsist mainly upon fruits and vegetables, lemonade, water and milk—no wines, tea, coffee or highly-seasoned food—certainly get on very much better than those who eat indiscriminately, paying no regard to diet. Fruits should be taken abundantly every morning, particularly, and lemonade as a general drink. This plan of diet also ensures a much easier labor than when subsisting upon the ordinary diet. In lying-in women oysters or clams are very apt to produce a fearful cholera-morbus, with much pain; fish is nearly as bad. Eggs produce an obstinate diarrhœa. Very many observers make the same report as to the deleterious effect of the above prohibited articles of diet on lying-in women. They seem to be really poisonous during this state.

Sterility—Barrenness.

This state is one of dread in all its different aspects and significations. A waste, barren piece of land, an unfruitful vine or tree, literary productions barren of ideas or sentiment, inability to produce young in animals or to bear children in human females,—all seem to produce at first thought a worthless idea of the non-producer.

It is of the human female particularly we wish to speak in this connection. Her sterility may be due to very many different circumstances. Among perhaps the most frequent causes are uterine displacements and flexions. Of some forms of displacement, though, we need not remark, because, as they do not cause impingement upon the uterine neck so as to interrupt the minute capillary tubes running to the ovaries, many a woman can readily conceive and bear children, though troubled in this manner. Membranous dysmenorrhœa, leucorrhœa, ulcers, contraction of the os, engorgements or elongation of the cervex, hypertrophy, induration, polypus, fibroids, vitiated secretions of the vagina, do not, *per se*, cause sterility. In all these cases the cause is dynamic, and the remedy which cures the patient, so that the effect ceases, will place the sufferer in a condition to conceive. Rheumatism, neuralgia, strangury, nervous or sick headache, may, upon the same principle, be said to cause sterility. Not so; there are disorders in the vital forces causing all the above appearances of disease. During a woman's menstrual life she ought to be well enough to conceive and bear children, and the more healthy she is, the better will be her offspring if her husband is healthy. Therefore, the first duty a wife owes to herself, her husband and the community she lives in, is to seek to be as thoroughly well as possible by employing the advice of a pure-minded homœopathic physician. If the husband is not in perfect health, he too should seek the advice of the best homœopathic physician he can find, lest he be the cause of his wife's mortification in not bearing him a child. It often occurs that this is a fact when the young wife bears the odium of barrenness.

Sterility or barrenness is not a disease; it is but the effect or result of morbific disturbances which are to be especially treated that conception may occur. The following remedies have been known to cure diseases causing barrenness, and pregnancy to follow: 1. Bell., Borax, Calc. c., Cann. s., Lilium t., Merc., Nat. carb., Phos., Puls. 2. Ammon. c., Caust., Con., Gossypium, Graph., Lycop., Nat. m., Plat., Sep., Sulph., Sulph. ac. 3. Agn. c., Cic., Croc., Dulc., Ferrum, Hyos., Podoph. pelt., Ruta, Zinc. Nat. carb., particularly indicated when the cervix is hard and the os out of shape, other symptoms agree-

ing, has been known to cure this condition and conception to follow. Conium, Plat. and Sepia when there was hardness and other symptoms agreeing. The profession is now awake to this important subject, and more numerous observations will forthwith be noted. The above list of remedies is far too small to cover all cases; the whole materia medica may need to be consulted; and when the remedy is selected it must be allowed to act a long while.

Diseases of the Nails.

Women and children are particularly liable to diseases of the finger- and toe-nails, which may appear in a great variety of forms. The disorder may be confined to a single finger- or toe-nail, or it may attack several, one after another, or nearly all at the same time may show evidence of a morbific influence. They become discolored, turn blue, yellow or spotted; may become brittle, crumbling off, deformed, split, thickened, falling (coming) off, growing of the nails into the flesh; may become painful in general, jerking pains in, sensitive, as if a splinter were under the nail, ulcerated and painful as if ulcerated; or they may become rough with hang-nails. It is more than likely that all these various forms of disease are as much of parasitic origin as are the various forms of diseases of the hair. Be this as it may, one thing is *certain:* if health reigns supreme, no troubles of this kind can ever appear. It is absolutely necessary that some constitutional disturbance should exist that any of the above forms of disease may arise. When they do appear, each and all of them are but the outcroppings of some dyscrasia, and are but symptoms of said constitutional disturbance. Diseases in the head, chest or abdomen may be cured by a medicine whose deciding symptom might be found in or about the nails of the fingers or toes.

Diseases of finger-nails and toe-nails often demand treatment apparently on their own account, and few or no symptoms appearing except in these localities. Even then no local treatment of any sort becomes necessary. So far as external circumstances are concerned, place the diseased member or members in a favorable position, apply the art of healing according to Hahnemann's *Organon*, and the work will be done, and well done. This has been the experience of the author in hundreds of cases, many of them of the most aggravated and painful form. I hereby subjoin a list of remedies for the treatment of these complaints, most of which I take from *Bœnninghausen's Therapeutics*, and have been thoroughly tested by myself and others:

NAILS *getting blue.*—Aur., Chel., Cocc., Dig., Nat. mur., Nux vom., Sil.

——— *brittle.*—Alum., Calc. c., *Graph.*, Merc., Sabad., Sep., Sil., Sulph.

——— *crumbling off.*—Alum., Calc. c., *Graph.*, Merc., Sabad., Sep., Sil., Sulph.

——— *deformed.*—Alum., Calc. c., Caust., *Graph.*, Sabad., Sep., Sil., Sulph.

——— *discolored.*—Ant. c., Graph., Nitr. ac., Sulph.

——— *falling (coming) off.*—Ars., Caust., Hell., Squill., Sec. corn.

——— *growing into the flesh.*—Arg. nit., Graph., Hep., Merc., Nitr. ac., M. austr., Mar., Sil., Sulph.

——— *jerks, with sensation as of.*—Calc. c., Caust., Graph., M. austr., Natr. mur., Nux vom., Puls., Rhus., Sep., Sil.

——— *painful in general.*—Ant. c., Caust., Graph., Hep., Mgs., M. austr., Mar., Merc., Nitr. ac., Nux vom., Puls., Ran. bulb., Squill., Sil., Sulph.

——— *sensitive.*—Alum., Calc. c., Graph., Hep., Mgs., M. austr., Natr. mur., Nux vom., Squill., Sep., Sil., Sulph.

——— *as if a splinter were under the.*—Arg. n., Hep., Hura. b., Nitr. ac., Petrol., Ran. bulb., Sil., Sulph.

——— *splitting.*—Squill., Sil.

——— *spotted.*—Alum., Nitr. ac., Sep., Sil., Sulph.

——— *thickening.*—Alum., Caust., Graph., Sabad., Sep., Sil., Sulph.

——— *ulcerated about the.*—Alum., Ant. c., Ars., Calc. c., Con., Graph., Hep., Lach., Lycop., Merc., Nitr. ac., Puls., Ran. bulb., Squill., Sil., Sulph.

——— *painful as if ulcerated.*—Amm. mur., Caust., Chin., Graph., Hep., Kali c., Merc., Natr. mur., Nux vom., Puls., Rhus., Sep., Sil., Sulph., Thuya.

——— *yellow.*—Ambr., Aur., Bell., Bry., Canth., Carb. veg., Cham., Chin., Con., Ferrum, Ignat., Lycop., Merc., Nitr. ac.. Nux vom., Op., Plumb., Sep., Spig., Sulph.

Hang-nails.—Calc. c., Lycop., Merc., Natr. mur., Rhus., Sabad., Stann., Sulph.

Of course the remedy must be selected according to the totality of symptoms.

CHANCRES, SYPHILITIC ULCERS.

Cinnabar is especially indicated in these ulcers when they are very red or have a very red margin.

Corralium rub. Exceedingly sensitive. Can't bear the least touch.

Hepar. Sensitive. Look like lard. Itch very much, and have many small ulcers or pimples surrounding the margin; these little ulcers or pimples gradually become incorporated with the main ulcer.

Merc. sol. or **Vivus.** Ulcers not red; look more like lard or tallow. Sensitive to touch, and painful.

Merc. jodatus or **Biniodide.** Particularly ulcers not painful nor sensitive. Sometimes *hard.*

Nitr. ac. Sensation as if sticks or slivers were in the ulcers, and they look lardy.

Silicea. Ulcers open again after healing. Sensitive; itch and look like lard. If they look *dark* on reopening, *Lachesis* is the remedy.

Sulph. The ulcer feels hot and pulsating.

Thuya. Condylomata—raised up with little necks.

Giving high potencies repeatedly in chancres usually aggravates. If the right remedy be selected and a single dose given, the common chancre will be cured thereby in two, the hard chancres in four weeks.

Albuminuria as a Sequela to Scarlatina, Diphtheria, Rheumatism and other Forms of Diseases in Children.

