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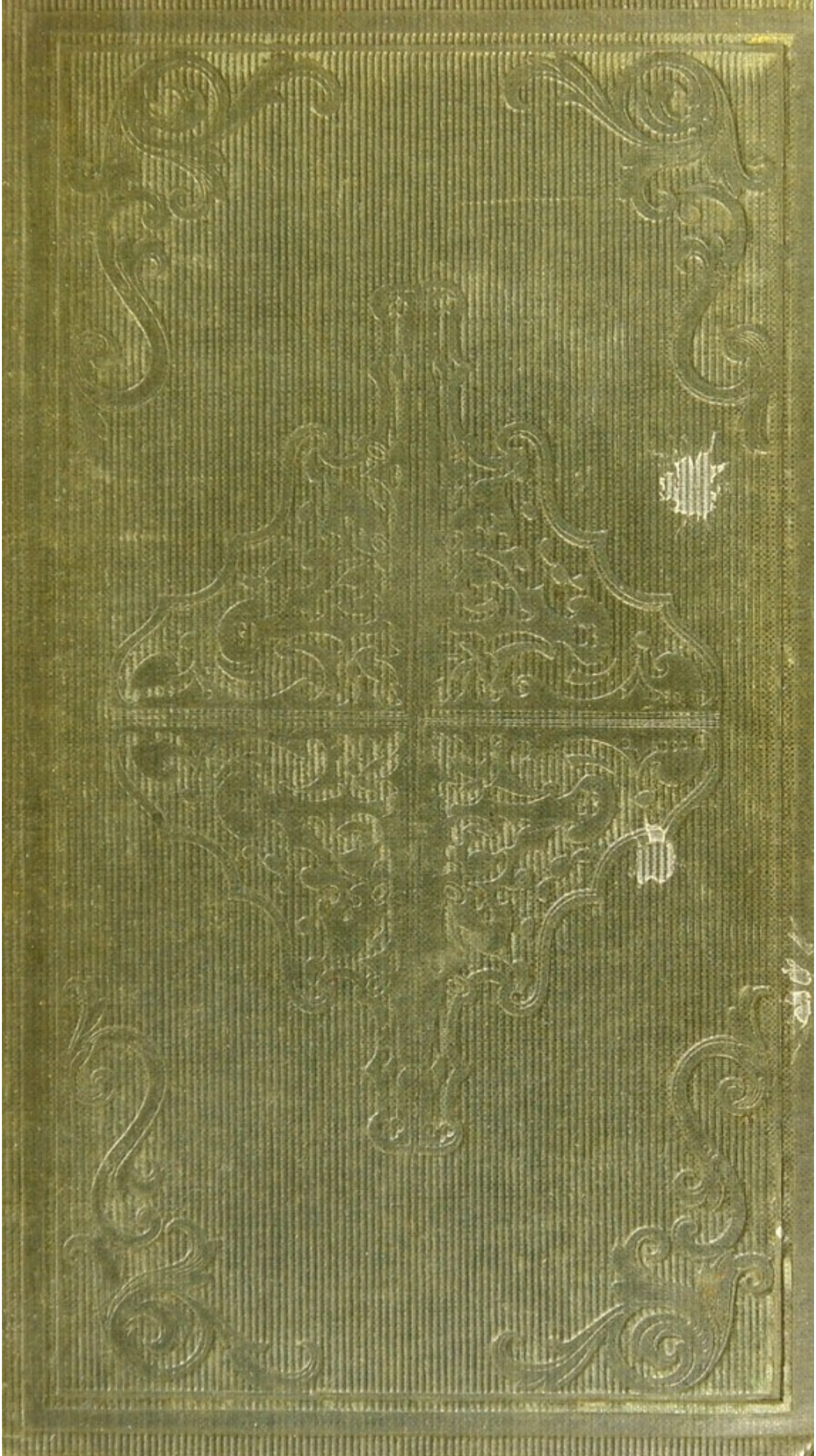

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SMALL POX, &c.

BY THE

WATER CURE & HOMŒOPATHY.

THE TREATMENT

OF

SMALL POX, MEASLES,

SCARLET FEVER,

HOOPING COUGH, CROUP, QUINSY, &c.,

BY THE

WATER CURE AND HOMŒOPATHY.

Adapted for the Use of Families.

BY DR. WILLIAM MACLEOD,

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS, EDINBURGH; MEMBER OF THE EDINBURGH MEDICO-CHIRURGICAL SOCIETY; LATELY ONE OF THE PHYSICIANS TO THE ROYAL PUBLIC DISPENSARY; LECTURER ON PHYSIOLOGY AND DEMONSTRATOR OF ANATOMY, EDINBURGH; PHYSICIAN TO THE WHARFEDALE HYDROPATHIC ESTABLISHMENT, BEN RHYDDING, AND EDITOR OF THE WATER CURE JOURNAL AND HYGIENIC MAGAZINE.

"To establish principles which recall all men to the laws of nature, by destroying the institutions and the prejudices which oppose themselves to these laws—this is what must be sought for—this is what is truly useful to know."

MANCHESTER:
WM. IRWIN, 39, OLDHAM STREET.

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EDINBURGH: CHARLES ZEIGLER.

1848.

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THIS LITTLE VOLUME

IS DEDICATED,

IN SINCERITY OF PURPOSE,

TO MOTHERS,

BY THE AUTHOR.

CONTENTS.

INTRODUCTION.

We would not be misunderstood in presenting this little volume to the public. We would have the idea which moves us to write it known. It is this. We look upon mothers as the great moulders of the human intellect—the great regulators of the human passions—and the great benefiters of the physical constitution. God has given them intuitively, as it were, the power to know. He has placed within their breasts the spirit of gentleness, with the firmness of resolve. Let them but see the right, and in the energy of truth, and in the holy hope of endeavour, they will do it. In society they are wrongly placed; the consequence of which is, that they are too often surrounded by prejudice, palsied by ignorance, and wrapped in bigotry. They have children they love, yet from their ignorance of the laws of the human organism, they often bring disease, weakness, and death upon them. The mother too often leans upon the arm

of another, who does not feel her deep love, and buys from him, what she thinks, will bring safety to her child. Our object in writing this book, is to endeavour somewhat to teach mothers how they may be able to prevent disease, or remove it when present. We wish them to know, that in the human constitution there exists a reactive energy, by which ailments are to be removed, and which is to be brought into force, fitted to this purpose, by means of fresh air, stimulating water, gentle exercise, and plain, nourishing food. We would say, cease to place your reliance on drugs, as commonly used, regard them as poisons, unfitted either to remove disease, or to strengthen weakened constitutions. To fix this idea, and to bring it into practice among the people, is one of the great tastes of the day.

We are conscious of the incompleteness of the articles contained in this volume—laborious and arduous duties are partly our excuse for its deficiences. Were it not that circumstances pressed us to publish it as early as we possibly could, it perhaps had been more worthy of the reader's perusal. Frequent and strongly written letters,

which we were daily receiving from parents, relative to the treatment of eruptive fevers, impressed upon us the necessity of publishing such a work as this, and with as much celerity as possible. We have never hesitated to use the words of others if they expressed fairly and with clearness our own views. We claim no originality for any thought or expression contained in the pages of this volume, our aim throughout being solely clearness, and explicitness, with faithfulness of description.

CHAPTER I.

THE ANATOMY AND PHYSIOLOGY OF THE SKIN GENERALLY CONSIDERED.

The diseases we intend treating of in the following pages are small-pox, measles, scarlet fever, hooping-cough, croup, and inflammation of the throat. Our primary aim will be to describe the symptoms and peculiarities of each of these diseases, along with their treatment, according to the water cure and homœopathy, as we consider that these two systems must go hand in hand, if we are to have the successful results we hope for. They harmoniously work together, and the effects which we have seen produced by their proper combination have been truly wonderful, and far beyond our fondest anticipations. Diseases which hydropathy by itself could not touch, we have seen entirely removed by the use of homœopathic remedies; while others which the latter system was unable to overcome, the former has not only relieved, but entirely removed. No fallacy could have misled us in drawing these conclusions, as the patients were treated in an establishment where the utmost regularity and the strictest possible attention is paid to every circumstance connected with them. They all dine at regular hours, and are restricted to a plain unstimulating diet, and nothing is allowed to be given unless ordered by the physician. We, therefore, do not for a moment hesitate in most strongly advising those who believe in the water cure, to turn their

attention also to the homœopathic system. These two systems are emanations from the mind of our Creator, and when united form A TRUTH. Before we enter into a description of the diseases mentioned above, we think it necessary that we briefly describe the structure and uses of the skin.

The skin is the smooth, soft, and pliable membrane which covers and protects the external surface of the body. It is the principal seat of touch, and is specially constructed for performing the function of excretion. It is composed of three layers, of which the internal is called "cutis," or true skin; the external, the "cuticle," or scarf skin; and the middle, by which the other two are united, the "rete mucosum." The latter is indistinct, excepting in the Negro, in whom it is the seat of colour. It must be remembered, however, that this rete mucosum is nothing more than the deepest or most recently formed part of the cuticle. When isolated, it presents depressions, or sometimes complete apertures, and hence has been termed *rete*. In the coloured races, there appears at first sight some ground for supposing that it is a structure distinct from the cuticle or cutis, the colouring matter being found to reside chiefly in this part. However, in the Negro the colouring matter is only accumulated in enormous quantity, while in the fair races it is so small as to be discernible only by the microscope. Besides, we have in various parts of the body, and at certain periods, this colouring matter deposited in great abundance in the skin of the white race, as in that of the Scrotum, of the nipple during pregnancy, and in moles or freckles; the bronzing of parts exposed to the sun is effected by a similar deposit

of colouring matter in the deeper laminæ of the cuticle.

The reason why we have so explicitly referred to this subject is from its having been invested with much interest, from its being supposed to bear on the warmly-debated question of the specific difference of the negro from the white man. This difference in the structure of the skin of the two races does not exist, for the quantity of pigment may, under many circumstances, be greatly increased in the white races, while it may be entirely wanting in the true negro.

The skin is every where directly continuous with the mucous membranes which line the internal passages, and its structure is perfectly analogous. These two structures are parts of one continuous compound tissue, which, when reduced to its most simple expression, may be said to be a continuous membrane more or less involuted, more or less modified in the elementary parts which compose it, and within which is contained the whole of the organs that constitute the animal, for it covers the external surface of the body, and lines the mouth, gullet, windpipe, lungs, stomach, intestines, &c. Let us imagine a branched tube covered in its outer and inner surfaces by a piece of leather or cloth, the inner being gently moistened, and we have a somewhat just idea of the relation which the skin and mucous membrane bear to the organism: on the one hand we have a membrane protecting the outer surface, and on the other a similar one, only more delicate and moistened, which guards the inner surface with its many ramifications and branches. We have the skin illustrated by the former, and the mucous membrane by the latter.

This is indeed a coarse illustration, yet perhaps it is sufficiently precise for the general reader.

The skin as we before said, is composed of three layers—the cutis, the rete mucosum, and the cuticle. The two latter contain neither blood-vessels nor nerves, while we have a delicate and complete network of blood-vessels ramifying in the cutis of such extent and capacity, that in the natural state of the circulation a very large proportion of the whole blood of the body is constantly pouring into these blood vessels. An innumerable number of nerves of sensation accompany these; likewise a smaller number of organic nerves. The latter endow the arteries with the power of performing the organic functions proper to the cutis; while the former, that is, the sentient nerves, communicate to every point of the external surface of the cutis the exquisite degree of sensibility possessed by the skin. Besides these blood-vessels and nerves, we have another system, termed absorbent vessels, which form a mesh of plexuses which lie partly above and partly beneath the vascular plexus. We shall not, however, enter into a minute examination of the cutis, as that is not necessary for our present purpose. We shall merely give a very general description of its component parts.

In structure, the cutis is a dense, firm, and elastic tissue, possessed of a colour more or less red, which is dependant on the quantity of blood it receives and circulates. Its internal surface presents a great number of small cavities, in which are contained small papillæ or points, that are visible to the naked eye, on the tongue, the fingers, and palm of the hand. These papillæ contain an artery, vein, and nerve, and constitute the true

organs of sensation, and, consequently, we have them most thickly studded where the sense of touch is most acute.

"*The dermis,* indeed," says Dr. Combe, "is so abundantly supplied with blood and nervous power, that, for practical purposes, it may almost be regarded as composed of vessels and nerves alone; and it is important to notice this fact, the universal and equal redness of the skin in blushing, is itself a proof of great vascularity, but a still stronger consists in our being unable to direct the point of the finest needle into any spot without puncturing a vessel and drawing blood. The same test proves the equal abundance of nervous filaments in the skin, for not a point can be punctured without transfixing a nerve and causing pain."

"Such are the appearances presented by the dermis, on a superficial examination. When subjected, however, to a minuter scrutiny under the microscope, its organization is discovered to be at once complete and delicate in the highest degree. Instead of being merely a network of blood-vessels and nerves upon a ground of membrane, it is found to consist of a variety of distinct parts, each performing a distinct function. By virtue of its firm and elastic texture, it is well adapted to the protection of the parts beneath; while by means of its innumerable secreting glands and excreting ducts, it is admirably suited for its office of EXHALANT of waste matter from the system; by means of another set of vessels it is enabled to act as an *inhalant* or *absorbent;* and lastly, by means of the papillæ on its surface, it is not less admirably qualified to act as the principal organ of

sensation and touch." The extreme smoothness and softness natural to the skin is caused by an oily substance secreted in glands, termed *sebaceous*, from which it is carried by means of ducts to the surface of the skin. It is this oily matter which communicates to the animal body the odour peculiar to it. The sebaceous glands are found in most parts of the skin, but are absent from the palms and soles. They are most abundant on the scalp and face, and their orifices open either on the general surface or into the glands of the hair. They consist of a more or less capacious duct, terminating in blind, pouch-like extremities. We may mention here the interesting fact, that a parasitic animal is generally found in the duct of the sebaceous glands in many parts of the body. And this singular animal is found in almost every individual, and especially in those possessing a torpid skin. They multiply in sickness. In living and healthy persons, from one to two or more may be found in each follicle.

We have under almost every part of the cutaneous surface, sweat glands. They lie in small pits on the surface of the cutis. Their orifices are discernible in the grooves that intersect the ridges of the papillæ in the hands and feet. On removing one of these glands, and placing it under a microscope of moderate power, it is found to be a solitary tube, intricately ravelled up, one end of which is closed, while the other opens on the surface of the skin. Sometimes this tube is branched. On its outer surface ramify blood vessels, through the walls of which, and those of the gland, the sweat passes into the cavity of the latter, and is carried by the duct to the surface of the body. According to Mr.

Erasmus Wilson, as many as 3,528 of these glandulæ exist in a square inch of surface on the palm of the hand; and as every tube, when straitened out, is about a quarter of an inch in length, it proves that, in a square inch of skin from the palm of the hand, there exists a length of tube equal to 882 inches, or 73½ feet. The number of glandulæ in other parts of the skin is sometimes greater, but generally less than this; and, according to Mr. Wilson, about 2,800 may be taken as the average number of pores in each square inch throughout the body. Now, the number of square inches of surface in a man of ordinary stature is about 2,500; the total number of pores, therefore, may be about *seven millions*, and the length of the perspirating tubing would thus be 1,750,000 inches, or 145,833 feet, that is, 48,611 yards, or nearly twenty-eight miles.

These calculations must, we think, deeply impress upon all unbiased minds the great importance of the action of the skin in the cure of disease, and lead the profession and the public generally to think that there is something more than is usually believed to be in the systematic process of the water cure, as carried on in establishments under the management of physicians well educated in a practical knowledge of the powers in the human organisation—powers, on the proper regulation of which depend, *in every case*, the cure of disease.

In many parts the cutis is perforated obliquely by hairs, which differ much in length, thickness, shape, and colour, according to situation, age, sex, family, or race. The hair is lodged in an involution of the cutis, and terminates in a bulbous root. The hair grows from these little bulbs, and

to which their growth is entirely confined. They are beautifully organized, and maintain a *vital*, though not a *vascular*, connection with the body. The sebaceous glands of the skin, as we before noticed, very generally open into the hair follicles, at a short distance from the surface. The hair follicle itself is fixed more or less firmly in its place, where there are spread round it the capillary blood-vessels which furnish the materials of growth. The nails are formed from the blood vessels circulating in the cutis, and are essentially the same in structure as the cuticle.

The third portion of the skin, the cuticle, epidermis, or scarf skin, greatly varies in its thickness, its chief use being to afford protection to the more delicate parts beneath, and from the circumstance that it attains to great density in those parts which are either exposed to pressure or friction, as the feet or palms of the hands. We may, in a general way, describe it to be a thin elastic membrane, covering the external surface of the cutis, from which it may be easily detached by the action of a blister on the skin, and by the process of putrefaction in the dead body. It is possessed neither of blood-vessels, lymphatics, or nerves, but is entirely composed of a number of granulated particles arranged in laminæ, one placed above another, which are formed as a secretion by the blood-vessels of the cutis. The layers which immediately lie upon the true skin are merely granules which have membranes gradually formed round them, when at first they contain a fluid, but as they gradually pass to the surface from the formation of new layers beneath them, they lose their fluid contents, and from being originally

round, become gradually flattened, and may then be compared to a thin piece of slightly dried gelatine. From this it is evident that the superficial laminæ are being continually shed, and that their loss is supplied by new layers formed below, so that when any portion of it is removed, it is renewed with great rapidity. "The cuticle," says Dr. Southwood Smith, "is a sheath in which the body is enclosed, for the purpose of restraining the organic actions which take place at its surface, and for tempering the sentient impressions received there; for restoring the organic actions, it is fitted by the cohesion of its parts, which is such as to receive and transmit any fluid very slowly, as is manifest from the dryness of its surface when it is raised in a blister, and from the extreme rapidity with which the cutis dries, until it becomes as hard as parchment, when the cuticle is removed from it in the dead body."

Having now described the several constituents of the skin which are thought necessary, it remains for us shortly to take notice of its functions, before proceeding to a particular account of those diseases we intend describing. We have diffused, over every part of the cutis, the nerves of common sensation, by means of which we become acquainted, through the process of touch, with the existence of external objects. If the nerves which ramify in the cutis, and on which its acute sensibility depends, had been placed in direct contact with external bodies, intolerable pain would have been the result. But by covering this surface with an insensible, yet organized substance, we have the organ of sense shielded, while the delicacy of sensation is retained. The skin, besides being the

seat of common sensation, combines the opposite functions of absorption and secretion—the former designed to take fluids or gases from without into the system; the latter to throw off or excrete fluids or gases necessary to healthy action, or which are unfitted to exist in a healthy organism. The lymphatic network of vessels, and the small or capillary arteries and veins are concerned in the absorption which, under certain conditions, takes place in the skin. The function of excretion and secretion may be said to be carried on more or less continuously on the surface of the cutis. The principal seat of excretion is in the pouch-like glands, called sweat glands, which lie scattered in so great abundance in, and immediately beneath the skin. This excreting surface may be safely said far to exceed in extent the surface of the whole body, and the amount of fluid capable of being illiminated by them is enormous. This quantity is, however, materially affected by the condition of the skin, and by its power of supporting the state of the atmosphere by which it is surrounded. This excretion is commonly known under the name of perspiration, which is either sensible or insensible. The former is commonly called sweat, and is observed, after severe exercise, in liquid drops on the surface of the body; while the latter consists merely of a vapour, which, under the ordinary circumstances of the body, is invisible. This invisible vapour is constantly exhaling, while the visible liquid is only occasionally found, and what is extremely interesting, the quantity of matter excreted from the system under the form of insensible perspiration, is much greater than that illiminated by visible perspiration.

The sebaceous glands yield an oily material, for the lubrication of the surface of the cuticle. They are, moreover, important, as they aid greatly in the illimination of the hydro-carbonous matters from the system. The substances removed from the blood, under the form of perspiration, are as truly secreted as the oil illiminated by the sebaceous glands. It is interesting to know that the process of perspiration is a cooling process, and that it is chiefly dependant upon it, that we are enabled to bear the intense heat of the torrid zone without sustaining injury. It is mentioned of Dr. Franklin that sitting one day in repose in the shade, during the intense heat of an American summer's sun, the skin freely perspiring at every pore, he happened to examine the temperature of his body with a thermometer, when he found that it was several degrees lower than that of the surrounding air; the explanation of which is found in the conversion of the liquid on the surface of his body into a vapour, and from its being transuded so freely.

We regret, exceedingly, that we cannot enter at further length into the consideration of these important matters. We would not, however, conclude these few general remarks, without anxiously impressing upon all who have any desire of retaining or restoring to themselves a healthy and vigorous constitution, the necessity of keeping their skin, with its different glands, in a healthy and active state, by the due and proper use of water, exercise, ventilation, food and clothing. Without a continued attention to all and every one of these, no one can expect to have that vigorous body or healthy intellect, which it is the ambition of all reflecting minds to possess.