Properly speaking, there are no sequelæ to diseases of any kind, nor should there be any. When a disease is properly cured there is an end to it for ever. Sequelæ come in consequence of improper treatment of the physician, or exposure or want of care on the part of the patient. Then the diseased condition may become translated to, and apparently spend its force upon, other organs or parts. When there is the least sign of dropsical effusion in any portion of the cellular tissues, the urine should at once be submitted to the ordinary tests for albuminuria; even when there is no sign of such effusion, but the patient does not rally from the debility consequent upon some form of illness as soon as is usual, we should not delay applying said tests; for the kidneys may then show what is going on in the system, and admonish the physician of a train of symptoms that he might not otherwise discern. The fact of finding albumen in the urine does not by any means give us the remedy whereby to cure the patient, but it gives us the knowledge of a very important factor in the totality of the symptoms, and one which we must watch with anxious care till the disease is thoroughly eradicated. Now, too, we must examine with equal care into the condition of the heart, for there is a likeli-

hood of sympathy between these very important organs. The totality of the symptoms must be carefully collated from all parts. The albuminous condition of the urine is only one symptom that pertains to this fluid. Its color, its sediment, its odor and the manner of voiding, each and all have an influence upon the prescriber in determining the remedy whereby a cure is to be effected. Great care should be observed that the patient takes no cold, for then the case would become much aggravated. A few months since I was called in consultation to a little child, whom I found in the following condition. It had recently experienced a severe attack of scarlatina; the child's lower extremities were swollen; great and universal pallor of skin; frequent attacks of epistaxis; bleeding of the gums sufficient to produce a dark coating on the teeth; lips slightly cracked, with a little exudation of blood therefrom; vomiting of food; very weak and easily exhausted; sleep very much broken with restlessness; urine very scanty, about a tablespoonful in the course of twenty-four hours, dark brown in color, with a dark-brown sediment, and of a sweetish smell like violets; when boiled, one half was found to be solid albumen; heart's action about normal. This state of things had been going on from bad to worse for about ten days, during which time many remedies had been given. *Terebinth.* was the only remedy which seemed to be indicated and suggested by the condition of the urine. This remedy in the 2^{c} potency was therefore prepared in water, and a teaspoonful of the solution administered every three hours for about two days, when there was a marked improvement observable in the urine and in the sleep. No more medicine was given at all, and the child made a rapid recovery. The epistaxis was the last symptom to abate, for which we were several times tempted to prescribe another remedy; but as there was a continuous and satisfactory improvement in all other respects, we thought it best to obey our *master*, Hahnemann, and we were amply repaid in the end for our allegiance. So in all cases of albuminuria. When the albumen lessens, make no change in the remedy, and beware of repetitions when the important point is gained in lessening the albumen. We are reminded of the following remedies particularly, when we discover the symptoms of albumen in the urine: Apis, Apocynum, Ars. (Ars. phos.), Aurum, Bell., Bry., (Calc. ars.), (Calc. phosph.), Cann., Colch., Cuprum, Dig., Dulc., Eupatorium pur., Kali c., Phos., Phos. ac., Puls., Rhus tox., Squill., Sulph., Terebinth. All the above are certainly important remedies in this relation, and a few years more of observation will probably add many others. The symptoms in each case alone must decide the remedy.

Admixture of Pus with the Milk.

"Engorgements of the breast, whether spontaneous or consequent upon fissures and excoriations of the nipple, are exceedingly common with nursing women, and have a great tendency to end in suppuration. These abscesses, the history of which belongs to the pathology of the female, will claim our attention only in respect to the alterations of the milk which they are liable to produce. In reference to this, it is very important to distinguish from all others the parenchymatous abscesses, seated in the tissues of the gland itself, and those which, commencing by a true lacteal engorgement, begin in a milk-duct, whose walls, inflamed and distended into a sort of cyst, secrete pus. In these only can the pus become diffused in the milk. The superficial or submammary abscesses, which do not open into the proper milk-ducts, do not affect this fluid by admixture of pus and alter its composition, except by the reaction which a morbid condition of the kind exerts upon a neighboring organ.

"When the glandular abscess is apparent, the presence of pus in the milk should be suspected and nursing relinquished; but, as M. Donne remarks, it often happens that suppuration has taken place in some deep-seated parts of the gland, without being indicated by any external sign. The slowness with which the suppuration is accomplished sufficiently explains this insidious course. Therefore, if the breast was affected at the outset with simple engorgement, attended with deep-seated lancinating pains, we should be on the watch and subject the milk to microscopic examination. If it is impossible to make this examination—which is the only possible way of removing all uncertianty—prudence would dictate the relinquishment of nursing, for there seems to be no doubt that it would prove injurious to the child."—(Cazeaux.)

That the admixture of pus with milk would be as injurious to the nursing infant as the adulteration of food with putrid substances would be to children of larger growth, there can be no doubt; but to wean the infant for conditions of the breast as above described will be neither necessary nor advisable in our mode of practice. The child should nurse from a bottle till we cure the troubled breast, when there will be no more pus. Then we should return the child to so great a boon as a mother's breast flowing with delicious milk laden with her love. During the interval the breast should be kept drawn by a carefully managed breast-pump or by the nurse, in the latter case the milk of course being spit out.

Erosions, excoriations, chaps, fissures and cracks of the nipple afford

another source of contamination by means of pus. All of these conditions present an unhealthy surface for the child's mouth, which will draw scabs, pus or blood, or all three, and really contaminated milk. Infants frequently vomit blood or pus drawn from the nipples so affected, and sometimes pass the same into the diaper, thus affording a source of alarm to the nurse or mother. In these cases a proper nipple-shield must at once be provided, and the mother subjected to treatment till the nipples be perfectly cured.* If no defect can be discovered about the nipple on inspection, but if pain is experienced when the babe nurses, the nipple shield should be used till the trouble is cured; it is not always possible to detect the difficulty, as it may be just inside and may be secreting deleterious pus. Out of the many nipple shields offered to the profession, one should be selected which can be used without causing the mother any pain. The shield should have a *black* rubber nipple.

These troubles with the nipples are often caused by exposing them to the air immediately after nursing. The breast should always be covered whilst nursing to prevent its being chilled, thereby obstructing the milk-pores, and the nipple should be covered warmly immediately after leaving the child's mouth; a well-worn pocket handkerchief or a piece of cotton batting would be a suitable covering. When the nipples seem healthy and do not stand in need of medical treatment, it is always better during the last month of gestation to rub them well with alcohol and water morning and night, for the purpose of hardening them preparatory to nursing. This often does much good as a prophylactic to sore nipples.

Altered quality of the milk is often a source of hinderance to a thriving condition of the child. When the milk is poor in globules or cream, is watery, and does not contain a proper amount of nutritious elements, the child of course languishes and does not prosper. Now, the mother should be carefully treated with well-selected medicine and a more nourishing diet recommended. Cure the mother, and her milk and the child will of course correspond with her improved state of health.

The effect of the extreme richness of the milk is another drawback to the well-doing of the infant. Frequent vomiting, diarrhœa, eruptions, crusta lactea, excoriations, etc. often seem to result from it. Then the mother or nurse should be enjoined to partake of a less nutritious diet, to take more exercise in the fresh open air, and enforce upon herself all the known laws of hygiene.

* See *Treatment for Sore Nipples.*

In all cases of supposed deviations of the milk from the healthy standard, the only test whereby to determine this question with certainty is the use of the microscope or the lactoscope. Thus will we become acquainted with the true cause of numerous disorders or morbid conditions of the new-born child, which otherwise might remain inexplicable. The number, size and regularity of the globules will establish the diagnosis either of the too poor or too rich condition of the lacteal fluid.

When it becomes advisable to feed the infant for a time, a very convenient formula, and one that gives us a preparation very like the mother's milk, is thus stated: In half a teacupful of *boiling* water dissolve a heaping teaspoonful of sugar of milk, and mix with an equal quantity of fresh *unskimmed* cow's milk. When condensed milk is used, take one teaspoonful of condensed milk and add twenty-six teaspoonfuls of boiling water.

Plica Polonica—Matted Hair.

Plica, from *plico*, *πλεκω*, "to fold." This disease is characterized by the interlacing, twisting and agglutination or matting of the hair. Some authorities regard the affection as a real disease, while others regard it as resultant from a want of proper cleanliness. In truth, however, this tangling or matting of the hair is a real disease, symptomatic of an affection, *sui generis*, of the dermoid system. In its essential or dynamic nature this disease is analogous to common ringworm, and "is a state of *granular degeneration* of the hair, the granules being turgid with a viscous sanguineous fluid."* The symptoms are as follows: Inflamed and excessively tender scalp, hairs swollen and imperfectly formed, and are tinged with a viscous and reddish-colored fluid. This fluid, secreted copiously by the hair-follicles, agglutinates the hairs and binds them firmly together in masses. The scalp may be so excessively tender that the lightest touch of a single hair causes pain. The odor from such a scalp is exceedingly unpleasant, and the matted hair sometimes becomes alive with parasites. In those wearing the hair short, as men, numerous locks are matted together separately, either in straight or in twisted meshes, causing *Plica multiformis;* or if the hair forms a single mass or coil, it is called *Plica caudiformis;* or it may form a large, irregular and shapeless mass, as is generally the case with women wearing long hair. As this matted hair has been found half an inch or an inch from the integument, some authorities have supposed the affection to exist separate

* Erasmus Wilson on *Diseases of the Skin.*

from and independent of the scalp. This is not so. The truth in such cases is, that during the curative progress of the disease the morbid mass of hair has grown away from the surface of the scalp. The causes, as stated above, are probably analogous to those of ringworm. We find this disease in all classes, high or low, and in adults or children. It generally occurs on the banks of rivers, in marshy districts, etc. Change of air, improved diet and proper hygienic measures are adjuvant in the cure. The disorder may appear in other parts than the hair of the head, as in the beard, in the axillaries, on the pubis, chest, etc.

It is found in every degree, from its fullest formation and of the worst description to the very mildest appearance. We frequently meet with it in girls and young women, the roots of whose hair are cemented in patches about the scalp, or the whole scalp may be covered with this matted hair in one solid mass. As the cure advances this cemented hair raises in masses larger or smaller, leaving the scalp and hair-follicles perfectly healthy. The best remedies so far as known are Borax, Branca, Clematis, Dulc., Fluor. ac., Graph., Hep., Lycop., Mezer., Natr. m., Nitr. ac., Oleand., Rhus tox., Sassap., Staph., Thuya, Vinca minor, Viola od., Viola tr.

A few years since I saw a very bad case of the plica caudiformis in a young girl cured perfectly with Viola tr. The constitutional, subjective and objective symptoms must always decide the choice of the remedy.

COCCYODYNIA—*κοκκυς*, COCCYX, AND *ο δυνη* = PAIN IN THE COCCYX.

This painful affection is found so frequently among girls and women that we feel fully justified in placing it among the diseases of females. It is a disease *very* frequently met with in practice, and is now treated quite satisfactorily, so much light having been thrown upon its management within a few years.

The pathological condition of this kind of suffering may be classed as neuralgic, rheumatic or gouty, idiopathic or from traumatism. Probably the latter is by far the most frequent cause. One may slip and fall upon this part of the body—*i. e.*, the coccyx—and think nothing of the accident at the time, yet the shock after the lapse of weeks or months may give rise to this troublesome affection. A bad cold may, for instance, be the immediate exciting cause of the suffering. If the accident should be followed by persistent and prolonged sufferings for two or three days, an examination should be instituted without further delay, with a view to reduce a dislocation or to set a

fractured bone. So after a case of parturition we may find dislocation or fracture. Even months after parturition a chill may develop a fearfully painful affection of this sort, due entirely to an injury then received.

Treatment.—When the disease can be distinctly traced to traumatism, though received *months* previous, Arn.^{40m} or a very high potency, and repeated at long intervals, say once per week, will often make a perfect cure; more particularly if it be from a shock, as slipping or falling down.

Calc. phos. If crepitation be discovered in the coccyx, or a sensation as if it were broken.

Cicuta. Coming on for the first time during catamenia after a parturition.

Fluoric ac. A continued bruised pain in the part in any position.

Hypericum. Particularly if the part is excessively sensitive.

Lachesis. Many years since I cured a series of cases where all the suffering was experienced on rising from a sitting posture, when the pain would be excruciating. I related this fact to the college class of students to which I was then lecturing, at least fifteen years since. It has always proved a true keynote to my students and to myself.

Phosph. Pain in the coccyx or sacrum after confinement, with or without heat in the part.

Rhus tox. If there be great stiffness about the parts—worse in damp weather, and feels much better when thoroughly warmed up in walking.

Ruta. If the periosteum seems to be bruised and the pain extend from the coccyx to the sacrum.

The following are a few remedies from an article on this subject, published by W. S. Searle, M. D., which I fully endorse:

Bell. The ischia feel sore, as if there were no flesh on them, yet she feels better when sitting on something hard than on cushions. Intense crampy pain in the small of the back and the os coccygis. She can sit only a short time. Sitting makes her stiff and unable to rise again from pain. Cannot lie down well; wakes often at night, and has to shift her position; unable to lie at all upon the back, and is most relieved by standing or walking slowly.

Cannabis sat. Pressure, as if with a sharp point, on the coccyx. Pain in the middle of the back, as if it were being pinched, the pain gradually extending toward the abdomen.

Cantharis. Lancinations and tearings in the coccyx, causing the patient to start.

Carbo. an. Pain in the coccyx, which becomes a burning pain when the parts are touched. Pressing, bearing-down pain in the coccyx, as if the parts were bruised. Pain as from subcutaneous ulceration in this region, mostly when sitting or lying down. Pressing, drawing or stiffness in the lumbar region, as if the back were broken.

Caust. Dull, drawing pain in the region of the coccyx. Darting pain in the coccyx. Pain as from bruises in the coccyx. Every movement of the body gives a pain in the small of the back. Pinching, crampy pain in the lumbar region and buttocks.

Cicuta. Tearing, jerking in the coccyx.

Cistus canadensis. A burning, bruised pain in the coccyx.

Creosote. Drawing pains along the coccyx down to the rectum and vagina, where a spasmodic, contractive pain is felt. Better when rising from her seat. Subsequent milky leucorrhœa.

Drosera. Itching stitch in the coccyx when sitting.

Graphites. Dull drawing in the coccyx in the evening. Violent itching of the coccygeal region, the part being moist with scurfy formations.

Gummi gutti. Repeated gnawing in the coccyx.

Kali c. Violent gnawing in the coccyx, both when at rest and in motion. This remedy has many back symptoms, and may be frequently indicated, but the above is the only symptom recorded including the coccyx. (To be thought of when coming on long after parturition as a cause.) Aggravation at 3 A. M.

Kali hyd. Pain in the coccyx as from a fall.

Lachesis. Continual pain in the sacrum and coccyx. Drawing pain, or pain as if sprained, in the small of the back, hindering motion.

Lactuca. Pain, as if in the spinal marrow, extending through the coccyx.

Magnesia. Sudden piercing pain in the coccyx. Sudden, violent, concussive, tearing, stitching pain in this region, as if the spine were bent back.

Mercurius. Tearing pain in the coccyx, relieved by pressing the hand against the abdomen. Pain in the sacrum, as if one had been lying on too hard a couch. Pricking, itching in the sacrum when walking.

Muriatic ac. Drawing, burning along the back, beginning at the coccyx, as if under the skin. Burning stitch in the sacrum, causing one to start.

Paris quad. Tearing in the coccyx when sitting. Pulsative stitches in the coccyx.

Petroleum. Pain in the coccyx while sitting. Great uneasiness and stiffness in the small of the back and coccyx in the evening.

Phosph. Pain in the coccyx, as if ulcerated, hindering motion, and followed by painful stiffness in the nape of the neck.

Phos. ac. Itching stitch in the coccyx. Fine stitches in the coccyx and sternum.

Platina. Numb feeling in the coccyx, as from a blow.

Ruta. Pain extending from the coccyx to the sacrum, as if caused by a bruise.

Thuya. Painful drawing in the sacrum and coccyx, and in the thighs when sitting. After having been seated a while the drawing hinders standing erect. Sudden cramp-like pain in the lumbar region after long standing and when attempting to walk. It seems as if she would fall.

Valeriana. Bubbling pressure above the anus in the region of the coccyx.

Zincum. Pain in the coccyx, sometimes pushing, aching, and sometimes pinching. Lancination in the sacrum; pressure, tension and weakness in the lumbar and sacral region; cracking in the back when walking.

We will close this important subject by adding a valuable and thoroughly practical extract from the chapter on Coccyodynia from the *Analytical Therapeutics* by C. Hering, M. D. (soon forthcoming):

Sore feeling, as if sprained: Lach., Sulph.; as from a blow, numb, tensive, tight, while sitting, Platina; as from a fall, Crocus, Kali hyd., Ruta; sore and stiff while sitting, Petroleum; as if beaten, Alum., Caust., Sulph.; with urging, Carb. an.; as if bruised, pressing, Carb. an.; burning, Cistus; extending to the sacrum, Ruta.

Like an ulcer: Colch.; when sitting or lying down, Carb. an.; hinders motion, Phos.

Aching: Bell., Carb. an., Caust., Graph., Ignat., Kali hyd., Lach., Magnes. carb., Nitr. ac., Petrol., Phos., Silicea, Zincum; feels tired, Petrol.; from spinal marrow to coccyx, Lactuca; with uneasiness and stiffness, Petrol.

Pressing: Cinchona, Hepar., Merc. sol., Phos., Phos. ac., Valer.; as if with a dull point, Cannab., Carb. veg.; boring, digging, Arnica; pinching, Calc. carb.; pushing, Zincum; with bearing down, Carb. an.; urging, Zincum; cramplike squeezing, Bell.; increases and decreases in sacrum, etc., Jod.; bubbling sensation, Valer.

Drawing, tearing: Ant. cr., Arn., Calc. carb., Canth, Carb. veg., Caust., Cicuta, Graph., Magnes. carb., Merc., Mur. ac.; when sitting,

Paris, Rhus, Zinc.; dull in the evening, Caust., Graph.; tearing, Cicuta; from sacrum down to coccyx and thigh, Thuya; along the rectum to the vagina, Creos.; relieved by pressure on the abdomen, Magnes. carb.; sudden, startling, tearing, Calc. phos.; often repeated, Canth.

Shooting, lancinating: Ammon. c., Canth., Colch., Magnes. carb., Niccol., Paris, Rhus.

Stitches, stinging: Agnus. cast., Angust., Argent., Colch., Phos. ac., Veratr., Zinc.; along the sacrum to the anus, Asaf.; like a needle, Rhus; itching, Phos. ac.; jerking, Carb. veg.; while standing, Veratr.; or sitting, Drosera; repeated lancinations, Canth.; pulsating, Paris; beating, Ignat.

Jerking, shrugging: Calc. carb., Caust., Cicuta, Cinchona, Carb. veg. (Magn.), Rhus, Sulph.; pain in the point of the coccyx, Alumina (Sep.).

Sudden: Magnes. carb., Thuya; startling, Mur. ac., Calc. phos.; as if from the spinal marrow, Lactuca; extending to the back, Mur. ac.; as if the spine were bent back, Magnes. carb.

Rest and motion: Cannot find a comfortable position, Phos.; has to shift the position, Bell.; cannot lie down well, not on the back, Bell.; can sit but a short time, Bell.; while sitting, aching pain, Petrol., Platina; stitches, Dros.; after sitting unable to rise, Bell.; cannot stand straight, Thuya; cannot walk quickly, Bell.; impeded motion, Lach., Phos.; better when rising, Creos.; when standing or walking slowly, Bell.; followed by a stiff neck, Phos.; by milky leucorrhœa, Creos.