CHAPTER II.

FEVER CONSIDERED GENERALLY. VARIETIES OF OPINIONS ENTERTAINED AS TO ITS NATURE AND SEAT—INFECTION AND CONTAGION.

We shall here give a few general remarks upon what we mean by the term fever.

This word, derived from the Latin term Febris, is applied to a class of diseases characterized by morbid heat of skin, frequency of pulse, with more or less disorder of the several functions. Fever may be either *primary* or *secondary*. It is said to be primary or idiopathic when it does not appear to depend upon the presence of any other disease or local affection; secondary or symptomatic, when it has been caused by a morbid action going on in some particular organ, as, for example, in inflammation of the throat accompanied by fever. In this case the fever depends on the presence of the inflamed state of the fauces. It is said to be simple when uncombined with any disease which can modify its effect or affect its natural course. In typhus we have an illustration of idiopathic fever, which is usually unattended by any local disease.

As it is the boast of the members of the medical profession connected with the present established mode of treating disease, that they do not give remedies according to the symptoms merely, but from a knowledge of the seat and nature of the complaint, it may, perhaps, be worth while shortly to examine into the extent of their agreement either as to the

seat or nature of fever. In the early ages of medicine the morbid condition of the fluids of the body was considered as the primary cause of fever. This view was for many centuries regarded as orthodox, and was deemed a sufficient explanation of the origin of the symptoms, which opinion was rendered still more satisfactory from the chemical doctrine promulgated by Paracelsus and Van Helmont, for, they imagined that the fluids in fever possessed at one time an alkaline and at another an acid quality, from the union of which properties they conceived that an effervescence took place, from which the febrile paroxysms originated—an assumption that led to not a few practical errors.

This idea of the morbid state of the fluids has, after having been dormant for near a century, been again revived, and now is very generally entertained by some of our best pathologists. Dr. Stephens considers the blood as the first link in the chain in the morbid phenomena which constitute fever. "The locality," says Dr. Tweedie, "of the disease, however, has been most warmly disputed; indeed, there are few organs of the body which have not been fixed on as the seat of fever." Stahl and Hoffman, two celebrated physicians of the seventeenth century, attributed the cause of fever to a torpor of the brain and nervous system, and the same idea formed the basis of the celebrated hypothesis invented by the great Cullen; while Dr. Brown, the contemporary and opponent of Dr. Cullen asserted and publicly propounded a theory entirely opposite to this, and, therefore, his only treatment was bleeding and stimulants. Marcus, Clutterbuck, and others, seem to have entertained the opinion that inflammation of the brain

was the primary cause of fever, and regulated their practice accordingly. Bonitus, Bartholinus, and perhaps Sydenham, ascribed the phenomena of fever to an affection of the intestinal canal. Broussais, with his followers, boldly assert that fever is entirely symptomatic of irritation or inflammation of the mucous membrane of the stomach and intestines, and this view of the nature of fever, we think we may say without any fear of exaggeration, now almost exclusively prevails among the French physicians, from whence it necessarily follows from the idea commonly entertained as to the means required to be pursued in subduing inflammations, that blood-letting, local and general, with other kinds of depletion, is the practice usually pursued; with what result the mortality book will doubtless be able to show. According to Broussais and his school, mild fevers arise from inflammation of the stomach and intestines only; inflammatory or ardent fever, from an intense degree of this lesion; mild typhus, when it has assumed such a degree of intensity as to affect the general powers of the system.

Let it not be supposed that these different views of the nature and cause of fever do not seriously modify the treatment pursued by their several advocates. We can assure our readers that they do so, for we have seen in the same hospital patients of the same age, of the same constitution, labouring under the same kind of fever, and the disease in exactly the same state of advance in each, treated quite differently by different physicians under whom they happened to be placed. One, for example, was bled, cupped, leeched, and blistered, with now and then a drastic purgative; the other was physicked morning, noon, and afternoon;

and the third was brandied, and kept continually in a state of excitement by this and similar stimulants.

From what has just been said, the reflecting reader will perhaps see the necessity of attending more to the history of the malady, the character of the symptoms, the circumstances under which they have arisen, the habits of the patient, &c., than to the fancied opinions entertained as to its nature. They will also see the importance of attending, in the selection of a remedy, to the characteristic actions it produces, which are to be discovered, not merely from their chemical nature, or from their effects upon individuals labouring under disease, but from a minute study, for a lengthened period, of their action upon healthy individuals. The honour of this discovery, which is yet to revolutionize and shake to its very centre, the medical art, as now uniformly practised, was made by that subtle thinker and acute observer Hahnemann.

Contagion.—By this term we understand the propagation of disease by actual contact, though it is sometimes used, both in speaking and writing, to denote the matter by which the propagation is effected. In certain instances, that of inoculation, for example, we know that this is produced by the communication of a deleterious substance, from an individual affected, to the one who receives the disease. Hence analogy, as well as an inability to explain the effects of contagion on the system, leads us to infer, that wherever disease is transmitted from one individual to another, it is by a communication of such matter. The body, secondarily affected, has the power of again generating and communicating to others a similar matter, from which, disease, the same in kind as

that existing in it, is produced. Diseases which possess this power are said to be contagious, and the matter generated, is called contagious matter, or contagion.

Contagious diseases may be properly divided into two sections—one where the contagious matter acts only by positive contact, and the other, where, though communicable by contact, they are besides capable of being transmitted from individual to individual, through the medium of the atmosphere. Contagion is therefore immediate or mediate. To the first section belong itch, Egyptian opthalmia, cow-pox, &c. To the second, small pox, chichen-pox, hooping-cough, typhus, influenza, measles, scarlet fever.

Of the constitution of the contagious matter we know nothing; endeavours, however, have been made to discover the laws which govern its diffusion through the atmosphere. We give the following results which have arisen out of these attempts:—they are, perhaps, not entirely true, yet they approach towards it.

Dr. Haygarth, so far back as the year 1777, states, that from clinical observation, he ascertained according to what law the small-pox infection is propagated, and in 1780, that by which febrile contagion is extended. He believes that the bad consequences of the small-pox miasma are limited in the open air to half a yard, that is, in mild cases; while in the most malignant, the infectious influence probably extends a few yards from the origin of the poison. He considers that the contagion of fever is limited to a much narrower sphere than that of small-pox. Dr. Clark, in the report to the Committee of the Newcastle Dispensary, dated

1802, states, that the most malignant fever does not render the atmosphere infectious beyond a few feet from the patient, and, moreover, that a person must remain a considerable time within this limit to be affected by it.

We may, however, add, that many circumstances influence the extent of the diffusion of contagion. These are, especially, dirty, crowded, and ill-ventilated apartments, neglect of cleanliness, foul clothes, fœted discharges from the body, &c. &c. which all increase the power of contagion, and render individuals at the same time more susceptible of it. The means of preventing the propagation of contagious diseases are, cleanliness of the person of the patient and of his apartment, free ventilation, the immediate immersion in hot water of all the clothes, &c., which the patient has worn, the avoiding all needless and long-continued proximity to the sick, inhaling their breath, and standing in the current of air which passes over them. The attendants should also, as far as possible, avoid approaching or continuing beside the patient when they are fatigued—hence the necessity for them to take frequent rest, and a plain, unstimulating, nutritious diet.

Infection.—We employ this term to signify the deleterious qualities which certain matters communicate to the air and other inert bodies, which have a pernicious effect on the human constitution in producing disease. Much confusion has followed from the attempt to discriminate between contagion and infection, when we employ the latter term to express the transmission of disease from man to man; infection, however, possesses a wider meaning than contagion, being applied to cases of

contamination which are not designated by the latter word; as for example, when transmission is effected through the agency of the winds, and at a distance, the mode of communication is designated *infection*. In other words, when the poisonous principle is volatile, and capable of diffusion in the atmosphere, it is infectious; but when this diffusibility is absent, it is simply contagious. From this very artificial distinction between infection and contagion, some of the most able writers now use them synonymously. Thus, Dr. Watson remarks, "since in all cases the disease is conveyed to the person of the recipient by particles of matter proceeding from the person of the sick, and since it seems very important whether these particles are in a solid or in a gaseous form, whether they are imparted by direct contact of the two human bodies or by being wafted through the air, or carried upon articles of clothing, I shall include both and all these modes of communication under the simple term contagion. This, in fact, is what is done in common discourse. All disorders that are catching I shall take leave to consider contagious." Bodies differ much in their power of receiving and retaining infectious influences. Confined masses of atmospheric air receive it readily and retain it long, so also bodies which have the power of absorbing air within their interstices—such as charcoal, cotton wool, and clothes made from this substance, fur, feathers, &c. while all smooth, hard, and polished surfaces are tainted with difficulty, and when they are so, are readily purified.

Two views are entertained regarding the mode in which these deleterious influences act upon the organism.—One is, that they produce their effects

through the nerves; the other, that the matter is absorbed into the circulation. We are inclined to believe that infection takes place through the absorption of deleterious matters by the lungs, for their structure and functions are exceedingly well adapted for such a purpose. But we are unable, from the limited space we have allowed ourselves, to enter upon this subject. We have sufficiently explained for our purpose, the meaning of the words infection and contagion, the conditions which regulate their actions, and the circumstances which aid in preventing their diffusion. We shall conclude this portion of our subject with the following pretty long extract from the excellent work of Erasmus Wilson, on "*Diseases of the Skin.*" "In whatever way the poisonous principle be brought to the body of a sound person, and with whatever part of his body it may come in contact, whether with the cutaneous surface, with or without abrasion, as in contagion, or with both the cutaneous and mucous surface in infection, the mode of its reception by the system is the same. In the first instance, it is dissolved in the fluids of the body, and, in the second place, is conveyed by imbibition into the circulating current of the blood, thence to act on the nervous system, and alter its functions. Thus introduced into the system, the poisonous principle possesses the remarkable power of exciting an action similar to that which existed in the body whence it emanated, the intention of that action being the reproduction of an identical poison. Liebig has compared this process to fermentation; as, when a particle of yeast is brought in contact with a fermentable fluid, the particle of yeast is itself

lost, or is too insignificant to be traced further; but the action which it excites occasions the formation of an abundance of similar yeast.

In certain diseases regarded as contagious, another mode of transmission occurs; the principle of contagion exists in the form of germs or seeds of a parasitical organism, which, wafted to a soil fitted for their nutrition, become developed, and assume an active growth. Of this kind are the parasitic fungi, found upon the surface of the bodies of animals, and, according to some, the mycoderma of the crusts of favus. Langenbeck found fungi in the body of a man who died of typhus fever. Mr. Owen has seen them coating the internal surface of vomicœ in the lungs of the flamingœ; and similar observations have been made by other observers.

The most interesting, as it is the most important of the phenomena of morbid poison, is the modification which they produce in the system of the affected person. By virtue of this modification, the susceptibility to be excited by a similar stimulus, or to take on a similar action, is deteriorated, and in many instances entirely abolished.

We might recur again to the simile suggested by Liebig, for we are incapable of again exciting fermentation in a fluid that has already fermented. It is upon this important principle that safety from a repetition of attacks of eruptive fever reposes.

CHAPTER III.

THE GENERAL CHARACTER OF ERUPTIVE FEVERS CONSIDERED.

These diseases are caused chiefly, if not entirely, by contagion, and therefore prevail now and then epidemically. They are characterized by fever, more or less severe, which precedes, accompanies, and sometimes exists after the disappearance of the exantheme; by an eruption which makes its appearance in the form of red points, and always pursues a regular course, and by their mode of termination.

The degree of the febrile symptoms is determined directly by the nature and power of the exciting cause, by the state of the health of the person previous to his being affected, and by the more or less perfect development of the eruption on the surface of the body. The severity of these symptoms is very much regulated by the extent and amount of the rash, as the severer and more extended it is the more affected are the sentient nerves of the skin, and then the brain and spinal chord. In mentioning this latter circumstance we ought also to remark that experience has shewn the danger of arresting the development of the eruption in the skin, for "whether" as the learned Professor Allison says, "the body contains a morbific poison which ought to be expelled or not, it certainly labours under the influence of a cause which becomes more dangerous if the inflammations accompanying it are abortive; and unwonted recession of the eruption, if not a *cause* of injury,

is very generally to be dreaded as a *sign* of such enfeebled circulation, as threatens immediate death by *Asthenia*." The seat of the congestion or increased flow of blood, which causes the greater or less redness of the eruption, is the vascular network of the cutis. When the eruption is red we may be assured that there is no danger of death from the attack provided the disease be properly treated. But should the eruption be of a dark brownish, livid, or purplish character, then there is danger; for the functions of the skin are depressed and the vitality of the system weakened. Gentle stimulants, and the cautious application of water, are then both needed to carry the patient through the disease, and so preserve life. "The epidemics of small pox are perhaps chiefly seen in the summer, those of measles in the winter of this climate. The diffusion of measles is generally the most rapid of any, that of small pox next, and that of scarletina in most seasons the least rapid; although, occasionally, and within narrow limits it appears to be propagated with extreme facility. Of the natives of large towns there are few adults who have not passed through measles, and one form or other of small pox, and on this account the mortality of both these diseases falls very much on children below the age of ten."

There is in these diseases so distinct an eruptive fever, which is so characteristic in each, that with a little care, the most unlearned cannot mistake the one for the other; and, when properly treated, the symptoms are so regulated, that rarely a bad symptom is to be observed during the whole progress of the disease. This will appear to many to be a most reckless assertion, but we can assure

our readers that we have not allowed it to be printed without having first well weighed its bearing. We are confident that, be he learned or unlearned, professional or non-professional, who treats the common eruptive fevers by the water system as described in this book, will rarely, if ever, have a fatal case. We speak so from experience, for we have now treated a large number of cases labouring under these different eruptive fevers, and have not yet had a death since we commenced using the water treatment upon them. How different this statement is from the results contained in the following tables of Mr. Watts.

DEATHS UNDER TEN YEARS.

	Measles per cent.	Scarletina per cent.	Small Pox per cent.
Edinburgh ...	92	64	82
Glasgow	85	70	85
Perth	92	63	87
Dundee	90	66	85

DEATHS UNDER TWENTY YEARS.

Edinburgh ...	99	98	95
Glasgow	99	97	95
Perth	100	98	91
Dundee	100	95	94

DEATHS ABOVE TWENTY YEARS.

Edinburgh ...	.03	1.8	4.7
Glasgow	.06	2.04	4.8
Perth	0	1.4	8
Dundee	0	4.6	5.1

CHAPTER IV.

SMALL POX.—ITS HISTORY, SYMPTOMS, TREATMENT ALLOPATHICALLY, HYDROPATHICALLY, AND HOMŒOPATHICALLY. INOCULATION. VACCINATION.

History.—Several writers of authority believe that they have been able to trace the existence of small-pox in the earliest writings of the Hebrews and Greeks; that it was seen by Hippocrates, and commented on by Galen. Dr. Baron, of Gloucester, asserts that the account given of the plague of Athens by Thucydides "presents as accurate an account of the leading symptoms of small-pox as could possibly be expected from any historian not medical." Rhazes, an Arabian physician, and the first acknowledged writer on this disease, endeavoured to prove that his master, Galen, had seen it. But Freund and Mead, medical historians, men of much learning and great erudition, after having devoted much time and attention to the elucidation of this matter, agree that there is no foundation for such an opinion.

We have it stated by Mr. Moore, in his history of small-pox, that this disease existed in China and Hindostan more than a thousand years before the birth of Christ. Some time after this, it seems to have extended into Arabia, and to have attacked the Arab host at the siege of Nurea, in the year of Mahomet, 569. Following the track of armies, we find it existing as a heavy scourge in Egypt in 640, and afterwards, pursuing the advances of the Saracens, in the eighth century, through Italy, Spain, and France, which contributed, doubtless,

to the gradual extension of Small-pox through the different countries of Europe, but on this subject very little is known. From the researches of antiquarians we are warranted in saying that small-pox reached England early in the tenth century. Moore's history, just referred to, mentions the existence in the British Museum, of a curious Anglo-Saxon manuscript, supposed to have been written in that century, containing an exorcism or supplication against the small-pox. Before the discovery of America by Columbus, small-pox had not been known there. But, twenty-five years afterwards, it was introduced into that continent, being first imported into St. Domingo, from whence it was carried into Mexico by a negro covered with the pustules of small-pox, being landed on the Mexican coast. From him the disease spread with immense rapidity, causing frightful devastation among the natives. The discovery of America, which so wonderfully extended the boundaries of human knowledge, led to the most fatal consequences to the people of the new world, by the introduction of this malady; for it swept away such multitudes of the natives that some whole tribes disappeared, and "Heaven, by thus evacuating a country in which the English might settle without molestation, was supposed to declare its intention that they should occupy it." Three millions and a half of people were destroyed in Mexico alone. Small-pox was introduced into Ireland in 1707, where 16,000 persons were carried off by its ravages, a number exceeding the fourth part of its whole population. Later, it extended into Greenland, where it appeared for the first time in 1783, when it almost depopulated the entire

country. All that we read in reference to this disease, serves to shew how great were the terrors inspired from the frightful consequences of small-pox, in every period of its career.

Symptoms.—Small-pox is usually divided, for convenience, into four stages : 1st, the febrile stage, extending from the first day to the fourth; 2nd, the eruptive stage, from the fourth day to the seventh ; 3rd, the ripening stage, from the seventh day to the eleventh; and 4th, the stage of desication, or decision, from the eleventh to the fourteenth or fifteenth day. This disease is especially distinguished by the pretty uniform duration, both of the latent period, and of the eruptive fever, by the *pustular* character of the eruption, and from the incipient pustules shewing always depression *upon* their apices after the second day. A slight erysipelatous rash often attends the beginning of the eruption, but disappears in a few days. The pustules are usually in some numbers on the eyelids, and in the mouth and throat, and are also occasionally seen in the windpipe, but they probably never extend to the stomach.

First Stage. Small-pox usually commences with a sense of cold, sometimes distinct shivering, feebleness, drowsiness, heavy pain of the head, sickness, or even vomiting. Infants and children are generally restless and fretful, and the peculiar action of the contagious poison in the nervous system is often shown in them by convulsions before the eruption comes out. After, from twelve to twenty four hours, fever ensues ; the skin is then hot, the patient thirsty, the face flushed and slightly swelled, the eyes red, injected, and watery. The pulse is much increased in frequency, and is

strong and full; respiration rapid, and the voice slightly hoarse; the urine is at the same time scanty and of a deep red colour. This train of symptoms usually occupies the first, second, and third days; then the skin is felt to be tense and itchy, and minute red spots, sometimes patches, are to be seen in the face and the forehead, then on the neck, breast, and upper extremities; next on the belly and back, and latterly on the lower extremities. After these have appeared the symptoms undergo a slight alteration, the respiration is slower, and the pulse beats less frequently. The hoarseness, however, usually continues, and there is sometimes sore throat, with difficulty in swallowing, and slight salivation. After this the pustules begin to enlarge, chiefly at their margins; their contents become opaque, and of a whitish yellow, or straw colour; the apices flat, level, and pitted. These changes may be observed on the sixth day, on the face and neck, but not until the eighth day on the extremities. On the eighth day the pustules begin to lose the depression on their summits, and are filled with an opaque white or yellow fluid, while there is, at this time, the exhalation of a peculiar odour. This process of change, when the pustules are numerous, is attended with much general disorder and local irritation. The pulse becomes quicker, with a distinct fit of shivering, and increased heat and thirst. About the tenth day convalescence is usually observed to take place. Under the water treatment, however, the convalescence generally commences a few days earlier.

Arrangement and Structure of the Pock.—This

subject has excited deep interest at various times, and was investigated with much care and diligence by Cotunnius, an Italian physician, in the year 1771. The pock has its seat in the true skin; and on or about the third day of their appearance, are formed into vesicles, which contain a thin, transparent lympth. They are each divided into six or eight cells, united together at the centre, which is depressed for some days. This central depression is characteristic of small-pox, and is exhibited only in it, and cow-pox. The poisonous matter of small-pox is secreted into these minute cells, and during their progress, they become gradually surrounded by an inflammatory circle called areola. After a time the thin, transparent lymph, contained in the vesicles, is changed into a thick, opaque matter, of a white or straw colour, which gradually distends the cells, and breaks down the central septum, in consequence of which the pustule *accuminates.* This process is usually completed in seven days, but it has been known to take place as early as the fifth day.

This disease, as far as we know, never has a *spontaneous* origin, but appears in all cases to be a product of a specific poison, or contagion, received into the blood from without. Of its primary origin we know nothing.