Heat (around coccyx below sacrum): Agar., Alum., Arn., Ars., Borax, Calc. c., Carb. an., Carb. veg., Caust., China, Colch., Graph., Hepar., Ignat., Lauroc., Ledum, Merc., Mur. ac., Phos., Phos. ac., Plat., Rhus, Spigel., Staph., Sulph., Zincum.

Burning: Cistus, Colch., Lauroc., Staph.; corroding, Canth.; to the right of the coccyx, Fluor. ac.; and drawing up the back, Mur. ac.; when touched, Carb. an.

Itching: Agar., Alum.; has to scratch, Borax, Bovista; with burning, Fluor. ac.; crawling, Borax, Lyc.; gnawing, Agar., Alum., Gambog., Kali c., Phos. ac.; better when scratching, Alumina.

Oozing: Graph., Ledum; offensive, Nitr. ac.; getting sore, Ledum; scurfy, Borax, Graph.; nodules as if swollen, Hepar.; eruptions, Merc. sol.

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GLOSSARY.

Abdomen. The cavity between the thorax and pelvis—the belly.

Abnormal. Not natural; unhealthy.

Abrasion. Loss of skin or membrane by scraping, etc.; excoriation.

Accoucheur. He who practices the art of Midwifery.

Acetabulum. Cup-like cavity, receiving the head of the femur at the hip-joint.

Acne punctata. Red pimples upon the face and nose of young people.

Acne rosacea. Same as above, but are more bright red.

Acrid. Corrosive; pungent; irritating.

Acromion. A process, or part, of the scapula.

Acupuncture. Plunging of needles into the soft parts.

Adenocele. Glandular tumor.

Adenoid. Resembling a gland.

Adipose. Pertaining to fat—as adipose tissue, fatty tissue.

Adynamic. Attended with great debility, prostration.

Aeration. Transformation of the venous blood and chyle into arterial blood by respiration; formation of blood in general.

Ætiology. Doctrine of morbid causes.

After-birth. See p. 146.

After-pain. See p. 209.

Agglutination. Adhesion; gluing together.

Ague. Chill.

Alæ nasi. Wings of the nose.

Albugineous. Term applied to textures, humors, etc. which are perfectly white.

Albumen. An organic element of the blood, etc., found almost pure in the white of an egg.

Albuminuria. See p. 333.

Alimentary. Connected with food.

Alkaline. Substance which neutralizes acids.

Allantois. See p. 137.

Alveoli (alveolar). Bony sockets of the teeth.

Alvine. Pertaining to the stomach or intestines.

Amaurosis. Paralysis of the optic nerve.

Amblyopia. Dimness of sight.

Amenable. Governable.

Amenorrhœa. See p. 501.

Amnion. See p. 136.

Amnion, Dropsy of. See p. 358.

Amphiarthrosis. A mixed articulation, in which the corresponding surfaces of bones are united by an intermediate body, allowing some slight motion—as the junction of the vertebral by the intervertebral cartilages.

Anæmia. See p. 342.

Anæsthesia. The taking away of sensation, usually done by inducing sleep.

Anasarca. Dropsy of the cellular tissue. A species of dropsy between the skin and flesh.

Anastomosis. Inosculation of vessels.

Anchylosis. Stiffness of a joint, adhesion of articulating surfaces.

Aneurism. Morbid enlargement of an artery.

Angina. Inflammation of the air-passages of the throat.

Anomalous. Irregular; unnatural.

Anorexia. See p. 290.

Anteflexion. See p. 623.

Anterior. Before; in front.

Anteversion. A bending forward. See p. 621.

Antiphlogistic. Preventives of inflammation; cooling remedies.

Antipsoric. Opposed to the itch.

Anus. External opening of the rectum. Fundament.

Aorta. The great artery of the body.

Apathy. Insensibility; indifference.

Aphthæ. Roundish, whitish vesicles found in sore mouth.

Apnœa. Absence of respiration.

Aponeurosis. Fascia; tendinous expansion of muscles.

Apyrexia. Intermission of febrile paroxysms.

Arachnoid. Membrane of the brain; tunic of the eye.

Areola. Circle, as around the nipple.

Areolar Tissue. Cellular tissue.

Arteries. Vessels conveying the blood from the heart.

Arthrodia. A movable joint formed by the head of a bone in a shallow socket, so that it can execute movements in every direction.

Articulation. The union of bones with each other, and the manner of union.

Ascarides. Small intestinal worms; pin-worms; thread-worms.

Ascites. Abdominal dropsy.

Asphyxia. Suspended animation, as by suffocation, etc.

Assimilate. To convert into a similar substance, as food is assimilated by conversion into animal substances, flesh, chyle, blood, etc.

Asthenic. Debilitated; applied to disease, low.

Asthma. Violent oppression of breathing.

Astragalus. Upper bone of the tarsus, on which the tibia rests.

Astringents. Medicines used to contract muscular

fibre, and to constrict vessels to restrain discharges.

ATELECTASIS PULMONUM. See p. 827.

ATLAS. First vertebra of the neck.

ATONY. Relaxation, want of energy or tone.

ATRESIA. Congenital imperforation of the intestinal canal.

ATROPHY. Wasting away of the system from functional disturbance.

AURICLE. A cavity of the heart.

AUSCULTATION. See p. 124.

AUTOPSY. Ocular evidence.

AXIS. Second vertebra of the neck.

BAG OF WATERS. See p. 177.

BALLOTTEMENT. See p. 123.

BAS-FOND. The lowest region of the bladder.

BASILAR. That which belongs to the base. This name has been given to several parts which seem to serve as bases to others.

BELCHING. The throwing off, or ejecting, of wind from the stomach.

BILIARY. Pertaining to the secretions of the liver.

BISTOURY. A small knife having a curved blade.

BLASTODERMIC MEMBRANE. See p. 134.

BLASTODERMIC VESICLE. See p. 134.

BORBORYGMUS. Rumbling of wind in the bowels.

BREECH. The lower part of the body, from the middle down.

BRONCHIA. Air-passages.

BRONCHITIS. See p. 804.

BRUIT DE SOUFFLE. See p. 126.

BUCCAL. Belonging to the cheeks; pertaining to the mouth.

BULIMY. See p. 291.

BULLÆ. Blisters.

BURSÆ. Bags.

CACHECTIC. Adjective of Cachexia.

CACHEXIA. Vitiated constitution; morbid condition of the body characterized by deficient digestion, nutrition and assimilation.

CADAVEROUS. Resembling a corpse.

CÆCUM. A portion of the intestines.

CÆSAREAN. See p. 279.

CALCAREOUS. Containing lime.

CALCULUS. Stone; gravel.

CALLOUS. Hard.

CANCER. A scirrhous, livid tumor, intersected by firm, whitish, divergent bands.

CANCER. Colloid, gelatinous. See p. 687.

CANCER. Fibrous, hard, scirrhous. See p. 687.

CANCER. Soft, medullary, encephaloid. See p. 687.

CANCROID. That which assumes a cancerous appearance.

CANULA. A small tube, metallic, wooden or rubber, used in surgery.

CAPILLARIES. Hair-like, minute vessels.

CAPSULE. Membranous sac.

CARCINOMA. Cancer.

CARDIAC. Pertaining to the heart.

CARIES. Ulceration of the bone.

CARIOUS. Adjective of Caries.

CAROTIDS. Two large arteries of the neck

CARTILAGE. An elastic and flexible substance found at the joints and at the extremities of the ribs.

CASEINE. Cheesy.

CASEOSA. A soft cheesy substance found on the skin of a newly-born babe.

CATAMENIA. Menses.

CATHETER. A hollow tube, used to insert into the bladder to draw off urine.

CAUDAL. Tail.

CELL. A small cavity.

CELLULAR TISSUE. Net-like formation, composed of cells.

CELLULITIS. Cellular inflammation.

CEPHALÆMATOMA. A sanguineous tumor found on the heads of new-born infants.

CEPHALALGIA. Headache.

CEPHALIC. Pertaining to the head.

CEPHALOMA. A tumor resembling brain.

CEPHALOTRIBE. See p. 278.

CEPHALOTRIPSY. See p. 278.

CEREBRAL. Pertaining to the brain.

CEREBRIFORM. A morbid substance commonly formed by scirrhous or cancerous tumor.

CEREBRO-SPINAL MENINGITIS. See p. 935.

CEREBRUM. Upper and front part of the brain.

CERUMEN. Ear-wax.

CERVICITIS. Inflammation of the neck of the womb.

CERVIX. Neck.

CHANGE OF LIFE. See Climacteric Period.

CHEMOSIS. Inflammatory swelling of the conjunctiva.

CHOLESTERINE. A substance forming the crystalline part of certain biliary calculi.

CHLOROSIS. A disease affecting young females, more particularly those who have not menstruated. It is characterized by a pale, livid complexion, languor, depraved appetite and digestion.

CHLOROTIC. Pertaining to Chlorosis.

CHOREA. See p. 934.

CHORION. See p. 131.

CHRONIC. Of long standing.

CHYLE. A nutritive fluid.

CHYLOPOETIC. Relating to the formation of chyle.

CICATRIX (pl. *cicatrices*). Scar left after the healing of a wound.

CILIÆ. The hairs on the eyelids.

CLAVICLE. Collar-bone.

CLAVUS. Kind of tumor.

CLIMACTERIC PERIOD. Cessation of menstrual functions, usually occurring about the forty-fifth year.

CLITORIS. See p. 45.

CLOACA. The pouch at the extremity of the intestinal canal.

COAGULUM. Clot of blood.

COCCYX. See p. 15.