The contagious matter of small-pox may be received into the body by three modes; first, by the lungs, through the medium of the respiration; this mode is properly termed *infection.* Secondly, by application of the matter to the unbroken surface of the skin, or mucous membrane of the nose, which is called *contagion.* Thirdly, by the appli-

cation of matter to the wounded surface, and here we have *inoculation*.

It is believed by some that small-pox is not infectious prior to the appearance of the eruption, while others, without hesitation, state that even while the body is labouring under the premonitory fever, the secretions are infectious. The power of contagion exists in the body as long as the scabs remain on the surface, which may be said to contain the poison in a concentrated form. It has been, we think, satisfactorily proved, that the contagious matter of the pustules continues active for some time after death, and that a severe case will so taint the air as to spread the disease for at least ten or twelve days after life has ceased.

Every individual seems to be susceptible of the small-pox poison at some stage of their existence. It may extend from the mother to the fœtus, when, it is always fatal to the latter. Care, therefore, ought to be taken not to inoculate females in such a state, as the life of the fœtus is usually destroyed thereby. It may be stated, as a general fact, that the susceptibility of small-pox is equally great at all ages. It may affect the infant immediately after birth, and the adult up to the most advanced period of life.

Allopathic Treatment.—We give a short sketch of this mode of treatment, merely that individuals may see its oppositeness, dangerousness, and heterogeneous nature. We take our illustrations from the works of the best authors who have written on this disease. Remarking here that we take no notice of how medical men treat the mild forms of this contagious fever, as that is usually done as well by experienced nurses as by them, we, therefore,

take our illustrations from those cases where the treatment required must be of an active and positive kind. In the 16th century small-pox was treated by means of warm drinks, warm rooms, and bad ventilation. "Sennertus," says Dr. Gregory, "gives the following account of the practice pursued in his time. The great object was to expel the noxious humour by perspiration, to accomplish which various decoctions of warm seeds are directed, containing mithridate, bezoar, and other drugs, denominated elexipharmic and sudorific. "While using these," we extract from Sennertus' own work, "every attention is to be paid, especially in winter, to prevent the admission of cold air. The patient is therefore to be tended in a warm chamber, and carefully covered up, lest by closing the pores of the skin, the efforts of nature should be impeded, the humours driven upon internal organs, and matters, which ought to be expelled, retained within the body, to the imminent danger of the patient, and the certainty of increasing restlessness, fever, and other symptoms."

This fatal mode of practice was in general vogue in the time of Sydenham; he saw the frightful consequences which arose from it, and opposed it manfully; yet though he worded all his expressions with the most scrupulous care and anxious wish, so that he might not hurt the feelings of his professional brethren, yet, the blighting bigotry and baneful influence of prejudice in the craft, exposed him, to the accustomed obloquy and calumniations which are the rewards usually bestowed upon those who advance beyond the prescribed limits of professional orthodoxy. He was styled, by the celebrated in the profession, a base innovator and

a black homicide, and yet the treatment which he recommended was merely a cooling regimen, fresh air, light bed coverings, abstinence from wine, and all sweating medicines, with moderate bleedings, acidulated drinks, opiates, gentle employment of purgatives, and the frequent use of blisters : a treatment we should think, orthodox enough. We shall now give the treatment usually employed in the present day in severe cases, "Where sickness and vomiting are urgent, an emetic of twenty grains of ipecacuanha will be useful; but some physicians conceive that medicines of this class may aggravate the gastric symptoms." "If the sickness be accompaniedwith much pain in the stomach, the most effectual remedy is full bleeding and an effectual dose of cathartic medicines." "During the period of maturation, when the stomach remains irritable, with a tardiness of eruption in the extremities, a blister may be applied over the stomach, and foot-baths, containing mustard powder, frequently used." "An opiate, consisting of laudanum, of the sedative liquor of opium, or of Dover's powder, may be given at bed time. if there be any considerable degree of restlessness or of irritation of the skin." "Sydenham was of opinion that blood-letting was of no service, and represented the only effectual remedy to be a large opiate. Of this measure I feel it requisite to disapprove, and to say, not only that opiates are here injurious, but that the best and most effectual remedy is blood-letting from the arm; in the case of children, from five to ten or twelve, to the extent of eight or ten ounces; and in the case of younger persons either a general bleeding to the extent of five ounces or local bleeding by means of leeches." "For the

case of persons above the age of puberty, the same means is required, by the presence of headache, *delirium*, much stupor, or typhomania. In each or all of which eighteen or twenty ounces of blood may be taken from the arm with great benefit." "In general, the symptoms here mentioned are greatly alleviated or wholly removed by blood-letting; but if they should not be entirely removed under the means now specified, it is proper to apply blisters or mustard poultices, or even to administer an antimonialized opiate."

"*Inflammation of the throat and base of the tongue.*—For these symptoms, the most prompt and effectual remedy is in adults general blood-letting, to the extent of twelve, fifteen, or eighteen ounces; in children to the extent of five or six, and in infants local bleeding." "Blisters have been commended by Cullen and others; but before and without blood-letting they are injurious, and afterwards they are often useless." "Opiates, which have been much used in this stage, are signally injurious." "When there is inflammation of the lungs or of the wind-pipe, blood should be drawn from the arm to the extent of fifteen or twenty ounces in an adult." "The discharge should be immediately followed by nauseating doses of tartrate of antimony, from one-eighth to one-fourth or one-half of a grain every hour, and if the use of these means be not followed by decided amelioration in the course of from thirty to thirty-six hours, it will be proper to administer calomel and opium, at the rate of two grains of the former to half a grain of the latter every second hour."

"In some cases in which the urine is scanty or suppressed, it is of great moment, next to blood-

letting and keeping the patient cool, to administer acetate of potass, in doses of from ten grains to half a drachm or a drachm, or a powder consisting of ten grains of cream of tartar, five grains of saltpetre, and five grains of aromatic powder. The use of diuretic medicines, however, is condemned by Hoffman, apparently without sufficient reason as to the saline diuretics."

"Concerning the use of cathartics, or free purging, in the suppurative stage of confluent smallpox, much difference of opinion has been entertained by physicians. The administration of cathartics was practised by Sydenham, though to a small extent; and only about the twenty-first day. Morton was decidedly hostile to it, and it was again favoured and strongly recommended by Freind, Mead, Tissot, Baker, and Huxham. It seems singular that Sydenham did not perceive that the continued use of cathartic medicines, after the commencement and during the course of the suppurative fever, would have not only mitigated all its symptoms, but by maintaining a cool and uninflamed state of the system, have often superseded the necessity of blood-letting, which he thought requisite, and which was requisite, to obviate inflammation of the lungs and intestines." "In general the best laxatives are the colocynth pill, or the compound jalap powder, followed by castor oil or the saline infusion of senna. Where, however, there is much distension of the belly, forty grains, or even sixty, of the compound powder of rhubarb and magnesia. Calomel and chalk, or mercury and chalk, are recommended by one party when there is diarrhœa, and condemned by another, who recommend opiates instead. If the

distension of the belly be not allayed, ten or twelve leeches are recommended to be applied, and to be kept bleeding by means of warm poultices. The drastic purgatives, such as senna and salts, are continued daily, so long as the tongue is whitish, the skin dry, or a tendency to looseness."

"Symptoms indicating local inflammation must be met by appropriate means. When cough and copious expectoration of a puriform mucous occur, and give evidence that inflammatory action has spread to the smaller branches of the bronchia, blood should be taken from the arm to the extent of twelve ounces, and repeated according to the exigencies of the case." "When headache or flushed face, redness of the eye, and activity of the carotid and temporal arteries denote the presence or probable approach (!) of phrenitic inflammation, particularly in persons of plethoric habit, blood must be taken from the arm freely. In the same habit of body it is sometimes advisable to take blood from the arm to moderate the violence of the inflammatory action upon the surface, and to lessen the danger during the state of secondary fever."

We would ask the most prejudiced individual to read over these complex, heterogeneous, contradictory, and dangerous recommendations for the treatment of small-pox, and then put to himself honestly the question, 'Do these medical men, who act in the way just described, really know what they are about? Do they understand the nature of the disease, or are they acquainted with the several properties of the many remedies they employ? His unhesitating answer must be to each of these interrogations, No. One, unacquainted

with the history of the art of medicine, may well doubt the assertion which the sceptic in the power of drugs given in large quantities, and without any principle to guide, often makes, when he considers that this huge gangrenous, corroded, and fœtid art, has been so long in use, and allowed to ride for so many centuries rough-shod over the intellects, feelings, and lives, of the community at large. No wonder that "the chief danger" after such a treatment "is a death by asthenia, or exhaustion, generally attended with much comatose tendency, and rapidly increasing about the time of the full development of the eruption," especially when we take into consideration the great excitement and irritation which exist in the skin, and the high irritability of the nervous system. But we have said enough to shew the want of any consistency, the thorough incompleteness, and the characteristic hap-hazard nature of the treatment usually employed in severe cases of Small-pox. And, we think it is sufficient to nerve mothers to take upon themselves, and with a free conscience, the treatment of their own children, while labouring under this disease, according to the plan we are about to recommend.

We shall now enter into the treatment of Small-pox according to the method usually termed hydropathic.

Hydropathic Treatment.—Previous to the commencement of the febrile symptoms, that is, when there is shivering, and heavy pain in the head and back, we would recommend that the patient be well rubbed in a slipper bath, or common tub, the temperature of the water being 75o Fahrenheit, and to be well dried afterwards.

This treatment to be continued until the febrile symptoms appear, and to be repeated morning and afternoon. When the febrile symptoms have commenced, we have carefully to watch that there be no affection of the fauces or windpipe, and that the stomach and bowels are not greatly out of order. We are at the same time to remember that the chief danger to be dreaded in general, is exhaustion; and, that after the disease has nearly or wholly subsided, it frequently happens under the common mode of practice, though rarely under that which we are now advocating, that inflammation which passes with peculiar rapidity to suppuration, is very apt to occur in different parts of the body, occasionally in the eye, and less frequently in the joints, while the patient is, for a long time after the disease has subsided, liable, on exposure to cold, to scrofulous inflammation, if previously predisposed to it. These sad consequences, as we have already mentioned, rarely if ever happen under the water treatment, yet it is proper to have them in remembrance, so that while we apply our remedies energetically we may at the same time be careful and watchful that we do not reduce the temperature of the body too far, and so for a time lessen the reactive energy.

Febrile Symptoms.—The prevention of serious local affections depends principally upon the vascular excitement, and also on the state of the febrile symptoms generally, for if we can keep these under controul the disease usually runs its course without any serious symptoms being observed in any part of the body. The best, surest and safest way of attaining this object, is by the use of the wet

sheet envelope, and the slipper bath.* We would recommend generally, that while the skin is hot and the pulse full, that the patient be enveloped every fourth hour, for an hour and a half each time, or until he has become restless or uncomfortable in it, and that he be immediately afterwards well rubbed with the hands in the slipper bath, temperature 70°, and be well dried afterwards, and then laid in bed between fresh sheets, and lightly covered; that the room be kept slightly shaded, as it were, or darkened, but that a free circulation of fresh air be constantly kept up in the room, and that the patient be allowed to drink as much cold water as he desires, provided it does not exceed eight tumblers full during the twelve hours. After the full pulse, and the heat of the skin have become diminished, we should advise the wet sheet envelope only to be used morning and afternoon, for one hour each time, but should the patient become restless during the night, he ought to be enveloped for an hour or so, with the slipper bath afterwards. After the patient has become convalescent this treatment should be discontinued, and the slipper bath, temperature 60°, alone used, morning and afternoon, the patient being carefully dried after. Should the bowels be constipated, an enema (the water, temperature 65°) ought to be employed every second day. If they be loose, we would recommend flannels wrung almost to perfect dryness, out of water temperature 95°, to be applied for half an hour each time, changing it every five minutes, four times a day. Should these symp-

* For a full description of all the baths, with the mode of using them, see the chapter on these subjects.

toms continue in spite of this treatment, we would advise the homœopathic remedies hereafter mentioned, to be given.

Headache.—The head ought to be shaved, and a compress, well wrung out of cold water, kept constantly applied over it, and changed the instant it gets warm. This frequent changing of the cloths ought to be most watchfully attended to.

Affection of the Throat and Chest.—When these organs are affected, either separately or together, a compress, wrung out of cold water, ought to be kept constantly applied round them, and changed every hour, and the throat gargled with cold water as often as the patient feels desirous of doing it.

No animal food ought to be given while the fever lasts, but a sufficiency of plainly cooked farinaceous substances, such as rice, arrow-root, tapioca, may be freely allowed. During the febrile symptoms, and while the pulse is full, no stimulants ought to be employed; but should the pulse become weak, quick, or thready, the patient should have a little wine or brandy frequently given to him during the day and night, watching the effect it has upon the pulse, and regulating the quantity accordingly. No fear need be entertained from the use of stimulants while the pulse is in this state. They are but fuel added to make up for the too much waste, and the depressing effect of the poisonous influence in the system, so that life may be, as it were, artificially retained and carried through its struggle by aids from without.

Homœopathic Treatment.—The principal remedies are Aconite, Belladonna, Arsenicum, Bryonia, Mercurius, and Rhus. Aconite, third dilution, twelve drops or globules, in twelve tablespoonfuls

of water—a tablespoonful every hour while the febrile symptoms last. When along with these, there is great sensibility to light, with severe headache, Belladonna, third dilution, twelve drops or globules, in twelve tablespoonfuls of water—a tablespoonful hour about with the Aconite solution given above. Where there is great irritability of the stomach and intestines, without much eruption on the surface of the body, Rhus, sixth dilution, six drops or globules, in six tablespoonfuls of water—a tablespoonful every fourth hour. If these symptoms be combined with high fever, we would recommend this remedy to be given alternately every second hour with Bryonia, third dilution, six drops, in six tablespoonfuls of water. If there be looseness of the bowels, with moist mouth and slightly coated tongue, Mercurius, third trituration, six grains, in six tablespoonfuls of water—a tablespoonful every second hour. If, however, with the diarrhœa there be slight pain in the abdomen, dry red tongue, and much thirst, with the desire to take only a little at a time and frequently, Arsenicum, sixth dilution, six drops or globules, in six tablespoonfuls of water, a tablespoonful morning and afternoon. We consider that if these two methods of treatment be followed that even in the most severe cases a cure will be the result, and that we shall not have to combat either during the progress of the disease or after it has ceased, the many complications and sequences which are so very troublesome and dangerous when the ordinary mode of treatment is pursued.

Inoculation.—Small pox was observed and studied by physicians for at least twelve hundred years before the idea was entertained that its

course might be controlled, and its virulence lessened by artificial means. At what time, in what place, and by whom this conception was first suggested, is not known. About the year 1703, rumours of the great success of inoculation attracted the attention of a Greek physician, who wrote a letter on the subject, dated 1713, to his English friend, Dr. Woodward, which we find published in the Philosophical Transactions of the subsequent year. Twelve months after this, the Venetian Consul at Smyrna, Dr. Pylarini, published an account of the success which resulted from this practice in Turkey, which is noticed in the Philosophical Transactions of 1716. "No notice, however," says Dr. Gregory, "was taken of these important facts by any English physician, and the idea of transplanting or engrafting small pox, as the process was called, was well nigh forgotten in London, when the celebrated letter of Lady Mary Wortley Montague appeared, which described the practice in so lively a manner as to attract public attention. "The small pox," she writes, "so general and so fatal amongst us, is here entirely harmless by the invention of *engrafting*, which is the term they give it. There is a set of old women who make it their business to perform the operation. Every year thousands undergo it, and the French ambassador observes pleasantly, that they take the small pox here by way of diversion, as they take the waters in other countries. There is no example of any one that has died in it, and you may believe I am well satisfied of the safety of the experiment, since I intend to try it on my dear little son. I am patriot enough to take pains to bring this careful invention into

fashion in England." She kept her word, and to the enterprise of this lady the introduction of inoculation into this country is altogether due. It was not until her return to London that any attempt was made to profit by a discovery which had been announced for five years, and her own daughter was reserved to be the first example of inoculation in England. This event occurred in April, 1721, and as its success was complete, Dr. Keith, who had been witness to the experiment, submitted his child to the same process, and with a like happy result. Several months elapsed, but the medical profession in London still remained sceptical; some, *because the practice originated with ignorant old women*, and others, from an inability to understand the rationale of the process. By slow degrees the medical profession threw off their bigotry and wedded prejudices, and began to be convinced of the advantages of inoculation. It was not, however, until the middle of the last century that it was practised in England to any considerable extent. The same century in which inoculation was first performed in England saw its rise into high popularity, and also its fall. In 1798, Dr. Jenner announced his great discovery of vaccination, soon after which the general practice of inoculation declined, and has never since revived.

The principal advantage derived from inoculation generally consists in obtaining the distinct or mild form of the eruption, and in preventing or moderating the secondary fever of confluent small pox, which is at all times dangerous, and not unfrequently fatal. No sufficient explanation has yet been given why a mild kind of the disease should almost always arise from its being occasioned

by the poisonous influence being received into the system by means of inoculation. The principal reason urged against small pox inoculation is, that it adds to the danger of the public by multiplying the fire of variolous contagion—that it preserves one life at the risk of many. Our limits prevent us entering further into this important subject.

Vaccination. On the 14th of May, 1796, Edward Jenner, a young physician in Berkeley, near Gloucester, performed the first experiment which led him to follow out the noble conception, that he might be able to prevent death, alleviate suffering, and diminish the frequency of illness from that fatal disease, small-pox. What must have been this great and good man's feelings then and during the time when the full light of his beneficent discovery was becoming manifest to his intellectual vision? What must have been his pity for those who refused the gift he offered them, and what the deep sorrow and the bitter regret he must have felt, when forced to hear of the many deaths which daily happened around him, and which he knew might have been prevented? He only can answer these questions who has received a like gift unto this. For the person who gets a thought from another can never feel it with the same vitality and earnestness as he who gave it being. This is the sweet reward given to all discoverers, and which no contemptuous indifference, bitter sarcasm, or mean insinuations, can annul. It is the stainless pearl sent direct from Heaven to him who gives utterance to the thought and form to the idea.

Dr. Jenner was a warm, but a steady enthusiast, and neither the discouragements of his

friends, nor the laugh of his opponents, were able to prevent him from pursuing steadily his onward course after truth. The conception which Dr. Jenner aimed at proving, and to bring into practice, if true, was whether or not the matter found in the vesicles, formed at certain times on the udder of the cow, was capable of preventing individuals who were vaccinated with it, from being attacked by the natural small-pox, and if it did not do so entirely, had it this effect to any extent, and to what? Dr. Jenner believed from his experience, that persons on whom vaccination had been performed in a proper and satisfactory manner, were not *liable* to be affected by small-pox. This inference when first announced, was generally disbelieved, then doubted, and afterwards was considered to be confirmed. Future researches, however, and especially those of Dr. Thomson, of Edinburgh, have shewn that the general expression must be modified in the following manner: As the human body is liable to be attacked more than once with small-pox, the former attack, however, modifying greatly the latter, so, in the same way, an individual who has been vaccinated, may afterwards be affected with small-pox, though in a mild form. Still, it is to be remembered, that one who has suffered from cow-pox is not only much less likely, than another who has not, to be affected with small-pox, even when epidemic, and that even should he be attacked by it, it will be much milder in its course, and less likely to be fatal in its consequences. He may have the disease in what is termed the *modified form*, in which rarely more than one death takes place in 330. These advantages must forcibly point out the necessity

under which parents lie, of having their children early and efficiently vaccinated. This is a positive duty, and the non-performance of it is assuredly a great sin, for it is not merely, humanly speaking, the preserver of life, but the preventer of sad local ailments and disagreeable appearances. It is proper, we think, that every parent should not only know the importance of vaccination, but that they should also be made sufficiently well acquainted with the manner of doing it, so that under all circumstances where they can get vaccine matter, but where there is no physician, or surgeon, they may be able to perform the small and easy operation themselves.

We shall now describe the whole of the process of Vaccination, and the time when the vaccine matter ought to be removed from the pustule. In the county of Gloucester, and others, it has been long known that where there are extensive dairies, the cows have been, now and then, subject to an eruptive, inflammatory disease of the udder, which is capable of being communicated by contact, so that it may extend from a single cow, through the whole herd. This eruptive disease appears on the skin of the udder, in several red, definite, painful and elevated points, which subsequently become opaque and puriform, raising and removing the cuticle from the cutis as it is formed. These elevations are termed *vesicles*.

To vaccinate with efficiency, the matter must not be removed either too early or too late from the vesicle. It must not be taken out until the fluid is secreted in its proper transparent state, and not *after* it has become opaque or puriform. If it be taken about the seventh or eighth day, and when the vesicle retains its pearly appearance, it

will produce the genuine vaccine disease in the person to whom it has been applied, provided he be not labouring under an eruptive or other febrile disorder, in which case the vaccine matter will, in general, have no effect, for these febrile and cutaneous diseases interfere, suspend, or counteract its influence altogether.

The best mode of practising vaccination is, carefully and slightly, to scratch the cuticle, so as merely to come in contact with the cutis, by means of a lancet, having at the same time an exceedingly small portion of the vaccine matter on its point. A deep incision must be avoided, as bleeding is likely to prevent the full action of the vaccine matter. When the drop of blood on the scratched point has become dry, it may be left uncovered, or covered only loosely, with a slight portion of linen cloth. The matter is removed from the vesicle formed by gently scratching it at its side until the fluid within leaks out, when pieces of glass, half an inch square, are to be gently pressed upon the vesicle, when it will be moistened with the fluid contained within. These glasses must be immediately covered by others of the same size, and carefully wrapped up in paper, so as to prevent the access of the oxygen of the air. Six such glasses may be easily taken from one well formed vesicle, and on the paper in which each is wrapt up the day of the month on which it was removed from the arm, should be mentioned, so that its age may be known. The matter thus carefully folded up and prevented from coming in contact with the air, may be kept fit for use for a greater or less number of months. When it is to be used, it should be moistened with a drop of tepid water

on the point of the lancet, and so mixed up, and then applied in two distinct places on the outer part of the arm, two and a half inches or so below the shoulder joint.

The proper time for the performance of vaccination is infancy, between the third and seventh month. At an earlier or a later period, the diseases incidental to childhood may interfere with the progress of the case. The constitutional symptoms accompanying vaccination are always slight, and often scarcely perceptible; the patient, therefore, requires only to be kept cool and not irritated.

We give the following long extract from Erasmus Wilson's work on diseases of the skin, as we consider the contents of it ought to be made generally known:—

Protective Power.—I now come to a question of the utmost importance, namely, the efficiency of vaccination as a protection against small-pox. But before I engage in this discussion, it may be necessary to define precisely the meaning which I attach to the term vaccination. Vaccination I conceive to mean—

1. That the lymph employed in the operation is pure.

2. That it has been obtained from a vesicle which has passed regularly through the course described in the preceding section.

3. That it has been procured from the vaccine vesicle, between the fifth and eighth day of its course.

4. That the vesicle produced by this lymph in the vaccinated subject shall have passed regularly through the stages known as the natural course

of the vaccine pock, and described in the preceding section.

5. That at least one of the vesicles produced by the vaccination shall have been permitted to remain unbroken and uninjured, until the internal vaccine crust shall have been formed, and shall have fallen in the natural course.

6. That the cicatrix shall be well marked, and permanent, perhaps also foveolated.

When the whole of these conditions are complete, vaccination is perfect, and the person so vaccinated may be regarded as protected against small-pox. But if, on the other hand, any of these conditions be incomplete, it would be monstrous to expect that the full influence of the vaccine protection should be exerted. Again, it has been observed, that the nearer the approach of the condition to the standard above established, the more protective will be the influence effected by the operation of vaccination.

The purity of the vaccine lymph is a point of the first consequence. The genuine lymph appears to undergo no change or loss of power by indefinite transmission, provided always that due attention has been directed to the fact of its being obtained at the requisite period, and from a vesicle which has passed regularly through its course, in fact, from the true "pearl upon the rose." But as the attention necessary for the assurance of this condition has unfortunately, in many cases, been omitted, much spurious lymph has been mingled with that derived from the original source, and, as a consequence, small-pox after vaccination has become more frequent, and vaccination has fallen into disrepute. It would, however, be unjust and

unphilosophical, to attribute this apparent falling off in the influence of the vaccine lymph to any but its true cause, the one just mentioned.

Re-Vaccination.—The phenomena of contagion, as it affects the human frame, develope two important facts; *firstly*, that the workings of contagion in the animal organism destroy the susceptibility of that organism to take on a similar action; *secondly*, that from the moment of completion of the workings of contagion, the organism becomes gradually and slowly restored to the condition which it possessed previously to the development of contagion. In the abstract, these positions are incontrovertible, but they require the modification implied in the estimate of time, to render them applicable to the thousand peculiarities that occur in daily practice. Thus in relation to the first, we have to enquire—For what length of time the susceptibility is destroyed? and in relation to the second—At what period after contagion is the restoration of the organism so far affected, that a second attack of contagious disease may take place? To both of these questions the answer is, *we know not.* All that we can venture to affirm with regard to them is, that, in one individual, a single attack of contagious disease appears to be protective of the individual for life; while, in another individual, a second attack may occur in a short period, the precise limits of that period not being correctly established. The determination of the shortest period at which contagious disease may resume its influence over the system, is a point of much importance, and one of legitimate investigation. It is in the field of numerical

medicine alone that we must look for a solution of the questions which are now proposed.

The reasoning which is here directed to contagion in general, applies with particular force to the protective influence of the contagion of small-pox. A single attack of small-pox would appear, in the majority of cases, to protect the individual for the rest of life, but in a smaller number of instances, the variolous constitution is still active, and a second, a third, and even more attacks may be experienced. Now, that which is true with regard to variola is equally true with regard to vaccinia; for variola and vaccinia are, in their essential nature, one and the same disease. Again, it is admitted at all hands, that severity in the manifestation of the variolous disease offers no security to the system greater than that to be derived from the mildest form; and as vaccine is variola in the mildest shape in which it can be presented to the human organism, the question of re-vaccination resolves itself into the propositions stated above.

If we admit that vaccination, although perfectly protective of the constitution against the recurrence of the small-pox contagion, for an unknown and probably variable space of time; and if we, in the next place, inquire what means present themselves of perpetuating this protective influence, the most natural and rational method that suggests itself to our mind is re-vaccination. Re-vaccination, or a repetition of vaccination, is a simple and harmless operation, producing a mild and trifling indisposition when the system is unprotected, but no effect whatsoever when the organism is safe. Here, then, we find the operation

to be acting as a test of the safety of the individual, and no objection can possibly be raised against its use. If the organism be safe it produces no effects ; if the organism be unsafe, it produces a trifling inconvenience, but it leaves a bulwark of safety in its train.

The only question that remains to be considered in relation to re-vaccination, bears reference to the periods at which the operation should be performed. This is a matter of trivial importance in comparison with the principle which it involves. I would say, let vaccination be performed every five years, or every seven years, or every ten years. But as our object is protection, let us not defer that protection too long. If the operation succeed at the end of five years, that fact affords the strongest proof that the repetition is not too frequent. If it fail at the end of five years, let it be practised at seven ; if it fail at seven, make a third attempt at ten ; if the operation fail then, it may be used at successive intervals, but the person inoculated has the satisfaction of knowing himself safe, and at a most insignificant inconvenience.

CHAPTER V.

MEASLES.—GENERAL DESCRIPTION. PROGRESS AND CHARACTER OF THE ERUPTION. THE DIAGNOSITIC SYMPTOMS OF MEASLES. INOCULATION. ALLOPATHIC, HYDROPATHIC, AND HOMŒOPATHIC MODES OF TREATMENT.

This is a contagious disease which primarily and especially affects the mucous membrane which lines the nasal walls, the bronchial tubes, and the eyelids, and which covers the white of the eye ball.

Measles commence with the usual symptoms which precede all febrile attacks, viz., sense of coldness, languor and fatigue, followed by thirst, heat, headache, anxiety, some sickness, and frequently vomiting. At the same time, from the inflammation of the mucous membranes before referred to, we have these symptoms usually accompanied by red and swelled eyelids, watery, red and tender eye balls, considerable flow of mucous from the nostrils, with a sense of looseness in these parts; hoarseness, short, dry cough.

In this disease the duration both of the latent period and of the eruptive fever is less uniform than in small-pox. The eruption usually commences on the fourth day from the beginning of the premonitory symptoms. It appears first in small stigmatised dots, not unlike flea bites, which, presently coalescing, form patches having a crescentic or semilunar form, first on the face, and then spreading gradually downwards over the whole body and limbs, disappear generally at the end of four days by desquamation of the cuticle. About the fifth day of the disease, the patches begin gradually

to enlarge, and to become of a deeper colour; soon afterwards the colour fades away, as desquamation of the cuticle, in minute powdery scales, takes place. On the fifth day the efflorescence of the face is most vivid; but on the sixth it begins to fade or become brown, while the patches on the body are a bright red. On the seventh these also begin to fade, and disappear about the eighth day. On the ninth day from the first accession of symptoms, the observer can recognize only slight patches of discolouration, which vanish before the end of the tenth, at which time, and for a few days afterwards, the skin is usually covered with the mealy desquamation referred to above.

Usually the catarrhal symptoms are increased instead of being diminished, on the appearance of the eruption; as are also the affections of the mucous membrane of the nostrils, eyes, sometimes of the ears, and not unfrequently those of the intestines also, for sometimes diarrhœa, possessing the character of dysentery, takes place in the decline of the eruption. This disease, in a great majority of cases, passes away without leaving any trace behind. Nevertheless, it too frequently happens that opthalmia, consumption, a tendency to scrofula or deafness, succeed the attack. Diseases originating from such a cause are usually very unmanageable in their treatment, and exceedingly chronic in their progress.

Measles are not unfrequently epidemic; they most commonly prevail in spring. "It has been frequently observed," says Dr. Montgomery, "that wherever measles rage as an epidemic, small-pox prevails at the same time; and, generally speaking, the contagion of measles, if received into the

system previously to that of small-pox, has the power of suspending the small-pox action till the measles have run their course."

Measles, like the other contagious eruptive fevers, usually affect the system but once; however, it is worthy of notice that Dr. Burns has observed, "when the measles were epidemic, it was not uncommon to find those who had previously had the disease affected sometimes with catarrh without any eruption, sometimes with an eruption preceded by little or no fever, and without any catarrh; this was very distinctly observed during every season when the measles were prevalent."

Measles may be discriminated by the catarrhal symptoms which precede and accompany the eruption, which generally appears on the fourth day of the eruptive fever, and declines about the seventh or eighth, by the crescentic form and vivid red colour of the eruption, by the tendency to bronchial or pulmonary inflammation during the course of the disease, and by its being propagated by contagion.

Inoculation.—"Some time about the middle of the last century, it was proposed," says Dr. Montgomery, "to adopt inoculation of measles, for the purpose of rendering the disease milder; and Dr. Combe of Edinburgh, performed several experiments on the subject, inoculating with a little blood drawn from one of the exanthematous patches." The result of these trials seems not to have been very satisfactory. We learn from the experiments of Professor Speranza of Mantua, who inoculated first six individuals, and then himself, with blood drawn from a vivid patch of the

eruption, that in a few days afterwards the measles appeared and proceeded mildly and regularly. He performed many more experiments of the like kind, which he states were all successful.

Treatment.—In the treatment of this disease our great aim ought to be to endeavour merely to lower the febrile symptoms, and to prevent injury of the lungs or of the lining membrane of the air tubes; for this disease, like all other contagious fevers, must run a given course, after which it undergoes a natural solution when that is finished. We, therefore, must never act with the expectation of preventing it from running through its several stages, for then a more or less severe constitutional ailment will be the result. The idea which should guide us in our treatment ought to be, to moderate and alleviate all the symptoms natural to the disease, and to prevent those consequent upon it. This we do by a proper use of the water treatment, modified according to the nature or severity of the symptoms, and by giving, when necessary, which we may say, with this treatment, is scarcely ever essential, homœopathic remedies. The old school gain this object not by such innocent means, but by those which are prejudicial, not merely to the safe progress of the disease through its natural course, but which are likewise the cause of many serious and often fatal consequences, not dependant directly upon the malady. These remedies are blood-letting, general and local, opiates, drastic purgatives, which, as one of their standard writers states, "must be employed promptly and energetically."

Dr. Heberden says that "bleeding, together with such medicines as the occasional symptoms

require in any other fever, is the whole of the medical care requisite in measles." Dr. Willan says, "when the eruption has disappeared, with difficult breathing and hard cough, bleeding, either from the arm or by leeches, or cupping from the chest, may be repeatedly necessary." And Dr. Allison says, "that if the cough, pain in coughing, and dyspnœa are distinctly observed to be greater than usual, general or local bleeding, purging, and antimonial or ipecacuan solution, followed by blisters (to be applied only for a short time), and the cautious use of opiates, are to be prescribed, even during the eruption." Dr. Montgomery says, "whenever we have satisfied ourselves of the presence of inflammation, our sheet-anchor is blood-letting. We should bleed at once, and if the symptoms are not subdued, bleed again; we would even say, if there be doubt, bleed, but of course very cautiously." "Whenever we find the patient harassed with an incessant hacking cough, complaining of pain and soreness within the chest, with a sensation of tightness or constriction across that cavity, increased by a full respiration, and with a full hard pulse, we should not hesitate to bleed, *even though we may not be able fully to satisfy ourselves of the absolute existence of thoracic inflammation.*" "The remedial agents in which our reliance must be placed for subduing the inflammations incident to this disease are blood-letting, leeches, blisters, or vesicating liniments, calomel, ipecacuan, tartar emetic, and the warm bath." After this learned physician has thus recommended his many nostrums, he says, "cold effusion has been recommended, and in a few instances adopted in the treatment of measles, and it is said success-

fully. Kœmpfer assures us that at Java the children die of measles if they are not washed with cold water; and Guersent says he would not hesitate to use it where there was pure debility, free from disease in the chest. We have never witnessed the adoption of this practice, and we confess that it appears to us (that is to say, *to wash the body*) so hazardous (!!!) and so unnecessary (!!!) that it would be difficult to induce us to venture on the experiment." Think of this, mothers, that one of your head physicians says our sheet-anchor, our safest treatment in severe cases of measles is blood-letting, blistering, calomelizing, &c. &c., while he considers the mere washing of the body as both hazardous and unnecessary.

Before we commence our method of treatment we would have our readers shortly, and with unbiassed minds, to reflect on the natural consequences which must necessarily follow from the practice we have just generally described. It is to be remembered that this severe, weakening, and irritating treatment is not employed except when the symptoms are of a serious or dangerous nature. Now, those who have seen much of the treatment of any contagious fever, will have remarked that the deaths have usually taken place in the later, and scarcely ever in the earlier stages of the complaint. Why is this? It cannot be because the disease is at or arriving to its height; for, on the contrary, it is on its decline, having run its course. The reason, we think, why contagious fevers, and indeed we may say almost every severe disease, are fatal towards their termination, is because the vitality or reactive energy of the frame has been so much lowered by the treatment

employed, that it is unable to withstand longer the weakening and poisonous influence of the disease. Our object then, ought to be, if our surmises be true, to preserve the strength, and to consider the future consequences as much as the present symptoms. Do the physicians of the old school pursue this idea in their treatment? In words, indeed, they pretend as much, but in practice they are in entire opposition to it. For, do they not drain the system, through blood-letting, of its vital fluid? Do they not irritate thirty yards at least, of a vascular surface, by their drastic purgatives? Do they not nauseate the stomach by their antimonials and ipecacuan draughts? Do they not stupefy the brain and dull the senses by their frequently repeated opiates? and, do they not irritate the already too irritable skin by their frequent blisters, and their often repeated burning sinapisms? Our amazement is, not that so many die, but that so many recover *in spite* of such heroic treatment. Patients have not to thank their doctors for their recovery, but their own vital energy, and sound constitutions. The conception which guides us in our treatment, is not to weaken—not to irritate—not to nauseate—not to stupify, but to soothe, to preserve strength, to stimulate the nervous system, not by medicinal remedies, but by the natural stimuli which nature so abundantly offers to all—fresh air, fresh water, soothing envelopes, strengthening baths, and unstimulating, simple diet. This mode of treatment is agreeable alike with experience and common sense, while the former is a heterogeneous and dangerous mixture, the fit representative of a blind and bungling art.

Hydropathic Treatment.—Before we commence to describe the treatment of measles we would make a few general remarks for the benefit of the non-professional reader. The index by which the treatment of all eruptive fevers may be regulated, is the condition of the skin and the character of the pulse. To these we most strongly and advisedly recommend those who treat acute diseases by the water system especially to attend. Let them not be anxious relative to the state of this organ or that—let them only watch and treat according to the symptoms. If the skin is hot, let the wet sheet envelope be used boldly and energetically after the directions immediately to be given,—that is if the skin becomes cooler, the patient feels refreshed and exhilarated, and the pulse is full and somewhat lessened in frequency after its use. If, on the contrary, the patient, instead of being refreshed, feels languid, and the pulse is small and quick, we would recommend rather the employment, three or four times a day, of the slipper bath, the water being at the temperature of 70°. Let the person who employs this treatment in fever keep these two general views in remembrance, and the result will, we are confident, be most satisfactory. For, we may mention, for the benefit of the non-professional reader, that all idiopathic fevers are caused more or less by a poisonous substance being absorbed into the system, the nature of which, with its mode of action, is entirely unknown at the present day; and therefore, we are necessarily unacquainted with the pathological condition of the system, or of the state of the several organs affected. The error into which, we think, the physicians of the

old school have almost invariably fallen in treating fevers is, that they have formed some hypothesis or other as to their nature, and as to the condition of the organism, and, instead of regulating the treatment according to the symptoms, have done so agreeably to their hypothesis.

In the first stage of this disease, that is, just before the febrile symptoms have commenced, the patient must be for two minutes, every fourth hour, well rubbed in the slipper bath, temperature 68o, and carefully dried afterwards ; and if able, ordered to take gentle exercise either in a well aired room, or out of doors ; if, from the feeling of languor and debility he is unwilling or unable to do so, then let him be put to bed and covered by a moderate quantity of bed clothes, a free current of fresh air being kept up in the room. During the first stage, and preceding the appearance of the rash, if the febrile symptoms, such as heat and dryness of the skin, with quickness of the pulse, be great, the patient ought to be enveloped in the wet sheet as described in chapter ninth, every three hours, until the fever has become lessened, or the eruption fully developed on the surface of the body. The patient should be kept a shorter or longer period in the envelope, according to the severity of the symptoms, and the sensations of the patient.* This is to be especially attended to, as the violence of the fever, with the heat and dryness of the skin, often prevents the full development of the rash, a circumstance which is most dangerous and often causes the most serious consequences. After the

* The reader will find fully explained in chapter nine, the circumstances which regulate the length of time a patient, labouring under a fever, ought to be kept enveloped.

eruption has been fully brought out, we would recommend that the envelope be used only three times a day, but if the febrile symptoms should be severe during the night it may be repeated twice. This kind of treatment ought to be continued, provided the case goes on well, until the eruption has disappeared. Afterwards the envelope is to be used in the morning and in the afternoon, for two or three days continuously, and then the slipper bath only, morning and afternoon, gradually diminishing the temperature from 68° to 50° or 54°.

Head.—We would recommend the hair to be cut short, or the head shaved, and wet cloths to be kept constantly applied to the forehead and temples, changing them every five minutes, so that the head may be kept cool, and the vascular action within the brain lessened.

Affection of the Eyes.—The back of the head to be placed in a head bath or pudding dish filled with cold water, every second hour, for a quarter of an hour each time. This local bath is a most powerful remedy in inflammation of the eyes.

Cough.—To have the throat, neck and chest well rubbed with the hand, and cold water every third hour, for five minutes each time, and then a compress, as described in chapter nine, to be carefully applied round the chest, and if the inflammation of the throat be severe, round it also.

Diarrhœa.—This local ailment occurring, as it usually does, about the ninth or tenth day, is a natural consequence of the dissolution of the fever, and therefore, if not severe, the only treatment required will be a compress put carefully round the stomach. Should the diarrhœa, from any cause, become severe, or be protracted beyond its

proper period, flannel cloths, *well* wrung out of water, temperature 98°, ought to be applied near the region of the abdomen three times a day, for twenty minutes each time, the cloths being changed every five minutes. The compress is to be applied immediately afterwards, and constantly kept on until the repetition of the warm fomentation. The compress is to be wrung out of cold water.