COITIS, or COITION. Sexual intercourse.

COLITIS. See p. 758.

COLLAPSE. Failure of vital power.

COLLIQUATIVE. A term applied to various discharges which produce rapid exhaustion.

COLON. The large intestine.

COLOSTRUM. See p. 214.

COMA. Lethargy; stupor; collapse.

COMATOSE. Pertaining to Coma.

COMEDONES. Little black spots on the nose.
COMMISSURE. See p. 43.
CONCEPTION. The impregnation of the ovum by the male sperm, whence results a new being.
CONDYLOMATA. Wart-like excrescences on the pudenda or anus, or on face.
CONDYLE. A knob at articulating joints.
CONGENITAL. Hereditary; existing at birth.
CONGERIES. A collection of several particles or bodies in one mass.
CONGESTION. Over-fullness of the blood-vessels.
CONSTIPATION. See Costiveness.
CONTAGION. Propagation of disease by contact.
CONTUSION. Bruise.
CORNEA. Horny, transparent coat of front part of the eyelid.
CORPUS LUTEUM. Cicatrix of the ovarium after the escape of an ovum.
CORPUSCLE. Globule.
CORYZA. Discharge from the nose.
COSTIVENESS. When evacuations from the bowels do not take place as frequently as usual; or are unnaturally hard and voided with difficulty.
COTYLEDON. A hollow cavity in a bone which receives the head of another bone.
CRANIOCLAST. See p. 277.
CRANIOTOMY. See p. 274.
CRANIUM. Skull.
CREPITUS. Crackling; grating
CRETACEOUS. Containing or relating to chalk.
CROCHET. See p. 277.
CRURAL. Belonging to the upper part of the inner side of the thigh.
CRUSTA LACTEA. See p. 869.
CRYPT, or FOLLICLE. A small hollow, roundish body, situate in the substance of the skin or mucous membranes.
CURUNCULÆ MYRTIFORMIS. See p. 47.
CUTANEOUS. Pertaining to the skin.
CUTICLE. Outer skin.
CYCLES. A period of a certain number of days or years.
CYST. A bladder.
CYSTOCELE. Hernia, or rupture, of the bladder.

DECIDUA. See p. 139.
DECIDUA REFLEXA. See pp. 87 and 139.
DECIDUA VERA. See pp. 87 and 139.
DEFECATION. Stool; alvine evacuation.
DEGLUTITION. Act of swallowing.
DELTOID. Muscle of the shoulder.
DEMENTIA. Insanity; idiocy.
DENTAL. Pertaining to the teeth.
DENTITION. Process of cutting teeth.
DERMIS. True skin.
DESQUAMATION. Peeling off of the skin.
DESICCATION. Drying up.
DIAGNOSIS. The discrimination of diseases.
DIAPHRAGM. Muscular partition between the thorax and abdomen.
DIATHESIS. Constitutional tendency.
DIETETICS. Pertaining to diet.
DIGITAL. Belonging to the fingers.
DIPHTHERIA. See p. 941.
DIPLOPIA. Double vision.
DISLOCATION. Displacement, as of a joint.
DIURESIS. An abundant secretion of urine.
DORSAL. Pertaining to the back or posterior part of anything.
DORSUM. The back; the posterior side of anything.
DROPSY. An unnatural collection of a watery fluid in any part of the body.
DUCTUS VENOSUS. A vein in the liver.
DUPLICATURE. Folding of a membrane upon itself.
DURA MATER. The outer membrane of the brain.
DYSCRASIA. Abnormal composition of the fluids.
DYSENTERY. A disease of the intestines attended with frequent bloody and mucous stools. See page 788.
DYSMENORRHŒA. Painful menstruation.
DYSPEPSIA. Weakness of digestion.
DYSPHAGIA. Difficulty of swallowing.
DYSPNŒA. Difficult breathing. See p. 339.
DYSTOCIA. Difficult labor. See p. 215.
DYSURIA. Painful micturition; difficulty in making water.

ECCHYMOSIS. Extravasation of blood under the skin, as in bruises.
ECLAMPSIA. Puerperal convulsions.
ECRASEMENT. Pertaining to the Ecraseur.
ECRASEUR. A surgical instrument, very like a chain-saw.
ECZEMA. Eruption of small vesicles on various parts of the skin, usually close or crowded together, with little or no inflammation round their bases.
ECZEMA CAPITIS. See p. 869.
EFFLORESCENCE. Redness of the skin.
EFFLUVIUM. An impure exhalation.
EMBRYO. The fœtus in its earliest stages of development.
EMBRYONIC SPOT. See p. 139.
EMBRYULCIA. See p. 278.
EMETIC. Medicine to produce vomiting.
EMMENAGOGUE. A medicine that promotes the menstrual discharge.
EMPHYSEMATOUS. Pertaining to the effusion of air into the cellular tissue.
EMPIRICAL. Practice based on experience alone.
EMPROSTHOTONOS. Spasms in which the body is drawn forward.
EMULGENT. A name given to the renal artery and vein.
EMULSIFY. To soften.
ENCEINTE. Pregnant.
ENCEPHALIC. Pertaining to the brain.
ENCHONDROMA. A cartilaginous growth proceeding from bones.
ENCYSTED. Covered with a membranous sac.
ENDEMIC. Peculiar to a circumscribed locality.
ENDOCARDITIS. Inflammation of the internal parts of the heart.
ENDOCERVICITIS. Inflammation of the lining membrane of the neck of the womb.
ENDOCHORION. See p. 146.
ENDOMETRITIS. Inflammation of the lining membrane of the uterus.
ENDOSMOSIS. The action by which fluids pass from without to within organic membranes.

ENEMA. Injection.
ENEURESIS. Incontinence of urine.
EPICHORION. One of the fœtal membranes.
EPIDEMIC. A generally prevailing disease among human beings.
EPIDERMIS. The true skin; the outside coat on the whole body.
EPIDYDIMIS. Parts of the testicles.
EPIGASTRIC. Pertaining to the region of the stomach.
EPILEPSY. Disease of the brain, characterized by unconsciousness, convulsive fits, etc.
EPISTAXIS. Bleeding from the nose.
EPITHELIUM. Cuticle of the mucous membrane.
EROSION. Destruction by ulceration.
EROTOMANIA. Love-madness.
ERUCTATION. Belching; rising of wind from the stomach.
ERYSIPELAS. Inflammatory cutaneous disease characterized by extreme redness.
ERYTHEMA. See p. 576.
ETHMOID BONE. One of the bones of the head.
ETIOLOGY. History of the causes of disease.
EUSTACHIAN TUBES. Leading from the throat to the inner ear.
EUTHESIA. The ready return of a rupture or a dislocation.
EVANESCENT. Vanishing; passing away.
EXACERBATION. Aggravation of a disease or symptom.
EXANTHEMA. Cutaneous eruption.
EXCITO-MOTORY. A term applied to a division of the nervous system, comprising the gray matter of the spinal marrow, with the afferent and efferent nerves connected with it; all of which are concerned in reflex actions.
EXCREMENT. Everything which is discharged from the body as superfluous, such as fæcal matter, urine, perspiration, nasal mucus, etc.
EXFOLIATION. Peeling off in thin layers, as of the bones or nails.
EXOSTOSIS. A morbid enlargement or tumor of a bone.
EXTRAVASATION. Effusion of blood into a structure.
EXUDATION. Passage of fluid through a membrane.

FACET. A small face; a small, circumscribed portion of the surface of a bone.
FÆCAL. Pertaining to stool.
FALLOPIAN TUBE. See p. 66.
FALSE PAINS. Pains like, or resembling, labor-pains.
FASCIA. Fibrous membrane arranged in the form of an inextensible texture, and constituting a sheath for muscles.
FASCICULUS (pl. *fasciculi*). Bundle.
FAUCES. Throat.
FEBRILE. Pertaining to fever; feverish condition.
FECUNDITY. Fruitfulness.
FELON. Very painful tumor found on the fingers or toes.
FEMORAL. Pertaining to the femur.
FEMUR (pl. *femora*). Thigh-bone.
FENESTRA. Aperture.
FIBRILS. Fibres.
FIBRIN. The filamentous portion of the blood.
FIBULA. Small bone of the leg.
FILAMENT. Same as fibril.
FILIFORM. Thread-shaped.
FIMBRIA. Fringe-like extremity of a structure.
FISSURE. A chap; crack; opening.
FISTULA. An ulcer, found usually in the anus.
FLATULENT. Pertaining to wind.
FLATUS. Wind.
FLEXION. Bending.
FLOCCULI. Cloudy sediment.
FLUX. Flow.
FŒTOR. Stench; disagreeable odor.
FŒTUS. The young babe in the womb before it is born.
FOLLICLE. Fold; small sac.
FONTANELLE. Aperture in the infant skull at the junction of the sutures.
FORAMEN. An aperture; a hole, as in bones.
FOSSA. Groove; shallow cavity.
FOURCHETTE. See p. 45.
FRÆNUM. Bridle, as of the tongue or prepuce.
FUNGUS. Spongy, fleshy excrescence; proud flesh.
FUNIS. See Umbilical Cord.