Homœopathic Treatment.—Aconite has been regarded by some as a specific against measles. Dr. Laurie says, "in its mild form it will frequently be found sufficient, in a few doses, to conquer the disease, or at least materially to shorten its duration; it is particularly indicated when the fever assumes an inflammatory form, attended with dry heat of the skin, heat in the head, with confusion and giddiness, redness of the eyes, intolerance of light, general weakness and prostration." Dr. Hartmann states that in a measle epidemic he cured all the cases, even the most serious, by giving daily two or three, sometimes even six or eight doses of aconite. He also states that pulsatilla is especially a specific against measles; as a preservative he gives every third or fourth day a drop of the 18th dilution; and Dr. Laurie mentions that "pulsatilla is also very efficacious, and even specific in this disease, and is frequently indicated in the commencement, from the strong resemblance which some of its pathogenic properties bear to the catarrh attendant upon measles." We have, in the treatment of measles, observed the most beneficial results follow from the use of aconite and pulsatilla alternately, especially where there have been severe catarrhal symptoms, along with gastric derangement. We

would, therefore, in every case where these two symptoms are present, give aconite and pulsatilla as follows:—aconite, third dilution, twelve drops in twelve tablespoonfuls of water alternately every half hour, with a tablespoonful of a similar dilution of pulsatilla, until the fever, the catarrhal and the gastric symptoms are diminished, and then every second or third hour. When there is much swelling of the salivary glands give three drops of the third dilution of arnica in a wine glass full of cold water, every night, until the swelling has disappeared. When there is violent head ache, give one drop of the sixth dilution of belladonna in a little water twice a day, and where we have inflammation of the throat, attended with great thirst, and inability or difficulty of swallowing, from acute shooting or pricking pain in it, we would recommend that belladonna be given alternately with the pulsatilla, *instead* of the aconite as described above.

When there are stitches in the chest during a full respiration, with frequent, short, dry cough, bryonia is found to be in such cases an excellent remedy; three drops of the third dilution in a little water, should be given every third hour, until these symptoms have disappeared. When there are violent pains in the ears, difficulty of hearing, or suppuration of these organs, sulphur is found to be a very useful remedy. Two globules of the sixth dilution of this substance should be given every second or third night, until they have been removed.

The Hydropathic and the Homœopathic modes of treatment may be used beneficially together, and without any disadvantage, in every case. It

is beautiful to observe the beneficial results which mark the curative powers of these two systems—*one*, we should rather say. From this we think we have a right to draw as our conclusion, the truthfulness of both. No one who has employed the wet sheet envelope in fever can doubt its efficacy, and none who have marked the action of aconite in lowering the pulse in acute inflammation, can for a moment suspect its inertness.

CHAPTER VI.

SCARLET FEVER—ITS HISTORY, SYMPTOMS, DIAGNOSIS, TREATMENT ALLOPATHICALLY, HYDROPATHICALLY, HOMŒOPATHICALLY.

We think we cannot better commence our article on scarlet fever than by quoting the following sentences from a work just published on that disease.

"In venturing to record my experience of a disease so fatal as scarletina (or scarlet fever) in the form of a distinct treatise, I feel that some explanation of my reasons is necessary, before entering more fully into details. More than nine years since I had the painful trial of losing my eldest child, when scarcely more than two years of age, from scarlet fever, although attended by two of the most eminent practitioners of the day, and shortly afterwards, besides several other patients, one noble little boy, the pride of his fond parents' hearts. The first circumstance was enough to make me think very seriously over this disease, which appeared to baffle all human efforts; and I felt that surely some plan of treatment could be devised that would, at all events, in some degree modify or arrest it. I saw my own child die after a fortnight's illness, from a sloughy throat; I saw the little boy die, after eight hours' illness, from complete prostration. I argued, in the case of my own child, that something should have been earlier done to stop the sloughing of the tonsils and fauces; and in the other case, that something should have

been done to avoid such complete failure of all vital power.

"Since then I have seen this disease making most frightful ravages in different families, having no respect to station in society; both rich and poor have alike felt its frightful effects, and every day the public journals have noticed the death of an only child, or beloved wife, or of two or three, and even four, children in one family in a few days; indeed, I know of one family who lost all their five children in a fortnight. The bills of mortality in London alone have exhibited the frightful number of from fifty to a hundred deaths weekly from scarletina.

"This disease far exceeds any other in its fatality. If such has been the case in London, what must the aggregate amount of its victims through England and Wales alone be? To say that thousands died yearly from this one disease but faintly expresses the havoc it commits. We find, from official documents, that during the thirteen weeks, ending the 28th of December last, the deaths from scarletina were 872 in London; and from the same source (the report of the Registrar General) in the year 1840, the deaths were, in England and Wales alone, 19,816 from the same cause."

These surely are sufficiently cogent reasons why we should promulgate our views for the treatment of this disease, "far exceeding any other in its fatality," especially when we believe, and when that belief is based upon extensive experience, that scarcely any deaths will occur under the mode of treatment we recommend.

This disease is of modern origin, and it is so well described by Dr. George Gregory, in his

work on the "*Practice of Physic*," that we shall give an extract from it here. He says, "No mention of it is made by the ancient or Arabian authors; and the first time it is distinctly noticed is but little more than two hundred years ago. It has been suspected that the contagion came originally from Africa. Be this as it may, it first shewed itself in a severe form in Spain, in 1610; from whence it spread to Naples, where it raged epidemically in 1618. In 1689 the same disease made its appearance in London, and was described by Dr. Morton, though not with the accuracy of the first Spanish and Italian authors. In 1735, it broke out in North America, and spread gradually, but slowly, over the continent. One of the most curious circumstances in the history of this disease is the slowness of its diffusion."

Scarletina, or scarlet fever, is an acute inflammation both of the cutaneous and mucous portions of the skin, associated with a highly infectious and contagious fever. This eruptive fever often attacks the same person more than once. Instances have been given where it has attacked the same person three times, producing deafness in both ears.

It is most frequent about autumn and winter, and attacks children and young persons more frequently than those older; no age, however, is exempted from it. The disease commences with fever. The eruption sometimes shews itself on the first day of the appearance of the fever, but more frequently on the second, when it is developed in the form of minute points and papulæ, which generally are of a more florid colour, and also are more uniform and continuous than those of measles;

at the same time the mucous membrane of the nose, fauces, tonsils, and also the lymphatic glands beneath the angle of the jaw, become inflamed, which, in the tonsils, frequently produce ulceration, and sometimes sloughing. The rash usually terminates at the end of six or seven days, leaving the skin rough and harsh, and the epiderma peeling off in thin laminæ.

There is, however, very great variety in the history of the different cases to which this general description applies, both in different epidemics and in different cases of the same, as to the rapidity of extension, the intensity of the different parts of the symptoms, the complications, sequellæ and mortality of the disease, which have caused it to be divided into three distinct forms; first, scarletina simplex, or the simple scarlet fever; secondly, scarletina anginosa, or throat scarlet fever; thirdly, scarletina maligna, or malignant scarlet fever.

Scarletina Simplex.—The mildest form of this disease commences with the usual symptoms that precede fevers generally, such as, feeling of languor and lassitude, pains in the head, in the back, and in the limbs, drowsiness, nausea, and shivering, which are quickly succeeded by heat, thirst, and the usual symptoms of an inflammatory fever; on the second day the skin and face begin to present innumerable red points, which, within a few hours, or at most within twenty-four hours, are found over almost the whole body; usually they are most distinct and earliest visible on the anterior surface of the body, and at the flexions of the joints. As the spots multiply they extend and coalesce into small patches, and the body then appears exactly like a boiled lobster. At the same

time a similar scarlet redness is observed on the mucous membrane of the mouth, throat, and even that of the conjunctiva; the papillæ of the tongue are elongated, and extend in the form of oblong scarlet points through the fur with which it is loaded; the face, in general, is considerably swelled; and the heat, dryness, and tension of the whole skin are exceedingly distressing.

There is always great restlessness, oppressed and quick breathing, and rapid wiry pulse, with very scanty and highly coloured urine, with no tendency to moisture of the skin. These symptoms continue unalleviated, often indeed actually augmented, during the continuance of the eruption, when treated after the usual method. The period at which the eruption and fever attain their height is the fourth day. On the fifth it begins to decline. On the sixth day the scarlet colour is indistinct, and before the expiration of the seventh it has entirely disappeared. For three days afterwards the old cuticle is being removed in dryish laminæ, and is succeeded by a newly-formed one, which, in consequence of its thinness, allows the vascular cutis to be seen through it, and so for some time is redder and more tender than the first.

Throat Rash Fever (Scarletina Anginosa).—This is the most common form of the disease, and is characterized by the greater violence of the primary symptoms, by less regularity in the appearance and progress of the eruption, by the fauces, from the commencement, and often before the appearance, of the symptoms, being redder than natural.

On the first and second days the febrile symptoms are rapid in their progress, and severe in

degree; the throat feels rough, the voice is hoarse, there is a large collection of viscous mucous in the fauces; there is a sense of constriction about the throat, and deglutition is painful and difficult. The pulse is full, hard, and rapid, the heat of the skin is more intense than in any other fever of this climate, rising to 106°, 108°, and 112° Fahrenheit. The tonsils and fauces become inflamed; several small specks appear on the tonsils, which often extend and form superficial ulcers; the breath is extremely fœtid; the tongue is at first coated with white fur, and after two or three days becomes of a *strawberry* red; the efflorescence generally appears about the third day, but sometimes does not uniformly cover the whole cutaneous surface, while more frequently the entire body is covered with a bright scarlet, but which brings no relief; on the contrary, the symptoms appear aggravated, the countenance expresses anxiety, the eyes are suffused. After the first appearance of the rash it may vanish and reappear partially, but without much alteration in the constitutional symptoms, which, in general, retain their uniform severity and violence. The complete and sudden disappearance of the eruption sometimes takes place, and is always to be considered a dangerous occurrence. The decline of the eruption happens on the fifth or sixth day, and at the same time the severity of the inflammation subsides, and the ulcerations begin to heal. There is, when this fever is treated after the common mode, great debility after recovery, and not unusually permanent deafness, accompanied with an offensive discharge of pus from the ears for many months or years; also ædematous swelling, sometimes confined to the

face and extremities, at others, diffused over the whole body. In less favourable cases still, effusion may take place into some of the cavities, such as the chest or abdomen, when very tedious symptoms are the result; or sometimes, as when it occurs in the brain, speedy and unlooked for death. When it terminates fatally, death, according to Dr. Craigie, "is produced, first, by the intensity of the febrile commotion, or by the impaired action of the capillary system producing fatal compression of the brain; second, by the severity of the inflammation of the mucous membrane of the bronchial tubes producing suffocation; third, at a later period of the disease, by the general loss of power which the disease has inflicted on various organs and functions, but especially on the pulmonary circulation, the heart, and the circulating function. This last is death by *exhaustion, general debility*, and other vague terms employed by writers who believe in the excitability, and other mysterious powers of the human body."

Scarletina Maligna, or *Malignant Rash Fever.*—This form of Scarlet Fever is exceedingly rare, and need only be noticed here very cursorily. The symptoms assume very early a typhoid character. The pulse at first is soft and frequent, but soon becomes small, rapid, and often irregular: the patient is restless, and has at the same time a low muttering delirium. The rash is very irregular in its appearance, and often disappears suddenly. The colour of it is at first faint, then it assumes a deep rose hue, and afterwards becomes of a dark livid red. The temperature of the skin is usually a degree or so below the natural temperature even on the trunk, attended with coldness

of the extremities: the countenance is pale and dejected, and the tongue is generally covered with a dry brown, or almost black fur. The throat is not much swollen, but is covered with small ash coloured sloughs, surrounded by a livid base. This disease is incurable by the old system, and when not treated from the very commencement is fatal either under the hydropathic or the homœopathic modes of treatment.

Diagnosis.—The special diagnostic characters of Scarletina are, *firstly*, the decided and acute affection of the fauces; *secondly*, the early appearance (on the second day) and rapid extension of the efflorescence; and *thirdly*, the bright scarlet, and diffused character of the rash. Between Scarletina and Measles very great resemblance exists. We have in both, inflammations of the tegumentary surface of the body; they are both accompanied by a cutaneous efflorescence; they are both liable to be succeeded by serious affections; they both appear during the prevalence of the same epidemic; they are known to have followed one another as a consecutive disorder; they are both infectious, and both contagious. We give here from Dr. Erasmus Wilson's work, a comparison of these two eruptive fevers.

SCARLETINA.	RUBEOLA, OR MEASLES.
1. Precursory symptoms of one day's duration.	1. Precursory symptoms of three days' duration.
2. Mucous membrane of the eyes, nose, and fauces, red and inflamed, without secretion; pain and soreness of throat; no cough, no expectoration.	2. Mucous membrane of the eyes, nose, and fauces, red and inflamed, with increased secretion, coryza, sneezing, &c.; dry cough at first, subsequently expectoration.
3. Eruption on the second day of the fever; invades the	3. Eruption on the fourth day of the fever; occupies

entire surface of the body in three days; disappears by the end of the seventh day.	three days in invading the entire surface of the body; disappears by the end of the eighth day.
4. The efflorescence occurs in large irregular patches, or is more or less generally diffused; is of a bright scarlet, compared by Willan to a "lobster's shell," and frequently interspersed with numerous small red papulæ.	4. The efflorescence occurs in small crescentic, and circular patches, with intervening unaffected portions of the skin; the colour is darker than in Scarletina, with "nearly the hue of a raspberry," and interspersed with numerous small red papulæ, disposed in clusters.
5. Odour resembling old cheese.	5. Odour sweetish, until the decline of the eruption, then sourish.
6. Principal sequelæ; anasarca; inflammation of the joints; gangrene; chronic bronchitis; ulcerations of fauces; conjunctivitis; otitis; abscess of salivary glands; chronic diarrhœa.	6. Principal sequelæ. The same as Scarletina, with the exception of anasarca, inflammation of the joints, and gangrene.
7. Exfoliation of the epiderma in laminæ.	7. Exfoliation of the epiderma, in furfuraceous scales.
8. Less infectious and contagious than measles.	8. More infectious and contagious than Scarletina.
9. Rarely attacks the same person more than once.	9. Frequently attacks the same person twice.

Treatment.—We shall review, or rather give the treatment commonly pursued in Scarletina Anginosa, and Scarletina Maligna. It will be almost useless in us to give the treatment usually employed in Scarletina Simplex, as this disease may be allowed safely to run through its course without any treatment. We may mention here that it was the opinion of the great Sydenham that the simple form is only fatal from the officiousness of the medical attendant; for he remarks that none die of this disorder, except from a too great officiousness on the part of the practitioner—"Nimia medici diligentia." "The management," says Dr. Craigie,

"of the throat scarlet fever, and the malignant, has given rise to considerable controversy, and the most opposite remedies have been recommended at different periods by different physicians." "The only remedy which can be said to act directly is bleeding—general or local. Physicians are not unanimous in recommending its use in scarlet fever, and especially in that in which there is a tendency to capillary disorganization." "Fifteen, twenty, or twenty-five ounces may be taken from an adult!!" (Dr. Craigie). "But experience has equally shewn that the expectation entertained by Dr. Armstrong and others, that by early depletion the congestive or malignant form of the disease may be made to assume the more healthy form of inflammation and fever, is hardly ever realized; and in many cases, although the pulse has been full and the eruption florid in the beginning, blood-letting (even local blood-letting) has been followed by a rapid change of the fever to the typhoid type, and manifestly aggravated the danger." (Dr. Allison).

Emetics.—"The use of emetics only is restricted by the best authorities to the commencement of the attack."—Dr. Craigie. "Emetics have been recommended very strongly as a means of clearing the throat of its mucous, and at the same time of ridding the stomach of its peccant contents. The violence of the remedy far outweighs the inconvenience which it is proposed to remove, and although supported by the authority of Withering, emetics have fallen into neglect. Indeed, they are not merely negative in their effects, but are calculated to be injurious. Dr. Withering prescribed them not only in the be-

ginning, but even in the latter stages of the disease." "Their employment, however," says Dr. Tweedie, "should be restricted to the period of invasion, as it has been observed that they are much more beneficial at this stage than when the symptoms are more advanced. The shock which is given to the system by the action of vomiting in the early stage of eruptive fevers is often followed by most decided improvement in the general symptoms and feelings of the patient." Dr. Rush recommended an emetic, combined with calomel, to be given, more or less frequently, in every case of scarlet fever.

Purgative Medicines.—Dr. Hamilton states that "the pungent heat of surface, violent headache, flushed and swollen countenance, and full quick pulse, are quickly subdued by one or two brisk purgatives." "The fears of the older physicians that purgatives were injurious are quite groundless, and premature fading, or sinking in of the rash has never been observed to follow their administration." (Dr. Craigie.) "As long as the affection of the fauces is formidable, the frequent use of laxatives must be regarded as essentially important." (Dr. Allison.) "Purgatives, like emetics, have been much overrated in the treatment of scarletina anginosa. Willan was an advocate for the employment of calomel in purgative doses, with a view to reduce the febrile excitement, and heat of surface. Dr. Hamilton also drew a favourable deduction from their use; but Dr. Robert Williams has shewn that while the mortality in the cases treated by Dr. Hamilton was 12 in 95, in those treated by moderate stimulants it is only 3 per cent." (Erasmus Wilson.) "It is not of great

moment to be solicitous about the selection of purgative medicines." "In general the most certain in its operation in every case is senna infusion, either alone or with cream of tartar, aloetic pill, the colocynth pill in sufficient quantity, and powder of jalap, either with calomel or cream of tartar. For children, calomel is expedient, in consequence of the *small bulk* in which it may be given." (!!!) (Dr. Craigie.) "I examine the tonsils and fauces, and finding them with the same character of redness or scarlet blush as the face, I instantly apply caustic (nitrate of silver) in the stick, and order the following liniment to the throat in flannel: soap liniment 1 oz., camphor do. 2 drams, mix; or a mustard poultice made of mustard and cold vinegar." (Dr. Isaac B. Brown.) "I even give (frequently on the second day) veal, chicken, or beef tea, with some arrow-root in it; and when the fever is of the anginose character, I begin with strong nourishment on the second day. Good beef tea or soup, port wine in arrow-root, and sometimes brandy as well, and I have never yet seen any danger from this diet in those cases which have been considered inflammatory, and as some would affirm requiring bleeding or emetics." "I apply once, twice, or thrice, during the day, a solution of caustic (nitrate of silver) in the proportion of ten grains to one ounce of distilled water to the fauces." (Isaac B. Brown.)

Blisters.—"A blister, applied to the throat, is sometimes very useful in diminishing the swelling and pain of the internal membrane." (Dr. Craigie.) "Blisters to the throat are objectionable in these cases, for by exciting inflammation of the cutaneous surface, they act as additional sources of irrita-

tion." (Erasmus Wilson.) "Blisters and mustard poultices are amongst the most frequently used of the external applications in eruptive fevers." "It will be observed in the cases which I have noted, that I never applied blisters, having frequently seen the most alarming sloughs from their use; indeed, I feel certain that the death of many a little patient has been accelerated by their application. I have known them tried by being allowed to remain on only two or three hours, and a poultice applied afterwards, and yet a deep black slough has supervened, and the destruction of the parts has been very extensive. I cannot, therefore, but consider blisters injurious, rather than beneficial, in this fever." (Dr. Isaac B. Brown.) We need not enter further into an exposure of the sad and lamentable inconsistencies of the medical craft in the treatment of this really serious disease. Something must be wrong with that profession which, after an existence of many centuries, can only give birth to such contradictions as those given above. It is derogatory to our Creator to think that He has allowed diseases to be, and yet not given to reasoning man a means for their safe removal. This means assuredly the medical profession, in spite of its pretended learning, its great respectability, its artificial and polite laws of etiquette, has not yet been able to find out. Two great and good men, the one deeply read, the other wholly uncultivated, have discovered the two systems by which life may be preserved from the fatal consequences of disease; yet the medical profession saddened the heart, broke the spirit, and made irritable the mind of one of them, while it despised, with ignorant contempt

and supercilious disdain, the other. By the former we mean the acute, the learned, the comprehensive thinker, Hahnemann; by the other, the shrewd, the excellent, and, as it were, the intuitive observer, Priessnitz. When the little strifes of to-day have been forgotten, and when the profession will look back with dread, fear, and trembling on the frightful doings of their predecessors, Hahnemann's name and discoveries will be held up before the admiring eye, and reverenced; and perhaps the very body which now condemns him most, will raise a noble edifice to his memory; and the figure of Priessnitz, the despised, may, perhaps, when freedom has entered within the walls of our royal colleges, be seen chiselled out of stainless marble, filling one of the most elevated niches in each.

Hydropathic Treatment.—We shall first describe the treatment of scarletina by the "Water Cure," and then give the Homœopathic treatment of this disease. We shall, at the same time, consider and enter at some length upon the discovery which Hahnemann made, viz., the juice of belladonna being a prophylactic in scarlet fever, just as the vaccine or cow-pox virus has the power of preserving the system, more or less completely, from the influence of the variolous or small-pox virus.