GALLACTORRHŒA. Inordinate flow of milk.
GALL-STONE. A stone formed in the gall-bladder.
GANGLION (pl. *ganglia*). A knot-like enlargement in a nerve.
GANGRENE. Mortification.
GASTRALGIA. Pain in the stomach.
GASTRIC. Pertaining to the stomach.
GASTRO-ENTERIC. Relating to the stomach and intestines.
GASTRO-INTESTINAL. See above.
GASTROTOMY. The cutting into the abdomen.
GELATINIFORM. Having the form of gelatine.
GENITAL. Pertaining to generation; sexual.
GENUS EPIDEMICUS. The prevailing type of a disease.
GERMINAL SPOT. See p. 132.
GERMINAL VESICLE. See p. 131.
GESTATION. See p. 88.
GLANDS. Small secretory bodies met with in various parts of the system.
GLOBUS HYSTERICUS. Choking sensation in hysteria.
GLOTTIS. Opening into the windpipe at the larynx.
GLUTEUS. A muscle on the buttocks.
GRAAFIAN VESICLE. See p. 68.
GRANULA. A small grain or drop.
GRANULAR. Composed of, or containing, small grains.
GRAVID. Pregnant.
GROIN. The depression lying between the belly and thigh.
GRUMOUS. Clotted; dark-colored.

HÆMATEMESIS. Vomiting of blood.
HÆMATOCELE. Swelling of the scrotum from effusion of blood.
HÆMATOMA. A bloody tumor, especially of the scalp of the new-born.
HÆMATURIA. Hæmorrhage from the bladder.
HÆMOPTYSIS. Spitting of blood.
HÆMORRHAGE. Morbid flow of blood.
HÆMORRHOIDS. See Piles.

HÆMORRHOIDS, BLIND. See Piles, Blind.
HÆMOSTATIC. Pertaining to the stoppage of blood.
HEARTBURN. Impaired appetite with gnawing or burning pain in the stomach.
HECTIC. Debilitating and emaciating fever.
HEMICRANIA. Half-side of the head.
HEPATIC. Pertaining to the liver.
HEPATITIS. Inflammation of the liver.
HEPATIZATION. Change in the lung by which it assumes the appearance of liver.
HERMAPHRODITE. One who possesses the attributes of male and female; a term applied to one who is at the same time male and female.
HERNIA. Rupture.
HERPES. See p. 576.
HETEROLOGOUS. Differing.
HILUM. The fissure of the spleen, kidney, lung, ovary, etc. Also, a small blackish tumor in the eye.
HOMOLOGOUS. Similar.
HOOPING COUGH. See p. 817.
HUMERUS. Bone of the upper arm.
HYBRID. A thing produced from two different species; mongrel.
HYDATID. Species of intestinal worm; serous vesicle.
HYDRÆMIA. See p. 341.
HYDROCELE. Dropsy of the scrotum.
HYDROCEPHALUS. Water on the brain; dropsy of the head. See pp. 903 and 905.
HYDROMETRA. A disease characterized by circumscribed protuberance in the hypogastrium, progressively enlarging, without ischuria or pregnancy.
HYDRORRHŒA. See p. 357.
HYDROTHORAX. Dropsy of the chest.
HYDROSIS. Perspiring.
HYGIENE. The science of preserving health.
HYMEN. See p. 47.
HYPERÆSTHESIA. Excessive sensibility.
HYPERGENESIS. The excess of formative power which gives occasion to monstrosities by excess of parts.
HYPERPLASIA. Excessive formation of tissue.
HYPERTROPHY. Morbid enlargement of an organ.
HYPOCHONDRIAC. One who is morbidly melancholy.
HYPOCHONDRIUM. The region under the false ribs.
HYPOGASTRIUM. The lower anterior part of the abdomen.
HYSTERALGIA. See pp. 555 and 671.
HYSTERIA. See p. 555.
HYSTEROID. Resembling Hysteria.

ICHOR. Fœtid, watery discharge from wounds, ulcers, etc.
ICTERUS. Jaundice.
IDIOPATHIC. Primary, original disease.
IDIOSYNCRASY. Individual peculiarity of constitution.
ILEUM. The longest of the small intestines.
ILIAC. Pertaining to the ilium.
ILIUM. See p. 15.
IMPREGNATION. Fecundation of the ova.
INANITION. Exhaustion from want of nourishment.
INCARCERATED. Imprisoned; strangulated; constricted.
INCISOR. See Tooth.
INCONTINENCE. Involuntary passage of urine; inability to retain semen, etc.
INCUBATION. The period that elapses between the introduction of a morbific principle into the system, and the development of the disease.
INCUBUS. Nightmare.
INDICES. Signs.
INDIGESTION. Dyspepsia.
INDURATION. Hardening.
INFECTION. Propagation of disease by *miasm* or *contact*.
INFERIOR. Lower.
INFILTRATION. Flowing of fluids into the cellular tissue.
INFLUENZA. Epidemic catarrh.
INGESTA. Food.
INGUINAL. Belonging to the groin.
INNERVATION. The nervous influence necessary for the maintenance of life and the functions of the various organs.
INNOCUOUS. Harmless.
INNOMINATUM. See p. 15.
INOSCULATION. Connecting of the extremities of the blood-vessels.
INSOMNIA. Sleeplessness.
INTERSTITIAL. Space between.
INTERTRIGO. See p. 874.
INTRAMURAL. Within or between walls.
INTRA-UTERINE. That which takes place within the womb.
INTUMESCENCE. Increase of size in a part or in the whole of the body.
INTUSSUSCEPTION. A portion of the intestine falling into the adjoining part and choking up the opening, producing strangulation.
ISCHIUM. Hip-bone; lower part of the pelvis.
ISCHURIA. Retention or impossibility of discharging the urine.
ISOMERIC. A term applied to different bodies which agree in composition, but differ in properties.

JACTITATION. Tossing about; restlessness; twitching.
JAUNDICE. A bilious disease, inducing yellowness of the skin, etc.
JUGULAR. Large vein in the neck.
JURISPRUDENCE. Embodied laws and regulations that relate to the teaching and practice of medicine. Legal medicine.

KIESTEINE. A peculiar albuminoid pellicle which forms on the urine of a pregnant female when allowed to stand for a few days.

LABIA MAJORA OR EXTERNA. See p. 43.
LABIA MINORA OR INTERNA, OR NYMPHÆ. See p. 45.
LABOR. Parturition. Child-birth.
LABOR-PAINS. See p. 177.
LACERATION. Tearing.
LACHRYMATION. Discharge of water from the eyes.
LACTATION. Secretion of milk.
LACTIFEROUS. Milk-carrying vessels.
LAMINÆ. Thin, flat part of a bone.

LARYNGISMUS STRIDULUS. See p. 823.
LARYNX. Upper part of the windpipe.
LEES. Liquor potassæ.
LESION. Hurt or injury caused by violence or disease.
LEUCOPHLEGMATIC. Torpid or sluggish temperament.
LEUCORRHŒA. Whites. A discharge of a white, yellowish or greenish mucus from the vagina.
LICHEN. A papular cutaneous eruption. See p. 576.
LIENTERIA. Diarrhœa consisting of undigested food.
LIGAMENT. Inelastic, tendinous cord.
LIGATURE. Cord tied around a bleeding vessel.
LINEA ALBICANTES. See p. 108.
LINEA NASALIS. A line extending from the wings of the nose to the corners of the mouth.
LIQUOR AMNII. Fluid by which the fœtus is surrounded in the womb.
LITHOTOMY. The removal of stone from the bladder by surgical means.
LOBULATE. The dividing of an organ into lobes.
LOCHIA. See p. 210.
LUMBAR. Pertaining to the loins.
LUMBRICI. Round worms in the intestines.
LUXATION. Dislocation.
LYMPH. A transparent fluid found in the lymphatic vessels and thoracic duct.

MALACIA. See p. 291.
MALACOSTEON. Softening of the bones.
MALAISE. Indisposition.
MALAR. Pertaining to the cheek.
MALFORMATION. Unnatural formation.
MALIGNANT. Term used to denote great severity of a disease.
MALPOSITION. Wrong position.
MAMMÆ. The female breasts.
MAMMARY. Relating to the breasts.
MANIA. Madness.
MARASMUS. Wasting away of the body; emaciation.
MASTITIS. Inflammation of the breasts.
MASTOID. A process connected with the temple bone.
MASTURBATION. Excitement of the genital organs by hand; self-abuse.
MATURATION. Ripening; full development of matter.
MEATUS URINARIUS. See p. 46.
MECONIUM. Excrement discharged from the bowels of a newly-born infant.
MEDIAN LINE. An imaginary vertical line through the middle of the body.
MEDICATION. Treatment by medicine.
MEDULLA OBLONGATA. Part of the brain within the cranium. Nervous system of the senses.
MEMBRANA GRANULOSA. See p. 68.
MEMBRANE. A thin, supple, more or less elastic, web.
MENOPAUSE. Cessation of the menstrual flow; change of life.
MENORRHAGIA. Excessive menstruation; excessive hæmorrhage.
MENSES or CATAMENIA. Monthly courses of women.
MENSTRUATION. See Menses.
MESENTERY. The investing and supporting membrane of the small intestines.
MESIAL LINE. An imaginary "middle line" in the body.
METACARPAL BONES. Five parallel bones forming the back of the hand externally, and the palm of the hand internally.
METASTASIS. Transfer of a disease from one part to another.
METATARSAL. Five bones on the back of the foot.
METRITIS. Inflammation of the womb.
METRORRHAGIA. Discharge of blood from the womb; uterine hæmorrhage.
MIASM. Poisonous influence in the atmosphere.
MICTURITION. Urination.
MILIARIA. See p. 855.
MOLAR. See Tooth.
MOLE. False conception.
MOLIMEN. An attempt; a struggle; the courses.
MONS VENERIS. A projection on the lower part of the abdomen, over the vulva, covered with hair.
MORBID. Diseased; unhealthy; unnatural.
MORBILI. See p. 848.
MORNING SICKNESS. See p. 111.
MOTHER'S MARKS. See p. 872.
MUCIPAROUS. Mucus-producing.
MUCOUS MEMBRANE. The lining of the cavities communicating with the external air, as lining of the mouth, intestines, etc.
MUCUS. Fluid discharged from the mucous membranes.
MULTIFORM. Having many forms.
MULTILOCULAR. Having many cells or small cavities.
MULTIPARÆ. One who has borne several children, used in contradistinction to Primiparæ.
MUMPS. See p. 891.
MYALGIA. Cramp.

NÆVI MATERNI. See p. 872.
NARES. The nostrils.
NATES. Two projections of the body on which we sit.
NAUSEA. Sickness of stomach.
NEONATORUM. Newly-born.
NEPHRITIS. Inflammation of the kidneys.
NETTLE RASH. See Urticaria.
NEURALGIA. Pain of the nerves.
NEURILEMMA. See p. 100.
NISUS. The monthly courses of women.
NORMAL. Natural; healthy.
NOSOLOGY. Classification of diseases by name.
NUCLEUS. Any body about which matter is collected; the germ of a new cell.
NULLIPAROUS. Having borne no children.
NUTRIMENT. A substance capable of nourishing and repairing the losses of the system.
NUTRITION. That function by which the nutritive matter already elaborated by the various organic actions assumes the nature of the different living tissues, to repair losses and maintain their strength.
NYMPHÆ. See Labia interna.
NYMPHOMANIA. An intense desire in females for sexual intercourse.

OBESITY. Abnormal accumulation of fat.
OBTURATOR FORAMEN. See p. 18.

OCCIPUT. Back part of the head.
ŒDEMA. Dropsical swelling.
ŒSOPHAGUS. Gullet; passage from the pharynx to the stomach.
ŒSTRUATION. See p. 74.
OLEAGINOUS. Oily.
OLECRANON. Elbow-bone.
OMENTUM. Caul; peritoneal covering of the bowels.
ONANISM. Masturbation.
OPALESCENT. Reflecting a colored lustre.
OPHTHALMIA. Inflammation of the eye.
OPISTHOTONOS. Spasmodic bending backward.
ORBITS. The circular cavities which contain the eyes.
ORGASM. A strong impulse or desire for something.
ORTHOPNŒA. Difficult respiration.
OS. Mouth. Also, bone.
OS CALCIS. Bone of the heel.
OS TINCÆ. Mouth of the womb.
OSSEOUS. Bony.
OSSIFICATION. Conversion into bone.
OSTIUM. An opening.
OTORRHŒA. Running from the ear.
OVALE FORAMEN. See p. 18.
OVARIALGIA. Pain in the ovary.
OVARIOTOMY. Operation for removing the ovary.
OVARITIS. Inflammation of the ovary.
OVARY. See p. 66.
OVIDUCT. Tube, Fallopian.
OVISAC. See p. 68.
OVOLOGY. Description of the ovum.
OVULATION. See p. 17.
OVULE. A small egg.
OVUM (pl. *Ova*). An egg.
OXYURI. Species of intestinal worm.
OZŒNA. Ulcerative destruction of the Schneiderian membrane.

PALPATION. See p. 120.
PALPEBRÆ. Eyelids.
PAMPINIFORM. See p. 69.
PANCREAS. A gland in the abdomen, secreting a juice, the use of which is to emulsify fatty matters.
PAPESCENT. Thin; pap-like.
PAPILLÆ. Eminences on the tongue, skin, the inner coat of the bowels, etc.
PAPULAR. Abounding in pimples.
PAPULOUS. See Papular.
PARACENTESIS. Tapping for the relief of dropsy.
PARENCHYMA. See p. 68.
PARENCHYMATOUS. Pertaining to parenchyma.
PARIETES. Walls or sides, as of the vagina, etc.
PAROTID GLANDS. Salivary glands beneath the ears.
PAROTITIS. See p. 891.
PARTURIENT. In labor.
PARTURITION. The act of child-birth.
PATHOLOGY. Doctrine of the nature of diseases.
PATULOUS. Spreading, open.
PECTORAL. Pertaining to the chest.
PEDILUVIA. Baths for the feet.
PELLICLE. A thin skin.
PELVIS. See p. 11.
PENIS. The male organ of generation.
PERCUSSION. See p. 120.
PERICARDIUM. Sac containing the heart.
PERICARDITIS. Inflammation of the pericardium.
PERICRANIUM. The periosteum which covers the cranium externally.
PERINEUM. See p. 38.
PERIOSTEUM. Membrane enveloping the bones.
PERIPHERY. Circumference.
PERISTALTIC MOTION. Alternate contraction and dilatation.
PERITONEUM. Serous membrane lining the abdomen and enveloping its contents.
PERITONITIS. Inflammation of the peritoneum.
PERTUSSIS. See p. 817.
PESSARY. An instrument to insert into the vagina to support a prolapsed uterus.
PETECHIÆ. Purple spots on the skin.
PHAGEDENIC. Corroding, ragged sores.
PHARYNX. Throat; upper part of the gullet.
PHLEBITIS. Inflammation of the veins.
PHOTOPHOBIA. Intolerance of light.
PHLEGMASIA DOLENS. Milk leg.
PHLEGMONOUS. Pertaining to inflammation in the cellular tissue. Inflammation with swelling.
PHRENITIS. Inflammation of the brain.
PHTHISICAL. Consumptive; pertaining to consumption.
PHTHISIS. Consumption.
PHTHISIS PULMONALIS. Consumption of the lungs.
PHYSIOLOGY. Science of life in health.
PHYSOMETRA. A circumscribed protuberance in the hypogastrium, with occasionally noisy discharge of wind through the os uteri.
PICA. See p. 291.
PIGMENT CELL. Dark cell.
PILES. Painful tumors around or within the anus.
PILES, BLIND. Those which do not bleed.
PILIFEROUS BULBS. See p. 49.
PITYRIASIS. See p. 871.
PLACENTA. See p. 146.
PLACENTA PRÆVIA. In child-birth, when the *placenta* precedes the child.
PLANES, INCLINED. See p. 24.
PLENO RIVO. Full stream.
PLETHORA. Over-fullness of the blood vessels; repletion.
PLEURA. Lining membrane of the thorax, covering also the lungs.
PLEXUS. Network of nerves or vessels.
PLEXUS, CŒLIAC. Formed of numerous nervous filaments, and is situated in the abdomen.
PLEXUS, SOLAR. Network of nerves lying upon the vertebral column, the aorta and the pillars of the diaphragm.
PLICA POLONICA. A disease characterized by interlacing, twisting and agglutination or matting of the hair.
PNEUMOGASTRIC. Belonging to the lungs and stomach.
PNEUMONIA. Inflammation of the lungs.
PNEUMO-THORAX. Air in the pleural cavity.
POLYCHREST. Having many virtues. Medicines useful in many diseases.
POLYPOID. Pertaining to, or similar to, polypus.
POLYPUS. Soft tumor in the nose, uterus, etc., attached by a pedicle.

Popliteal. Pertaining to the ham.
Porrigo larvalis. See p. 869.
Posterior. The back part of anything.
Post-mortem. After death.
Post-partum. After child-birth.
Precursory. Forewarning.
Pregnancy. The state of a female who is with child.
Pregnancy, Uterine. See p. 89.
Pregnancy, Extra uterine. See p. 89.
Primipara. A woman about to bear her first child.
Procidentia. Complete falling of the womb, so it protrudes from the vulva. See p. 612.
Prodromic. Immediately preceding the attack of a sickness.
Prognosis. Art of foretelling results in disease—how long it will last, what will be the end, etc.
Progressive locomotor ataxia. Inability to walk steadily. See p. 612.
Prolapsus. Falling, as of the womb or rectum.
Proliferous. To be prolific; to abound.
Prophylactics. Means used as preventives against disease.
Prostate Gland. Situated around the neck of the bladder in the male.
Prurient. Itching; uneasy with desire.
Prurigo. Itching disease of the skin.
Pruritus. Itching of the skin. See p. 575.
Psoas Muscles. In the loins.
Psora. Itch.
Psoriasis. Cutaneous disease, with a rough and scaly state of the skin.
Ptyalism. See p. 328.
Puberty. The period when childhood ends and adolescence begins.
Pubic Arch. The arch at the front part of the lower circumference of the pelvis.
Pubis. See p. 17.
Puerperal. Pertaining to child-bed.
Pulmonary. Pertaining or belonging to the lungs.
Puriform. Pus-like; resembling pus or corruption.
Purulent. Composed of pus or corruption.
Pus. Cream-like matter produced in abscesses, etc.
Putrescence. Rottenness; decay.
Pyloris. Lower orifice of the stomach.
Pyriform Muscles. See p. 17.
Pyrosis. See p. 306.

Quickening. See pp. 113 and 116.

Rachitis. Inflammation of the spine.
Radius. Upper bone of the fore arm.
Râle. Peculiar rattling sound in the lungs.
Ramification. Division of arteries, nerves or veins into branches.
Ramollescence. Softening.
Ranula. See p. 874.
Rectocele. See p. 587.
Rectum. Straight gut, terminating at the anus.
Regurgitation. Return of food or drink from the stomach.
Renal. Belonging to the kidneys.
Respiration. The act of breathing.
Rete mucosum. Mucous tissue beneath the cuticle.
Retina. A very thin membrane found in the eye.
Retention. Stopping of natural discharges, as of urine, etc.
Retrocession. Retirement of symptoms.
Retroflexion. Bending backward.
Retroversion. A bending backward. See p. 624.
Rhagades. Chaps or cracks of the skin.
Rhonchus. Wheezing or rattling sound.
Rickets. See Rachitis.
Rigor. Coldness.
Roseola. See p. 854.
Rouleaux. Rolls.
Rubeola. See p. 848.
Rugæ. Wrinkles; folds.