Treatment of Scarletina Simplex.—Although in this mild form attention to diet, and the uniform temperature of the sick room, with a shallow bath, of the temperature of 70°, morning and afternoon, is sufficient treatment to carry the patient safely through the attack, yet, as at first, we are not certain what form the disease may ultimately assume; especially whether it may be the simple or the sore throat kind, we would recommend that

the patient be, on the first appearance of the disease, placed in a wet sheet envelope* morning and afternoon, that is, provided the eruption is fully out and the fever not great. If, however, the eruption is not perfectly developed, or if the fever increases after it has been fully brought to the surface, we would recommend that the patient be immediately enveloped in the wet sheet, which should be changed every time it becomes warm, and the patient feels restless and uncomfortable in it. These sensations are the criteria by which the repetition of the wet sheet must be guided. It rarely happens that the body is not covered by a florid eruption, even after the second or third wet sheet has been employed, although previously there was no appearance of any eruption. After the rash has become fully developed, the sheet need not be repeated oftener than three times a day, and once or twice during the night. We cannot impress too strongly upon our readers the necessity of using the envelope at the very commencement of the disease, for if the fever has attained great violence before the development of the rash, the skin will not be in a favourable state for its full appearance on the surface; and this process must be persevered in for one or more days, until the eruption has covered the whole surface of the body. The frequent use of the envelope, for any length of time, is scarcely ever needed, as most usually the eruption appears after the second or third application of it. In those cases, however, where we are required to use the wet sheet continuously for a long period, it is necessary that

* How to administer the envelope see the chapter devoted to the description of the different kinds of baths.

we attend to the state of the pulse, and to the heat of the body, that they may not be too far reduced. We would, therefore, advise that when the pulse is small and quick, and the heat of the body not very high, the patient receives, according to his age, some wine every second or third hour, say a teaspoonful to a child of two years old, a dessert spoonful to a child of eight years old, and so forth; and that the wet sheet be wrung out of water of the temperature of 70o. The patient should be allowed to drink as much water as he pleases, not, however, allowing the quantity to exceed eight tumblers full during the twenty-four hours. The greatest attention should be paid to the state of the evacuations, and the bowels should be kept regular by means of tepid clysters. We cannot too strongly impress upon our readers the utmost necessity of attending to the state of the pulse and heat of the skin. If the pulse becomes weaker, and smaller, and quicker after the envelope, it should not be employed again, but the slipper bath, temperature 75o, should be used instead three times a day, giving the patient every second hour a little wine, according to its power of exciting or increasing the pulse. When there is the slightest symptom indicative of a sudden disappearance of the eruption, the patient, if the surface of the body be cold, ought to be rubbed with the hands in the slipper bath, temperature 70o, for two or three minutes, then well dried, put to bed, and immediately afterwards given a little wine. This process should be repeated every fourth hour, should the surface become warmer and the eruption begin to reappear after the employment of each bath; but if it should be-

come colder instead of warmer, and the eruption not reappear, the body should be merely sponged over, and a little wine, the quantity regulated according to the age and strength of the patient, should be given every half hour until the heat of the surface has been increased, and the pulse becomes fuller. On the other hand, if the skin is hot, dry, and burning, and the pulse full, the patient should be immediately enveloped, and changed in the manner described above. The efficiency of this treatment, in such cases, is often astonishing; for a tardy rash will sometimes shew itself in a full state of development in the course of three or four minutes after its use. "Its operation," says Dr. Weiss, "is most beneficial as a sedative in those cases where the skin is covered with the eruption, but dry and hot; and where the fever is considerable, two or three applications of the wet sheet will suffice to allay these inflammatory symptoms." It is impossible to describe the relief and comfort patients experience after one envelope or ablution. During the progress of the disease, a compress is to be applied round the stomach and abdomen, which is to be changed every third hour. Cold wet cloths are to be kept constantly applied to the head, which are to be changed whenever they become the least warm. If there is inflammation of the throat, it ought to be rubbed with the hand and cold water for five minutes each time, three times a-day, and a compress, carefully put round the throat, is to be constantly worn, and wetted each time the throat is rubbed. We would not advise the too frequent repetition of cooling applications to the throat, as frequently, though the fever is high, the reactive

energy in the skin is unable to withstand the constant changes of cooling cloths, as this part is specially affected in the sore throat scarlet fever. This treatment is equally adapted for the Scarletina Anginosa as for the Scarletina Simplex, only the energy with which it is to be employed must be regulated according to the severity of the attack.

We will conclude this part of our subject by giving a few cases treated hydropathically, which were published in the *Water Cure Journal* a few months back, with some remarks which we then made upon them.

"Sir,—My attention having been called to a letter which appeared in your last week's number, from Dr. Macleod, on the treatment of typhus fever, I beg to avail myself of your columns to give publicity to the particulars of cures from scarlet fever recently effected, through means of the water treatment, by that gentleman, on two of my children; and I venture to hope that the statements thus submitted to the notice of the public will be of interest, not only to parents, but also to those who are appointed guardians of public health.

"My youngest child—a delicate boy, three and a half years old, although in apparently good health the day before, was suddenly taken ill, during the night of the 19th of June, with an attack of fever; and early in the morning an eruption appeared in different parts of the body. I immediately, with a view of ascertaining the nature of the disease, sent for a medical friend, who stated that the child was labouring under an attack of scarlet fever. In compliance with the wishes of Mrs. Frank, I took the necessary steps towards procuring the personal attendance of Dr. Macleod, who promptly and kindly came to Bradford, to give his advice as to the treatment of the case. Being unable to remain any longer than half an hour with us, he gave the following directions to Mrs. Frank, mentioning that should any untoward symptoms appear, to let him immediately know. I may add that before Dr. Macleod gave us the plan of treatment to be pursued, he himself first observed the effect of the water treatment upon the child.

"Dr. Macleod ordered the patient to be enveloped in the wet sheet every three hours, half an hour each time, until a full

eruption appeared and the fever had diminished; and that after each envelope the child should be washed in a slipper bath, the temperature being 75 degrees Fahrenheit. After the second envelope, the body was so densely covered by the scarlet fever eruption, that it could be compared to nothing else than a boiled lobster. After every envelope the fever diminished, and the child became less restless. During the night, the instant the fever increased, or the child became restless, its mamma had it immediately enveloped, when both these symptoms were lessened, and the child fell into a sound sleep, of from three to four hours' duration, without waking. On the third day the fever and restlessness had entirely disappeared, and the eruption was also very much faded. On the seventh day he was quite well, able to run about, and still continues well.

"Another of my children—a girl, four and a half years old, was, on the 3rd instant, attacked with scarlet fever, and treated much in the same way as her brother was. Although the attack was a very severe one, she was so far recovered on the 8th instant, as to leave the house and play about the garden. I am happy to say, that both are now enjoying as perfect health as they ever did; and I may mention that no medicines in any shape whatever were given to my children, either while labouring under the fever or since.

"I give publicity to these cases, from a conviction of the powerful efficacy of the water treatment in febrile diseases, and from a hope that they will lead many anxious mothers to make use of this potent, and I believe, safe remedy.

"I am, Sir, your obedient servant,

"J. P. FRANK."

"North Parade, Bradford,
July 15th, 1847."

"P. S. I may mention that my children were allowed to drink as much *cold water* as they pleased in *every stage* of the disease."

We hope mothers will consider this letter well, and act according to their convictions. We entreat medical men, in the spirit of truth, to throw off their bigotry and ill-toned irony, and make use of that innocent and yet powerful remedy, which an ignorant (at least so esteemed by the world) and humble peasant has been privileged to add to our many other means of curing disease and invigo-

rating health. We would have you—the members of the medical profession—to be independent, and allow yourselves no longer to be shackled by prejudice or swayed by your accustomed habits of thought. We ask you honestly and in full sincerity, to put the water treatment to the test of experience. Let the ordeal be the most fiery you can conceive, we care not; all we want is, the truth to be advanced and error uprooted. We would have no mystification, no semblance of quackery, mixed up with or retained in the mode of practice we advocate. It is a pity there has been so much already. But why has there been so much of these two degrading and damning elements in the water-cure practice? Is it not because men of eminence and of uprightness in the profession, with very few exceptions, disdain with bitter contempt a proffered good in the way of healing, because offered to them by an uneducated peasant? Let this be so no longer. Help us to advance this great gift which our Maker has so lately given us, and labour with us to endeavour to remove the ignorant, and may we not say almost superstitious, belief and dependance which the mass of the people has in the power of drugs to cure—a belief which supports the mere drug vender, enriches the dishonest or ignorant quack, and lays the seeds of constitutional ailments, the sure forerunners of many fatal and incurable diseases.

We assure our readers, and we do so without doubt or hesitation, and after a long use of the water treatment in febrile diseases, that *no* bad result can follow the application of the envelope, so long as the febrile symptoms remain. We have

never yet seen a case where the whole body has not been covered by a florid eruption, after the sheet has been applied three times; and what is exceedingly interesting is the circumstance, that we have never seen a dark eruption in any case where the sheet had been used, although we have seen several such cases where it had not been employed. We feel confident that if patients labouring under scarlet fever be treated from the commencement by the water system, that the eruption will always be florid, and, moreover, will always be brought fully out on the surface of the body.

The circumstance especially which prevents the envelope being used in eruptive fevers, is the fear that the eruption be thrown in, for experience has fully proved the great danger and sad consequences of such a result. No one is more conscious than we are of this fact, as the major portion of the chronic diseases usually under our treatment have originated out of the imperfect development, or from the sudden disappearance of eruption. Nevertheless, conscious as we are of these dangerous results, and also of their frequent occurrence, we yet feel ourselves fully warranted in saying, that no eruption can be thrown in by the use of the envelope; but that, on the contrary, if it can by any means be developed on the skin, it is by the process we now recommend. Our anxiety to show and to convince the profession and the public of the safety of the wet sheet envelope is such, that we will enter shortly into an examination of the nature of its action.

We have the patient in a high state of febrile excitement, laid in a well wrung out wet sheet,

which is quickly brought tightly over him, followed immediately by a blanket. All having been made tight, particularly at the neck and feet, a few other blankets, or a bed, are carefully and closely packed over him. Thus hermetically sealed, as it were, for a shorter or longer period, which is entirely regulated by the feelings of the patient, the febrile symptoms are lowered, and the pulse beats less frequently. For the first minute the patient feels cold, then comfortable, and afterwards warm, in the envelope. The water in the sheet becomes tepid, but cannot evaporate, from the close packing of the blanket; thus only a certain quantity of heat can be withdrawn from the body; for the instant the envelope becomes too hot, the patient becomes irritable, is restless, and therefore ought to be immediately removed. In this condition of things we have a full explanation of the fact, that the wet sheet is anything but dangerous, and that, on the contrary, it is decidedly beneficial. It alleviates the heat, controls the violence of the symptoms, renders the skin moist, diminishes the quickness and strength of the pulse, and, instead of the restlessness and anxiety so general in these cases, we find the patient tranquil, comfortable, and disposed to sleep. The entire organism and the skin are thus in the best possible state to allow of the full and perfect development of the eruption. During all this process, the heat within, and the great desire for cooling drinks, are alleviated by the free internal use of cold water, and the free circulation of fresh air in the sick room.

The disease is now in the best possible condition for making a sure, safe, and rapid recovery, with little danger of any bad results following; the ex-

treme pungent heat of the skin, the violent headache and slight delirium, the full and quick pulse, the flushed and swollen countenance, the inflamed throat and tonsils, with all the other symptoms, having been removed by means which do not weaken the general system, as bleeding does, nor irritate the already too irritable skin, as is usually done by the application of blisters; neither by the administration of remedies which irritate the gastric, enteric mucous membrane, as strong emetics and powerful purgatives frequently do. Our treatment is, then, the simplest, the safest, and we believe, the surest of all modes by which acute eruptive diseases can be removed; for we know the *wherefore* and understand the *how* of our remedy; but the common physician neither understands the how nor the wherefore of his very complex, opposite, and dangerous remedies. We think we have sufficiently shown the obligation under which every physician who has a love for truth, or a conscience within, lies to put this remedy to the test. We hope to have in our next number the first of a series of articles on the treatment of eruptive diseases, in which we will compare the plan we advocate with that supported by physicians of high eminence in the old school.

W. Macleod.

To shew that we have not at all overrated the powerfulness of the proper use of water in curing this serious disease, we shall quote the following extract from Erasmus Wilson's work on *Diseases of the Skin*: "Dr. Currie, of Liverpool, the celebrated advocate for the employment of cold water in fevers, pursues this practice in scarletina with remarkable success, washing the surface whenever

the skin was "hot and dry." Dr. Bateman and several other eminent physicians, adopted the practice of cold effusion, and gave the strongest evidence in its favour. The method of using the remedy is, to pour one or two pailfuls of cold water over the patient, to rub him quickly dry, and place him in bed, where, in a short space of time he falls asleep, and generally breaks out into a moderate perspiration. If the feeling of cold should continue after the bath, a little warm wine and water is administered to the patient. The effect of cold effnsion is to diminish the frequency of the pulse, to reduce the thirst and heat of skin, and to tranquillize the nervous system. If needful, it may be repeated for a second or a third time. When effusion is not thought advisable, sponging the surface with cold water may be employed as a substitute. "Cold effusion," says Bateman, "combines in itself all the medicinal properties which are indicated in this state of disease, and which we should scarcely, *a priori*, expect it to possess; for it is not only the most effectual febrifuge, but it is in fact, the only sudorific and anodyne which will not disappoint the expectation of the practitioner under these circumstances! "Invariably, in the course of a few minutes, the pulse has been diminished in frequency, the thirst has abated, the tongue has become moist, a general free perspiration has broken forth, the skin has become soft and cool, and the eyes have brightened, and these indications of relief have been speedily followed by a calm and refreshing sleep."

It may be asked by the general reader, if the use of cold water was so efficacious in the hands of Drs. Currie, Bateman, and other eminent physi-

cians, why is it that it has gone entirely out of use? for, surely, physicians have had no very great prejudice to overcome, seeing that this use of water had been introduced by physicians of high respectability, with learning and great talents. We would answer, because it was used without any principle, and not as a part of a system; and consequently, it could not be adapted, with precision, to every stage of a disease, or to individual cases; hence, dangerous symptoms often arose from its employment. There was no guide to conduct physicians into a knowledge of the relation which the treatment should bear to the condition of the reactive energy in the frame. From this, it frequently happened that instead of bringing out the rash, and soothing the febrile symptoms by means of effusion, a depressing result was produced, from which dangerous consequences followed; hence physicians, from timidity, prejudice and ignorance, have allowed this *now* safe and certain remedy to fall into disuse.

Homœopathic Treatment.—The chief remedy in this disease is belladonna. This should be given alternately with aconite, until the febrile symptoms have been removed, and in the following way: Twelve drops of the third dilution of each, mixed in separate vessels with twelve table spoonfuls of cold water, a table spoonful of which is to be given alternately every half hour while the heat of the skin and great quickness of the pulse continue. After these have been subdued, alternately every second hour only. In violent scarlet fever, with severe inflammation of the throat, and which is at the same time moist, aconite and mercurius solubilis, should be given in the same way and in

like quantities as the remedies before named. These three remedies are usually sufficient to carry the patient safely through the disease, and none else are ever needed, provided this treatment be combined with the hydropathic.*

We now come to say a few words concerning the prophylactic properties of belladonna in scarlet fever. This is a most important subject, and deserves the most serious consideration. The prophylactic power of belladonna against scarlet fever was discovered by Hahnemann. The members of the profession generally have not merely received this new truth with coldness and indifference, but even with contempt, ridicule, and abuse. Hahnemann, however, does not stand alone in this respect. "Precedents, at any rate, will not fail it, old as the world, new as the present century. What can the unfortunate, yet fortunate, man,

* It is our duty to mention here that it was Hahnemann who first pointed out the efficacy of belladonna in scarlet fever. An author on this subject writes as follows, "In the last years of the past century, Dr. Hahnemann, in making experiments with belladonna on healthy subjects, observed, among many other symptoms, that this substance produced a kind of smooth, scarlet eruption and inflammation of the fauces and tonsils, with difficulty of swallowing. According to his therapeutical principles, already given to the public in 1796, he concluded from these symptoms that belladonna must be the best remedy for scarletina, and he proposed to put it to the proof on the first occasion that occurred. A favourable opportunity soon offered itself, in an epidemic of this contagion which for some years afflicted a great part of Germany, and in which hardly ten in each hundred persons attacked, recovered. He administered belladonna to his patients, and the happiest success crowned the attempt, and confirmed his views. The number of patients he lost was extremely small." Since that period all homœopathic physicians have made use of it, and they may boast that fatal cases very rarely occur under their treatment.

borne away by his genius from the beaten track, expect to find in the untrodden paths, which it is his task to clear, but weeds and thorns? His eagle eye may descry from afar sunshiny hills, wide sweeping horizons, glorious and blessed fields; but the way thereto is a wilderness, and that is his way. And it is good it should be so. Truth were not the heavenly, the god-like thing it is, could it be otherwise won than by magnanimity and self-denial. Genius were not the highest privilege in nature, were it not attended with infinite labour, with stringent duties, with struggles and trials. In the history of all discoveries and discoverers, we read this lesson while we run."

So important do we consider a full knowledge of the facts upon which the truth of the preservative powers of belladonna in this disease is based, that we do not hesitate to quote the greater portion of an article written by Dr. Black, late of Edinburgh, and which is contained in the first volume of the *British Journal of Homœopathy* :—

Experiments made to ascertain the prophylactic properties of Belladonna.—"Gumpert, physician at Posen, in an epidemic in 1817, preserved his four children and twenty families, amounting to about eighty individuals. Two persons were, however, attacked, but very mildly. In one, the belladonna had only been used for some days; in the other case, the disease declared itself in the second week of the employment of the belladonna. Gumpert senior states, in a report to the government, that he prevented the introduction of the epidemic into several villages, by administering the medicine continuously at the proper time. He remarked that in those villages where the epidemic

had already appeared the employment of this substance rendered the scarletina very mild. In the district where he practises the public have as much confidence in it as in vaccination, and the local authorities are ordered to furnish gratis this medicine. The dose employed by the Gumperts was about a teaspoonful, morning and evening, of a solution of one grain of extract of belladonna in four ounces of orange water, and one of alcohol.

In the very fatal epidemics of 1817, 1818, and 1819, Berndt, physician at Custrin, made use of two preparations of belladonna; in the one there was two grains of the extract to an ounce of cinnamon water, in the other three grains. The dose varied from two to twelve drops, morning and evening. His trials give the following results—out of 195 children who were constantly exposed to the contagion, and who took the first preparation, 14 were attacked, and 181 preserved.

With the second preparation, given to a large number of individuals similarly situated, he preserved them all. The few who contracted the scarletina had the disease very mildly.

Dr. Murhbeck, of Demmin (Western Pomerania), says, "It is now seven years since I employed *belladonna* as a prophylactic against scarlet fever, and always with equal success. Every time that the fever shewed itself in a family, I administered *belladonna* to all the persons exposed to the contagion, being careful to continue it until the entire desquamation of the patients affected with the fever. I also used the same preservative in houses where it had not as yet appeared; and I can state, from an experience of seven years, that all who took the *belladonna* were preserved from the scarlet fever."

The dose employed by Dr. Murhbeck was, to children 1 to 5 drops, and to adults 5 to 10, four times a-day, of a solution of 2 grains of belladonna to an ounce of water.

One of the authors, whose observations are the best calculated to prove the prophylactic efficacy of belladonna, is Dr. Dusterberg, of Warbourg. In three consecutive epidemics this practitioner preserved from contagion all the individuals who made use of this remedy, although they were allowed to visit and keep company with the sick. He, therefore, regards this practice as certain a prophylactic as vaccination. To be more certain of its results, Dusterberg made a still more conclusive experiment. He chose in each family submitted to the prophylactic treatment, a child who had not taken *belladonna. All the children thus excepted were attacked by the contagion.*

Dusterberg adds, it is true that several other children, who had only used the remedy for four or five days, were also attacked, but so very mildly, that the only trace of the scarletina was the subsequent desquamation. Among several of those who were preserved, there appeared an eruption a little analogous to scarletina, but unattended by fever, which was but the effect of the belladonna, observed by Hahnemann.

In 1820, during the course of a very fatal scarletina, Behr, physician at Bernbourg, gave the specific to 47 individuals; among these 41 escaped the contagion, and 6 were attacked, but in an exceedingly mild manner. The preparation was the same as that employed by Dr. Berndt.

In two epidemics which reigned at Colmar, in 1820 and 1821, M. Meghin states that every one

was preserved who took *belladonna*. The preparation he used was similar to that of Dr. Berndt.

One hundred and twenty persons were attacked with scarletina in a village of Silicia; Wolf gave them belladonna, according to Berndt's formula, and after that the disease ran a mild course. In two other villages 132 healthy individuals employed the same means—6 contracted the fever, 126 escaped it. Schenk, at Siegen was enabled to confirm, in 1820, the favourable results he had gained in 1809 and 1810 from the employment of belladonna. Benedick, in the island of Rugen, and Wesner, at Dulmen, also observed favourable results.

Twenty children, out of 84, were attacked with scarlet fever in the military foundling hospital of Hull, in Tyrol. Zeuch, physician to the establishment, gave belladonna to the 61 remaining; all were preserved, with the exception of one; and meanwhile the epidemic continued to rage in the environs of the hospital.

Dr. Suttenger, of Cercle, reports that several people having died of scarlet fever, in the village of Milaskowo, recourse was had to *belladonna;* and that after its use, no one was attacked with the disease.

Dr. Kurtsman has always been in the habit, when called to a case of scarlet fever, to administer *belladonna* to the other children of the family, and only in one has he found it to fail as a prophylactic. This failure he attributed to the improper administration of the *belladonna* by the parents. He continued, however, in some measure doubtful of the efficacy of *belladonna* until 1825, when the following trial confirmed his belief. Upon the appearance of several cases of scarlet fever in the in-

stitution of Treduick, he administered the remedy to 70 children, aged from four years to fourteen. Of these, 3 caught the fever, but in a very mild form; 67 were preserved. One other child, who had not been submitted to the trial, was violently attacked. The preparation employed by Kurtsman was 2 grains of the extract to an ounce of liquid: as many drops, twice a-day as the child had years.

Dr. Guerki, of Stetin, obtained the following results of 94 children, in Glasgow, to whom the belladonna was administered: 8 contracted the contagion, 86 were preserved; while 15 children, to whom the remedy was not administered, were all attacked at the same time, and after the period that the prophylactic had been given to the others.

Hufeland, in a preface to the two last-mentioned observations, writes that he has frequently used belladonna in his own practice, and has never found it fail.

In 1825, Maitier, of Burg, administered belladonna for 15 days to 170 children in the village of Negrippe. After this period it ceased, but continued to rage in an adjoining village, where the remedy had not been given. In 1821, by the employment of the same remedy, he succeeded in arresting a very fatal epidemic which was raging at Grabow and in Burg, he gave immunity to 66 out of 70 children.

In 1824, Maitier gave belladonna to 300 children, during another violent epidemic which was prevalent at Schlieben, district of Mersebourg. Several of these children attended school, others remained with their parents; about one half, who

had already had scarletina, were preserved; the other half, who had not had scarletina, were also preserved, with the exception of a very few who were slightly attacked, presenting only a reddish eruption without fever, which, with great probability, may be considered as a not uncommon effect of belladonna. Of four children sleeping together, one only, who had not taken the medicine, contracted the disease.

Dr. Wagner states, as the result of his experience, that comparing those who took the belladonna, during the prevalence of the epidemic, with those who neglected to do so, of the former he only lost about one in seventy, whilst of the latter, there died one in three.

Dr. Velsen, in an epidemic which raged at Coleres, gave belladonna to 247 individuals who had not had scarlet fever, and the great majority of whom were young people. The form he employed was two grains of the extract to two ounces of distilled water and two drachms of alcohol; of this, from five to twenty drops, according to the age, were given twice a day. The following were the results: Out of the 247 individuals, 234 were preserved, 13 had scarletina; of the 13, four were children who had taken the remedy for several weeks, but not regularly; one a child who had taken it regularly for 14 days; another who had taken it for eight days; and seven who had employed it for only forty-eight hours. Of these last, one, a delicate child, died. With all the others the disease was very mild, and much slighter than in those instances where belladonna had not been given.

Dr. Koreff, Professor of the University of

Berlin, affirms, from a very extensive and long-continued experience, that the most intimate intercourse may be kept up with patients affected with scarlet fever, provided the belladonna be taken in the proper doses, for eight or nine days before exposure, and be continued till after the period of desquamation.

At Monastier, in 1829, scarletina raged both among our troops and the inhabitants of the towns and villages where we were quartered. The Grand Vizier, who had expended much time and money on the discipline of this his favorite *corps d'armee*, gladly accepted my proposal to try the effects of *belladonna*. As the troops were generally of young men, and totally unaccustomed to narcotics, the dose I gave was comparatively small; 36 grains of the extract of *belladonna* were mixed up with 1lb. of the extract of liquorice, and 10 grains of this were given morning and evening to each soldier. The success of the experiment far exceeded my most sanguine expectations; for not more than 12 men out of 1200 sickened after this plan was adopted; of these twelve, 6 died; and it is to be remarked that the disease continued unabated among the inhabitants where the soldiers were quartered, after it had ceased among the latter, though they lived in the same houses. The following is the result of our own experience: The remedy was administered to eleven children who never had scarletina, and who were living in a house with two cases of scarlet fever, the one of them attended with sloughing sore throat, and in intercourse with these cases; all escaped, even one who was sleeping in the same bed with one of the patients. In another instance we gave belladonna

to four children, none of whom had had the fever, and were directly exposed to the contagion. Three escaped; one took the fever, but so slightly that we were inclined to regard the symptoms as those of belladonna.

In another instance, we administered the remedy to four children and an adult, who were living in the same house with two cases of scarlet fever. The adult and two children were seized with the fever. Two had only taken the remedy for two days, and one for three days; the other two children escaped.

The three cases were much milder than the two cases in which no belladonna had been given as a preservative.

Out of the 20 cases, we observed the remedy produce head-ache, with increase of pulse in one child; in another there was slight redness of the skin, which lasted for eight hours, and unattended with fever.

The dose we employed was about double the strength of that recommended by Hahnemann, and was administered from ten to fourteen days.

Authors who have given Belladonna.	Number of persons who took Belladonna.	Number of persons preserved from Scarletina.	Number of persons attacked.
Schenk.....	525	522	3
Rhodius	7	7	—
Masius..... ...	5	5	—
Gumpert.....	84	82	2
Berndt	195	181	14
Behr.....	47	41	6
Kohler.....	7	6	1
Wolf.....	132	126	6
Schenk..... ...	3	3	—
Benedik	10	10	—
Zeuch	61	60	1
Kuntsman.....	70	69	1
Genecki.....	94	86	8
Maisier.....	170	170	—
	70	66	4
	300	280	20
Velsen	247	234	13
Randhaken ...	160	160	—
Oppenheim ...	1200	1188	12
Block.....	270	270	—
Cramer.....	90	90	—
Total.....	3747	3656	91

CHAPTER VII.

CROUP. HISTORY, OCCASIONAL CAUSES, SYMPTOMS, TREATMENT HYDROPATHICALLY AND HOMŒOPATHICALLY.

This disease was, previous to 1765, usually confounded with other affections of the throat and chest, originating from exposure to cold. In that year Dr. Francis Holme, of Edinburgh, gave the first distinct account of it. His description was drawn from the observation of patients resident in Leith and Musselburgh. This disease has been most carefully and anxiously studied by several great men, in consequence of a general order which Napoleon issued from the head quarters of Frankenstein, that a prize should be given for the best essay on the disease. The best work written on this subject in Britain, is that of Dr. Cheyne, a work in which the author minutely describes the disease as he observed it in Leith and the vicinity for several years, and illustrates its pathology by good dissections. So faithful is the history given of this disease, by Dr. Cheyne, in the article on croup in the *Encyclopædia of Practical Medicine*, that we hesitate not to quote it here. Speaking of the occasional causes, he says, "In the early part of his professional life, the writer of this article lived on the coast of the Firth of Forth, where croup may be considered an endemic disease, and where every facility was afforded for cultivating an acquaintance with it. During the last twenty-two years, while practising medicine in Dublin, his opportunities of wit-

nessing croup have not been unfavourable, especially when attending the Dispensary. While discharging that duty, he had frequent occasion to observe the disease among the ragged and half-starved children of the poor, who live near the canals which surround the city; or in Ringsend, near the estuary of the river Liffey, or in Sandymount, lying between Dublin and its bay; indeed, the disease is prevalent in the latter end of winter and in spring, along the whole of the eastern and northern coasts of Ireland. With respect to its prevalence along the rest of the sea-coast, no inquiries were made; his inquiries, however, sufficiently confirm the received opinion relative to the principal cause of croup, viz. that in Ireland as in Scotland, it is chiefly produced in the neighbourhood of large bodies of water, running or stagnant, fresh or salt.

The disease may occur at any period from the second or third month after birth to puberty. The younger children are when weaned, the more liable are they to croup. After puberty it scarcely ever occurs. Some families, those especially in which the children are of a sanguineous temperament and full habit, are much more liable to the disease than others. It often attacks children who have not fully recovered from a previous illness. It is liable to recurrence, at distant intervals, upon exposure, not merely to an atmosphere which has been influenced by passing over a large body of water, but to any of the causes which produce common catarrh.

Hoarseness, in very young children, does not usually attend common catarrh; and hence when observed in a child living in a district which gene-

rates croup, this symptom is always much more deserving of attention, especially if accompanied with a rough cough, than it would be after puberty. This remark may be supposed scarcely worthy of the reader's attention; but having had innumerable opportunities of ascertaining that inflammatory affections of the mucus membrane of the larynx and bronchi in children owe their complexion to the mode of treatment adopted during the first six or eight hours of the attack, when no other symptom but hoarseness exists, we consider the observation important to parents whose children are liable to croup, and consequently to their family physician.

In the approach of an attack of croup, which almost always takes place in the evening, probably of a day during which the child has been exposed to the weather, and often after catarrhal symptoms have existed for several days, he may be observed to be excited, in variable spirits, more ready than usual to laugh or to cry, a little flushed, occasionally coughing; the sound of the cough being rough, like that which attends the catarrhal stage of the measles. More generally, however, the patient has been for some time in bed and asleep before the nature of the disease with which he is threatened is apparent; then, perhaps, without awaking, he gives a very unusual cough, well known to any one who has witnessed an attack of the croup; it rings as if the child had coughed through a brazen trumpet; it is truly a *tussis clangosa;* it penetrates the walls and floor of the apartment, and startles the experienced mother—"Oh, I am afraid our child is taking the croup": she runs to the nursery, finds her child sleeping softly, and

hopes she may be mistaken. But, remaining to tend him, before long the ringing cough, a single cough, is repeated again and again: the patient is roused, and then a new symptom is remarked; the sound of his voice is changed; puling, and as if the throat were swelled, it corresponds with the cough: the cough is succeeded by a sonorous inspiration, not unlike the kink in *pertussis;* a crowing noise, not so shrill, but similar to the sound emitted by a chicken in the pip, (which in some parts of Scotland is called the roup, hence probably the word croup); the breathing, hitherto inaudible and natural, now becomes audible, and a little slower than common, as if the breath were forced through a narrow tube; and this is more remarkable as the disease advances. A blush of inflammation may sometimes be detected on the fauces, and in some rare instances a slight degree of swelling round the larynx, and the child complains of uneasiness in his throat, and says he is choking. The ringing cough, followed by crowing inspiration; the breathing, as if the air were drawn into the lungs by a piston; the flushed face; the tearful and bloodshot eye; quick, hard and incompressible pulse; hot, dry skin; thirst and high coloured urine—form a combination of symptoms which indicate the complete establishment of the disease.

Sometimes the symptoms enumerated subside about midnight, even in the absence of medical treatment; perhaps to return in the course of the following evening. From seven or eight o'clock till midnight, this complaint is always at its height; but in general, unless the patient be treated with promptitude and judgment, the disease may be

expected to terminate fatally; a new order of symptoms, the second stage of croup as it is called, taking place the next day.

When the first, or inflammatory stage of croup just described, has not subsided or received a check, the cough, from being loud and sonorous, becomes husky and suffocative; it resembles the cough which attends tracheal phthisis, and cannot be heard at any distance from the bed; the voice is whispering, the respiration wheezing; the countenance pale; lips livid; the skin motley; the eyes languid; the iris with less colour than natural;* the pupils dilated; the tongue loaded, and with purplish edges; thirst considerable; skin much less hot, and the stools dark and fœtid. In this, the second stage, or that of suppuration, the breathing may often be remarked most free in positions which are generally least favorable to easy breathing, as, for example, when the head is low and thrown back. When the breathing is a struggle for life, the patient sometimes will suddenly obtain relief, which, however, in general is only temporary.

From the state described in the last paragraph comparatively few patients recover. The eyes now become hollow; the countenance sinks; the circulation gradually fails; the extremities are cold and swollen; jactitation and drowsiness occur, the respiration becomes frequent, interrupted and laborious; and, after gasping for a longer or shorter time, the child dies; the duration of the disease being varied according to the stamina of the

* This paleness of the iris, which often attends the advanced stage of diseases, especially of the lungs, and which is a very unfavorable symptom, has, we think, been overlooked.

patient. When fatal, croup at an average occupies a period of four days. Sometimes, however, the second stage is prolonged for two or three weeks, and the patient, expectorating freely, slowly emerges from a condition which repeatedly had appeared hopeless. Along with puriform fluid, of which the sputa chiefly consist, there is sometimes expectorated a white, soft, tubular matter, like macaroni stewed in milk, which is called the membrane of croup."

"This disease," says Dr. Allison, "is generally produced by a combination of cold with moisture, and is hence observed to be remarkably more frequent in low moist situations than in higher grounds, and in wet weather than in very cold. It is more rapid in its progress, and more fatal, probably because the false membrane forms more rapidly in very young than in older children, but it is seldom seen in those that are still on the breast. The mortality from the disease in children under the age of five, has been stated, and probably not exaggerated at one in two."

Hydropathic Treatment—The success of our treatment of croup depends upon the correctness of our diagnosis, and the activity with which we employ our remedies. The instant symptoms of this disease present themselves, the patient must be enveloped, and a wet bandage carefully and closely applied to the throat. He should be kept in the envelope so long as he feels warm and comfortable, were it even for four hours, and then washed in a shallow bath, of the temperature of 65°, then placed in bed, and allowed to remain there for an hour or an hour and a half, with the wet compress on the throat. After this he is to be

again enveloped, until a gentle moisture is observed upon the skin, when usually the dangerous symptoms will either have been removed or greatly ameliorated.

It is not necessary that the patient should drink much water, but if he have thirst, the water given him to drink must have the chill taken off. As the exacerbation generally takes place at or near midnight, the patient should be most narrowly watched through the night, and should the slightest symptom appear, he must be instantly enveloped, and the compress round his throat renewed. On the activity and energy with which we use these two remedies depends our power over the complaint. As this disease is sometimes very insidious in its course, we must continue this treatment for one or two days, at the same time watching lest the patient become weakened by it, when it must either be stopped, or used less actively. The patient, after every ablution, ought to be put to bed, and covered with a moderate quantity of bed clothes, so as gently to encourage the perspiration. If even an exacerbation should not take place after the first, still the envelope ought to be employed twice a-day for the next four days. After this period the envelope need not be repeated, but the body of the patient should be carefully washed and well rubbed, morning and afternoon, for one minute each time in the shallow bath, temperature 65°. Should this plan of treatment produce no alteration in the disease in the space of eight or ten days, we need scarcely expect any great relief to follow a continuation of it. Dr. Weiss says, "encouraged by the success of Dr. Harder, of Petersburgh, and of several cases published in

modern times, I have undertaken several cases which had been treated medically, or even by water, and had passed into the last stage; but I never succeeded in saving even one patient." This treatment may appear exceedingly simple, and not sufficiently comprehensive to many of our readers. We can, however, assure them that it is usually quite sufficient, if employed with energy and judgment. We have purposely avoided all complexity, so as not to confuse the individual who treats the disease.

Homœopathic Treatment.—By the treatment of this disease homœopathically, scarcely one-sixth as many children die as when treated by the old method. The medicines upon which the greatest reliance is to be placed in this affection are aconite, spongia, heper sulphuris, calcarea, and lachesis. We ought to commence our treatment by giving alternately aconite and spongia, every hour, as below specified. Fifteen drops of the third or fourth dilution of aconite, in seven teaspoonfuls of water. Spongia, third or fourth dilution, twenty drops, in seven teaspoonfuls of water. A teaspoonful of these two medicines, thus diluted, is to be given for the first twelve hours, should the symptoms become in any way augmented, and then alternately every third hour. When there is excessive restlessness, stridulous, shrill respiration, dry, hoarse cough, the patient seizing the wind pipe, with arid redness of the face, and excessive anxiety, stop the aconite, and give alternately instead of it, with the spongia, two drops of the sixth dilution of heper sulphuris in a teaspoonful of water. "Phosphorus," says Dr. Laurie, "is preferable to spongia, when the inflammation threatens to extend to the air

passages and lungs, or when the latter are implicated from the commencement, and may also be given alternately with that medicine, or follow it; and may further, in some instances, be advantageously alternated with lachesis." These two remedies should be given in the same way as the aconite and spongia, but of the sixth dilution. Lachesis is a very efficacious remedy, where there is a swelling and tenseness in the throat, with hoarseness, great sensitiveness to the touch, and where the voice is very low and hollow, having a sound like that of a person speaking through the nose; our sheet-anchor in the treatment of this dreadful disease is the active employment of the envelope, the careful application of the compress round the throat, with the regular administration of aconite and spongia, as given above. Should our directions be timely employed, and used with sufficient energy and perseverance, we believe this disease will be rarely fatal in the hands of any one.

CHAPTER VIII.

HOOPING COUGH.—SYMPTOMS, COURSE, CONTAGIOUS NATURE, REMARKS ON THE COMMON MODE OF TREATMENT, HYDROPATHIC TREATMENT, HOMŒOPATHIC TREATMENT.

The reasons why we enter into a consideration of the treatment of hooping cough are contained in the following extract:—"Few situations are more distressing to medical men than to be called upon to prescribe for diseases over which the medicines in general use exercise little or no control. Disease is an enemy with which they are perpetually to be at war, and over which their fellow-men, who appeal to them for succour, expect them in every instance to overcome. To be obliged to look on, therefore, whilst man's common enemy is cruelly tormenting his victim, and endeavouring to deprive him of life, without being able to render efficient assistance, is a position from which every member of the profession must naturally shrink; and, accordingly, when I first found that hooping cough pursued its course uncontrolled, or but little affected, by the remedies directed to be used against it, and witnessed the tedious sufferings of those who were attacked by it, and the permanent injury inflicted upon them by its protracted duration, I wished that I had not been consulted on behalf of persons labouring under that disorder."

This disease has been described under a variety of names, the generality of which, as chin cough, kink cough, refer to some one or other prominent

symptom. Hooping cough frequently commences with the symptoms usual to a common cold, which may continue for a greater or less period, without attracting any attention. Now and then it is ushered in with the symptoms characteristic of an acute inflammation of the air tubes. But in neither instance has the cough, at its commencement, any characteristic sign by which it can be recognised. It is, however, early observed to come on in paroxysms, a number of expirations are then made with much violence, and repeated in such quick succession, that the patient seems to be almost in danger of suffocation. "The face and neck are swollen and livid, the eyes protruded and full of tears. At length one or two inspirations are made with similar violence, and by them the peculiar *whooping* sound is produced; a little rest probably follows, and is succeeded by another fit of coughing and another whoop, until after a succession of these actions, the paroxysm is terminated by vomiting, or a discharge of mucus from the lungs, or perhaps by both. Sometimes, when the *kink* is unusually severe, blood is forced from the nose, ears, and even from the eye-lids; and occasionally it ends, without producing any discharge, in the complete exhaustion of the patient. The number of paroxysms occurring during a day varies much in different cases, according to the severity of the disease, and the violence of each is diminished in proportion to the freeness of the expectoration. After the disease has continued at its height for two or three weeks, it begins gradually to decline, the paroxysms become less frequent and violent, the expectoration increases, the cough soon loses its peculiar characteristics, and finally wears away

altogether, leaving the patient in perfect health. It is to be observed, however, that occasionally, several weeks after the cough has entirely subsided, it may return; and in a long time, if the patient accidentally catch cold, the cough will often assume the spasmodic character, and be accompanied with "the whoop." This disease rarely attacks the same individual twice, and as it generally occurs in childhood, it is seldom to be met with in adults.

"It is also," says Dr. Johnson, "supposed to be very uncommon in early infancy (in the first two months), an opinion which is generally true, although we have seen more than one instance of an attack in children three weeks old. When the disease attacks an adult, it generally wants the peculiar whooping inspiration, and the same thing is usually, but not constantly, observed in the cases of very young children."

Contagious nature of Hooping Cough.—The chapter in which this subject is treated in Dr. Roe's work on hooping cough is so full, so just, and so succinct, that we give it entire.