Sac. Bag.
Saccharine. Partaking of the nature of sugar.
Sacrum. Posterior bone of the pelvis on which the spine rests.
Saculate. Bag-shaped; bag formation.
Saliva. Spittle.
Salivary Glands. Gland secreting saliva or spittle.
Salivation. See p. 112.
Sanguineous. Consisting of blood.
Sanguinolent. Tinged with blood.
Sanies. Ichor.
Saphena. Vein in the leg.
Sarcoma. Fleshy tumor.
Scalpel. One of the smaller sized surgical knives.
Scapula. Shoulder-blade.
Scarify. To make a slight scratch.
Scarlatina. Scarlet-fever. See p. 830.
Schneiderian. The mucous membranous lining of the nose.
Sciatic. Pertaining to the hip.
Scirrhus. Indolent, hard tumor, a form of cancer.
Sclerotica. The hard coat of the eyelid; white of the eye.
Scorbutic. Pertaining to scurvy.
Scrofula. A morbid state of the system characterized by indolent, glandular tumors; they suppurate slowly, heal with difficulty, leave scars, etc.
Scrotum. Bag holding the testicles.
Sebaceous. See p. 49.
Secretion. A flowing or discharge.
Secundines. All that remains in the womb after the birth of the child—viz., the placenta, a portion of the umbilical cord, the membranes, etc.
Segment. A portion.
Semen. The generating fluid furnished by the male.
Septicæmia. An unhealthy condition of the blood.
Septum. A partition.
Sequelæ. Consequences resulting from disease.
Sero-mucous. Partaking of serum and mucus.
Serous. Thin; watery.
Serum. Fluid portion of the blood.
Serratus magnus. A muscle situate at the sides of the thorax.
Sibilant. Hissing.
Sigaultean Operation. See p. 282.

Similimum. The remedy that corresponds most nearly to the existing symptoms.

Sinciput. Fore part of the head.

Sinus. A cavity or hollow.

Slough. The part which separates from a foul ulcer, decaying bone, etc.

Soporous. Sleepy state.

Sordes. Dark-colored deposit on the teeth.

Spasms. Severe, morbid contractions of the muscles.

Spermatic. Pertaining to the male sexual organs.

Spermatorrhœa. An involuntary emission of semen.

Spermatozoa. Animalcules in the semen.

Sphacelated. Struck with gangrene or mortification.

Sphincter. Circular muscles to close the rectum or bladder.

Sporadic. Scattered; not epidemic.

Sputa. Spittle.

Stercoraceous. Vomiting of fæcal matter.

Sternum. The breast-bone.

Stertor. Noisy respiration.

Stethoscope. A hollow cylindrical instrument used in examining the chest, the beating of the heart, etc.

Stillicidium. The flow of any fluid, particularly the urine, drop by drop.

Stomach. Situate beneath the diaphragm, and is the first receptacle of food.

Stool. Fæcal matter.

Strabismus. Squinting.

Strait, Inferior. See p. 28.

Strait, Superior. See p. 25.

Strangury. Painful or suppressed urination.

Stroma. See p. 68.

Strumous. Scrofulous.

Stupor. Drowsiness; sleep.

Styptic. A substance employed to arrest hæmorrhage.

Sub. A term signifying "under" or "in a lower degree."

Subacute. Not severe.

Subcutaneous. Beneath the skin.

Sublingual. Beneath the tongue.

Submaxillary. Belonging or pertaining to the lower jaw.

Subsultus tendinum. Spasmodic twitching of the tendons.

Sudoriparous Glands. See p. 49.

Sulcus. A furrow; a groove.

Superior. Upper.

Suppuration. Production of pus.

Supra. Above.

Suture (*Anatomy*) **of Bones.** A kind of immovable articulation in which the bones unite, are dovetailed into each other.

Suture, Coronal. See p. 159.

Suture, Lamboidal. See p. 159.

Suture, Sagittal. See p. 159.

Suture (*Surgery*). The sewing up of a wound.

Suture, Interrupted. This consists in passing a ligature through the lips of a wound previously brought into contact, and then tying the ends of the ligature all the stitches being made in this way.

Suture, Quilled. Same as previous, except the ligatures are tied over two quills, rolls of plaster or bougies, which are laid along the sides of the wound.

Suture, Twisted. A pin is passed through the edges of a wound to keep them together, and a piece of thread is then wound around the pin in the form of the figure 8.

Sycosis. Fig-wart, a venereal disease.

Symphysis. Union of bones.

Symphyseotomy. See p. 282.

Symptom. Any unnatural change perceptible to the senses in any organ or function.

Synchronous. Occurring at the same time.

Syncope. Fainting.

Synochal. Inflammatory fever.

Synovia. The unctuous fluid which lubricates the joints.

Syphilis. A venereal disease communicated by sexual intercourse.

Tabulate. To shape with a flat surface.

Tænia. Tapeworm.

Tarsus. Bones which connect the leg with the foot.

Tenaculum. A fine hook used in surgery to seize a blood-vessel.

Tendon. The white, tough extremity of the muscles.

Tenesmus. Painful, ineffectual urging to stool.

Testes. See Testicles.

Testicles. Two glandular organs of the male contained in the scrotum, whose office is to secrete semen.

Tetanus. Lock-jaw.

Tetter. Herpetic eruption.

Therapeutics. Relating to the cure of disease by remedial agents.

Therapia. Therapeutics.

Thorax. The chest.

Thrush. Aphthæ.

Thymus Gland. Gland behind the sternum.

Thyroid foramen. See p. 18.

Tibia. Large bone of the leg.

Tonsils. Glands on each side of the thorax.

Teeth, Canine. Eye teeth.

Teeth, Incisor. The sharp, cutting teeth.

Teeth, Molar. Grinding teeth; jaw teeth.

Tormina. See p. 790.

Torticollis. Twisted or wry neck.

Toxæmia. Poison in the blood.

Trachea. Windpipe.

Traumatic. Resulting from wounds or injuries.

Trephine. A circular instrument for perforating the bones of the skull.

Trismus. See p. 947.

Trocar. An instrument used to evacuate fluids from cavities, as in dropsy, etc.

Trochanter. Tuberosity on the thigh-bone.

Trochlearis. Muscle of the eye.

Trunk. The principal part of the body, to which the limbs are joined.

Tubercle. A tumor in the substance of organs, from the production of new matter; no sensation; slow growth.

Tuberculosis. The morbid condition which gives rise to tubercles.

TUBEROSITY. A rough eminence or tubercle on a bone.
TUBEROUS. Knobbed.
TUMEFACTION. Swelling.
TUMOR. A swelling, larger or smaller, developed by a morbific cause in some part of the body.
TUNICA. A membranous coat or covering.
TUNICA ALBUGINEA. See p. 68.
TUNICA PROPRIA. See p. 68.
TURGESCENCE. Swelling up; growing large; distension of the blood-vessels.
TURNING. See p. 250.
TYMPANITIS. Flatulent distension of the abdomen.

ULCERATION. The formation of an ulcer.
UMBILICAL CORD or FUNIS. See p. 149.
UMBILICUS. The navel.
UNILOCULAR. Having one cell or cavity.
URACHUS. See p. 141.
URÆMIA. See p. 335.
UREA. A compound of the urine, existing in large quantities.
URETHRA. See p. 47.
URTICARIA. See p. 867.
UTERINE PROLAPSUS. See p. 355.
UTERUS. See p. 54.
UVULA. The fleshy, cone-shaped body hanging in the mouth.

VAGINA. See p. 51.
VAGINISMUS. See p. 593.
VAGINITIS. See p. 594.
VARICELLA. Chicken-pox.
VARICES. Dilated veins, with knotty, livid tumors.
VARICOSE. Dilated.
VARIX. See plural, *Varices*.
VASCULAR. Pertaining to vessels, particularly the blood-vessels.
VASO-MOTOR. The force which controls the circulation of the blood.
VECTIS. See p. 275.
VEINS. Vessels for the conveyance of black blood from every part of the body to the heart.
VELUM. A veil or cover.
VENA CAVA. Veins returning the blood to the heart
VENOUS. Pertaining to veins.
VENTRICLES. Cavities in the brain or heart.
VERMICULAR. That which resembles a worm.
VERSION. See p. 250.
VERTEBRÆ. Bones of the spine.
VERTEX. Crown of the head.
VERTIGO. Dizziness; giddiness.
VESICAL. Pertaining to the bladder.
VESICATION. The formation of blisters.
VESICLE, GERMINAL. See p. 69.
VESICULÆ SEMINALES. Two small membranous sacs which serve as reservoirs for the semen.
VESICULAR. Containing small vesicles or cells.
VESTIBULE. See p. 46.
VIABLE. Capable of living.
VILLI. Minute processes on the surface of some membranes constituted of blood-vessels, nerves and absorbents.
VIRULENT. Highly noxious.
VISCERA. Entrails.
VISCID. Sticky.
VITELLINE. See p. 68.
VITELLUS. See p. 69.
VOMIT. To throw up the contents of the stomach.
VULVA. See p. 43.
VULVITIS. See p. 570.

WATERBRASH. Regurgitation of a watery fluid from the stomach.
WHITLOW. Felon.
WOLFFIAN BODIES. See p. 152.
WOMB. See Uterus.

ZYGOMA. Cheek-bone.
ZYMOTIC. A term used to characterize the entire class of epidemic, endemic and contagious diseases.

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