CONTAGIOUS NATURE OF HOOPING COUGH.—Attempts have frequently been made to prove that those diseases which, by common consent are considered to be contagious, cannot be communicated from one person to another; and the argument usually advanced in support of this position is, that healthy persons are continually coming in contact with those who are suffering from what are called contagious diseases, and yet remain wholly unaffected by them. A very striking instance in favour of this argument came under my own observation a few years since. Two

or three children of a family with whom I was acquainted, travelled from London to Liverpool in a stage coach, in company with some other children who were at the time suffering from hooping cough, and yet did not take the disease. But any number of such instances would only prove that a disease, supposed to be contagious, is not invariably communicated to every individual who comes within the reach of its influence, and that all persons are not at all times susceptible of such diseases; assuredly they would not prove that the disease was wholly incapable of being communicated by contact. One positive is worth many negative arguments; and numberless instances may be adduced in which persons, previously in perfect health, after having come within a certain distance of others labouring under particular disorders, have been sensibly affected at the time, and have returned home to suffer from the same malady. Thus, a lady of my acquaintance, meeting in the street a person who was just recovering from an attack of small-pox, and was strongly marked by it, said to her companion, "I have taken that disease;" and shortly after her arrival at home was seized with shivering, which was followed by fever, and a very severe attack of small-pox.

To instances such as the above, of apparent infection by diseases whose contagiousness is less certain than that of small-pox,—to instances, for example, of apparently communicated hooping cough,—non-contagionists reply, that all persons affected with the same disease have derived it from the same or a similar cause, or causes; and that before it can be admitted that a disease has, in any

particular case, arisen from contagion, it must be proved that none of the circumstances originally capable of producing it have been in operation. But this would be to require proof of a negative position, of all proofs the most difficult; and especially where the point to be established is the absence of *unknown* circumstances. The premises, then, which are assumed by the supporters of this theory are, I conceive, inadmissible; for though it is clear that the man who was first affected with any disease must have derived it from some other cause than contagion, this only proves that some other cause or causes of disease must exist besides contagion; but it affords no evidence that any disease, after it has been produced, may not be communicated from an infected to a healthy individual: the admission, therefore, that any diseases may have their origin independent of specific miasms, is not an argument against the position, that those diseases may be propagated by contagion.

That hooping cough may be communicated by this means is borne out by the fact that children who were formerly in perfect health, having no cold or cough, after playing with other children suffering from this disease, are themselves attacked by it, and that all the other children in the same house are soon after seized with it, as well as many others, both children and adults, who come in contact with them. Dr. Hamilton, in his work on the diseases of infants and children, p. 170, mentions that infants, a few days after birth, have been affected with hooping cough, in consequence of being dandled by persons who had been in a house where that disease was prevailing.

M. Rostan gives an instance of its contagious nature, in his *Cours de Mid. Clinique, vol, ii. p.* 552:—A family, on going to their country seat, found their gardener's children in the hooping cough; in a few days, one of the family, a boy of four years of age, who had been playing with the infected children, contracted the disease, but the other children, who were kept separate from them, did not then take it; and afterwards the whole family—father, mother, servants, and children—who had any communication with the infected family, went through the disease.

But the rapidity with which hooping cough spreads through a country cannot be explained by the supposition that it is communicated by contagion only. It makes its appearance at certain periods, attacking at the same time many of the inhabitants of a district, without distinction of sex or age, generally, however, selecting children as the objects of its violence; and after pursuing its ravages for an indefinite period, at length takes its departure without any assignable cause for either its appearance or cessation.

Dr. Watt, in his treatise, p. 25, gives an account of the appearance of hooping cough in a situation where it did not seem probable that any individual could have received it by contagion. He has taken it from a paper of Dr. A. C. Willey's, of Black Island, published in the *American Medical Repository, vol. x. p.* 95, in which he says, "Hooping cough occurred in that place in April, 1805, and did not become wholly extinct till autumn. What he considered as particularly worthy of attention was, the fact of its being indigenous, appearing over the greater part of the island at the

same time, and being untraceable to any apparent source. The insulated situation of the place being extremely favourable to observations and the detection of facts of this nature, without the danger of deception, has afforded, in the present instance, a fair demonstration that hooping cough can originate without contagion. He concludes thus: "Indeed, I was inclined to believe that the rise and progress of this epidemic disease does not depend so much upon contagion as is generally imagined. The universal belief that the system during the operation of pertussis, generates a specific virus, capable of communicating the disease, seems to have prevented the mind from looking any further for a principle adequate to its production."

Such facts as these, and there are many, leave scarcely any room for doubting that hooping cough is an epidemic as well as a contagious disease. This view is strengthened by the fact, that it is much more severe and fatal at one time than at another. Like other epidemics, it has appeared in various parts of Europe at different times. At its commencement, the number who fell victims to it was very great; but towards its decline it became mild, occasioned little suffering, and left the subjects of its attacks very little injured in health or constitution. We may therefore consider that hooping cough is an epidemic disease, but that it may also be communicated from diseased to healthy individuals by contagion.

Treatment.—"The medicines," which have been recommended by the writers on this subject who preceded Dr. Watt, produce such opposite effects upon the human system, that one might be led to

suppose that to establish the utility of one, would be to prove the injurious effects of another. Tonics, as bark and arsenic,—stimulants, as ether and cantharides,—nauseating medicines, as tartar emetic and ipecacuanha,—and depressing remedies, as hemlock, lead, and deadly nightshade,—have all been represented to have the power of alleviating or cutting short this complaint. But to know that these medicines are remedies—if indeed they be such,—affords but little insight into the best method of treating this disease, unless the peculiar circumstances under which they have been found useful, be at the same time clearly pointed out. Of what practical benefit can it be to be told that hemlock is a cure for children labouring under hooping cough, unless it can be shewn that it cures every case, or the symptoms for which it is beneficial be carefully described? The same may be said of all those other agents which produce so powerful an effect upon the human system as to render them either decidedly useful or decidedly injurious." These excellent remarks, if fairly carried out, would soon make medicine the noble system it ought to be; but so long as men merely speak and do not act, so long will medicine be the unsatisfactory art which it now is.

The principal remedies in general use for the treatment of hooping cough, with the names of those who brought them into notice, we give here.

Opium,	recommended by		*Dr. Kirkland.*
Cicuta,	,,	,,	— *Butter.*
Belladonna,	,,	,,	— *Buckham.*
Digitalis,	,,	,,	*Various authors.*
Bark,	,,	,,	*Dr. Cullen.*

Cup Moss,	recommended	by	*Mr. Hayes.*
Arsenical Solution,	,,	,,	— *Simmons.*
Nitrate of Silver,	,,	,,	— *Jones.*
Assafœtida,	,,	,,	*Dr. Millar.*
Castor,	,,	,,	— *Morriss.*
Musk,	,,	,,	*Mr. Hayes.*
Artificial Musk,	,,	,,	*Dr. Hufeland.*
Camphor,	,,	,,	*Popularly.*
Oil of Amber,	,,	,,	*Dr. Underwood.*
Meadow Narcissus,	,,	,,	*Mr. Dufresnay.*
Alkalies,	,,	,,	*Dr. Stutz.*
Antimonials,	,,	,,	— *Fothergill.*
Cantharides,	,,	,,	*Dr. Burton.*
Acetate of Lead,	,,	,,	— *Sauvages.*
Cochineal,	,,	,,	*Popularly.*

Hydropathic Treatment.—We have lately had several cases of hooping cough under our care, and we have found the hydropathic treatment produce the best results. From experience, we agree with the following extract, taken from Dr. Weiss's work on Hydropathy: "No method of treatment has hitherto succeeded in checking or interrupting the cause of hooping cough. The disease will always run through its usual stages; a judicious course of water treatment, however, appears capable of breaking through the chain of morbid symptoms; viz., where we can produce artificial perspiration or eruption of the skin at an earlier period than that at which they usually present themselves. The production of these favorable symptoms may appear hazardous to those who hold the opinion that nature should be left to effect every crisis; but it is proved by experience that patients recover, with the water treatment, in six weeks, in whom a crisis cannot be produced

before the usual time; and we may hence conclude, that the water cure neither prolongs hooping cough nor leads to morbid sequences." Our object ought to be, in our treatment of hooping cough, to regulate the circulation of the blood on the surface of the body; to remove the congestion and irritation of the internal organs, and to produce a gentle perspiration on the skin. These are to be effected by means of the envelope, the shallow bath, the rubbing of the chest and throat, and by a compress being applied round these parts.

The envelope is to be employed immediately on the observation of the first symptoms, were they only those of a common cold. The patient is to be kept in the envelope so long as he feels comfortable, and until it has produced a gentle perspiration. Then to be well rubbed in the shallow bath, temperature of the water 60°, and well dried afterwards; and he should then be allowed to amuse himself in a well aired room, of the temperature of 65° or so. Should the patient feel hot and uncomfortable in the envelope, he is to be removed from it—washed as above described, and immediately after enveloped again; and this continued until the gentle bedewing of the surface above mentioned takes place. During the time the patient is enveloped he requires to be assidulously watched, lest a paroxysm comes on whilst he is in it. If this should happen, the child, while in the envelope, should be held in the arms or in the lap, until the paroxysm has ceased, and then put to bed, to remain there until perspiration has commenced. In some cases the diaphoresis is exceedingly tardy; when it is so, the patient should not be kept longer than three hours in the envelope, during which

time, if there be no violent fever present, the sheet will not require to be changed. The greatest caution must be employed in administering drinks during this process, as there is danger of bringing on a severe fit of coughing.

The treatment here described must be continued and employed once a day so long as the cough exists.

Throat and Chest.—These regions of the body are to be rubbed with the hand and cold water three times a day, for seven minutes each time, and a compress immediately thereafter carefully applied round them.

Abdomen.—Should the stomach be irritable, it ought to be fomented with flannel, well wrung out of water, temperature 90°, twice a day for half an hour; this remedy must never be used earlier than two hours after a meal. If the bowels are constipated, an enema of tepid water should be given daily while the fever continues.

By following the simple treatment here recommended, we have not had a death from hooping cough, and the cases have not on an average lasted longer than five weeks; and they, through their whole course, have not been complicated with any other disease.

Homœopathic Treatment.—In this complaint homœopathists have remedies capable of checking the inflammatory symptoms at their outset; subduing the other distressing symptoms, and shortening the duration of the attack, without those evil consequences being the result which usually are attendant on the common mode of treatment. Dulcamara, third dilution, six drops in six teaspoonfuls of water is to be given when the attack

has been excited by exposure to wet, and where there is copious and easy expectoration. Where there is high fever, dry, hollow, or harsh and barking cough, aggravated during the night, belladonna, third dilution, twelve drops in twelve teaspoonfuls of water, given alternately every hour, with the same mixture of chammamilla, are found to be exceedingly beneficial, especially if we have difficult expectoration of tenacious mucus, with a sensation of irritation in the larynx and lower part of the windpipe. If the latter symptoms are not present, the belladonna alone is requisite. Where there is hoarseness, with a watery secretion from the nostrils, along with soreness of these parts, mercurius third dilution, twelve drops in six teaspoonfuls of water should be given every third hour. Where there is the feeling of suffocation, and when each inspiration seems to excite a fresh fit of coughing, twelve drops of the third dilution of ipecacuan in six teaspoonfuls of cold water; a teaspoonful given every third hour, we have found beneficial.

The remedy which experience has proved to be most potent in the spasmodic stage of this disease, is drosera. We have, in several instances, seen this remedy remove the spasmodic symptoms, when very severe, in a short time. The symptoms which especially indicate the employment of this remedy are, violent paroxysms of cough, occurring so rapidly one after the other as to threaten suffocation, accompanied by the characteristic shrill sound during inspiration. The mode of administering this remedy, is twelve drops of the sixth dilution, in six teaspoonfuls of water, a teaspoonful to be given after each paroxysm of coughing.

Should there be fever, or great excitement of the vascular system, we would recommend a drop of the third dilution of aconite in a teaspoonful of water, to be administered three or four times during the twenty-four hours. We have found these remedies, when combined with the water-cure, to be sufficient for the removal of the disease in every case we have treated; and these, during the last eighteen months, have been numerous, and many of them very serious.

CHAPTER IX.

QUINSY, OR SORE THROAT.—SYMPTOMS, CAUSES, ALLOPATHIC, HYDROPATHIC, AND HOMŒOPATHIC MODES OF TREATMENT.

In the term throat, we include all that region which extends from the posterior opening of the mouth, to midway down the neck. We have contained here a number of parts, the healthy state of which is essential to the functions of deglutition, the voice, and respiration. We shall, so that we may be fully understood, describe generally the anatomy and relations of the parts contained in this region of the body.

The roof of the mouth, called the palate, consists partly of a bony, and partly of a membranous substance. There is suspended from the posterior part of the bony palate a moveable partition, composed of muscular fibres covered with the mucous membrane of the mouth. No less than ten muscles are contained in this region. They are designed to modify, change and regulate, according to circumstances, the passage between the mouth, the pharynx, and the windpipe. By their actions the communication between the mouth and pharynx is closed up, and so prevents the assent of food and other ingesta into the posterior opening of the nostrils. From the centre of the soft palate a pendulous conical shaped body, called the uvula, hangs down. This part consists of a small muscle enclosed in the mucous membrane, and its function is to assist in completing the valve formed

by the soft palate; it also assists somewhat in the modulation of the voice. On both sides of the soft palate two thin fleshy pillars are seen to descend from it to the root of the tongue. These enclose the bodies called the tonsils, two glandular organs, usually of the size of an almond, which consist of a number of deep mucous follicles surrounded by cellular tissue. They are largely supplied with blood, and lie in the immediate vicinity of the two large arteries which principally supply the head, face, and brain, with blood.

The Pharynx; a muscular bag immediately continuous with the mouth, and the tube which conducts the food into the stomach. It is bounded above by the soft palate and uvula, on each side by the pillars of the palate, between which, as already mentioned, we have the tonsils, and beneath by the root of the tongue and epiglottis. Before is the entrance to the windpipe, termed the glottis; at the sides are the openings of two tubes, termed *Eustachian*, which lead to the internal parts of the organ of hearing, and above are the two entrances to the nose.

The Epiglottis is joined to the root of the tongue by the mucous membrane; it is of a triangular form, and composed of cartilage; it is placed immediately above the opening into the windpipe, or glottis, and so prevents food or liquid from entering into the larynx.

The whole of the parts we have here very generally described, may be seen, with perhaps the exception of the epiglottis and Eustachean tubes, on opening the mouth before a looking glass.

The disease denominated quinsy, or sore throat, may sometimes be so trifling as not to require

treatment; while, again, it may be so severe as to produce serious and dangerous symptoms. This disease may assume three different forms. The first is superficial, and confined to the mucous membrane of the tonsils, palate, uvula, and pharynx. The second is deeper seated, and, besides affecting the mucous membrane, attacks also the substance of the tonsils and uvula: while the third is both extensive and deeply seated, affecting with the parts now specified, the base of the tongue, the epiglottis, and occasionally the glottis itself. In the first case the disease produces little inconvenience, and presents the usual characters common to sore throat, which are a sense of soreness and tenderness in the fauces, joined to difficult and painful deglutition; the throat when inspected is found to be red and slightly swelled. In the second and third forms we have acute and severe febrile symptoms—the pulse is quick and wiry; the skin hot and dry; the face flushed, and the eyes slightly suffused. The mucous membrane of the fauces is of a bright red colour; the palate and tonsils are swollen, and lymph is effused on their surfaces, which is of a grey or yellowish-white colour. The tongue cannot be moved; deglutition is completely impracticable, and even thin fluids cannot be swallowed. When the attempt to swallow is made, great pain is produced, and the substance is rejected through the nostrils. The tonsils become so much enlarged as to project from between the pillars of the fauces, in the form of two globular bodies on each side, and almost entirely fill up the opening leading from the mouth to the pharynx. The patient is scarcely able to speak; he snivels through the nostrils, and usually an in-

creased secretion of saliva issues in greater or less quantity from the open mouth.

Causes.—The circumstances which usually occasion quinsy, are exposure to cold; cold, wet feet; exposure to sudden and great change of temperature; and it is also frequently produced by the habit which individuals too often have of muffling the throat. This affection is likewise a frequent accompaniment of measles, scarletina, and small pox. It may attack persons of any age, but is most common between twenty and forty-five; it occurs mostly in spring and autumn, and in winter when the weather is mild, moist, and variable. It is not contagious, though sometimes epidemic.

"One cause of quinsy," says Dr. Craigie, "and especially of inflammation of the tongue, requires here to be noticed; that is, the presence of mercury, or any of the mercurial salts in the system. Persons when under the influence of this mineral, if exposed to cold, are very liable to have a severe attack of inflammatory *angina*, in which the tougue is very much swelled and protruded from the mouth, while deglutition is impracticable, and a stream of saliva, more or less copious, issues from the mouth."

Allopathic Treatment.—In the mildest cases, says Dr. Craigie, it is advisable, in the first place, to administer an emetic, so as to produce full vomiting; and after this, to exhibit cathartics, and employ astringent gargles. For the first object, a scruple of ipecacuan powder and a grain of tartrate of antimony forms for an adult the most convenient means. After full vomiting has been thus produced, and has ceased, six grains of calomel and a scruple of jalap powder, in an electuary of treacle or honey, should be given."

"A very useful gargle is alum, dissolved in an infusion of roses, at the rate of two drachms of the former in a pound of the latter." "In more formidable cases, the simplest and most efficacious method is blood-letting from the arm, to the extent of sixteen, eighteen, or twenty ounces for an adult; or if deglutition be not rendered less painful and more easy, a repetition of this evacuation to twelve or fifteen ounces more." Should the symptoms be still more severe, he says, "it is then requisite instantly to take from the arm eighteen, twenty, or twenty-five ounces of blood; and examine the symptoms about five or six hours after it. It is necessary in general to repeat the evacuation to the extent of twelve, sixteen, or twenty ounces more." This we call heroic treatment; others, perhaps, may term it murderous: the liberty of choice between these two terms we entirely leave to the reader himself.

Hydropathic Treatment.—In the first or mild form of quinsy, the throat is to be rubbed with the hand and cold water for seven minutes, four times a day, and a bandage, well wrung out of cold water, immediately afterwards applied round it, and the patient should be confined to his room, the temperature of which ought to be 65°. The bandage round the throat is to be wetted and applied after each rubbing. This is sufficient for the mildest form of this disease. When it is of a more serious nature, the throat is to be rubbed, and a bandage applied in the way first described; but, in addition to these, the patient is to be dry packed,* and to remain in it half an hour after the perspiration has

* For an explanation of this term, and the mode of application, see chapter ten.

commenced; after which, he is to be well rubbed in a shallow bath, the water being quite cold. Should the fever and inflammation of the throat still continue, we would recommend that the patient be enveloped in the wet sheet four hours after the dry packing, and remain in it, if he does not feel heated and uncomfortable, until he commences gently to perspire; after which he is to have a cold shallow bath. The wet sheet envelope is then to be used twice a day until the inflammatory symptoms have been entirely removed, or greatly alleviated; then once a day, for one or more days; and after this, that is when the inflammatory symptoms have entirely disappeared, he is to have a dripping sheet twice or thrice a day. The throat, during the whole period of the treatment, is to be well rubbed and carefully bandaged, as above mentioned. The bandage is to be changed whenever it becomes dry. The patient may drink as much water as he pleases; but he is to be allowed no stimulating drinks or diet. His food is to be restricted to farinaceous substances, of which he may eat as much as he pleases; he is to keep his room, except in summer, when he may take exercise during the day out of doors; the rooms in which the patient sleeps and sits are to be well ventilated, and to be kept at or about the temperature of 65_{o}.

The throat is to be gargled every half hour with cold water, and this, with the rubbing of the throat and the dripping sheet, are to be continued for at least one month after a severe attack of quinsy; so that the susceptibility of the throat to inflammation may be entirely removed. This treatment, if actively employed, will be found sufficient for the worst attacks. While saying this, however, we

would recommend the employment of the homœopathic remedies about to be noticed in conjunction with it. This is one of the best diseases in which to prove the merits of the homœopathic treatment.

Homœopathic Treatment.—In the homœopathic treatment of this disease three medicines are usually all that are necessary. These are aconite, belladonna, and mercurius. Aconite is to be used, combined with belladonna, when the febrile symptoms are severe, the tongue very thick, the inflammation of the throat acute, and the throat itself dry, with injection and florid redness of the structures contained in this region. In this state of the disease twelve drops of the third dilution of aconite, in twelve teaspoonfuls of water; the same dilution of belladonna, in the same quantity, and mixed with the same number of teaspoonfuls of water, are to be given hour about so long as the febrile symptoms and the inflammation of the throat exist. We may mention here that aconite is the homœopathists' sheet-anchor in all acute sthenic inflammations; for with this potent remedy he is able, much more satisfactorily and much more actively, to reduce the most acute and severe inflammations, than the allopathic physician can with his bleedings, his nauseating draughts, his blisters, or his sinapisms. Mercurius is the fittest remedy in this disease, when there is moisture of the throat and mouth, suffusion of the tonsils, excoriation of the palate, whitish furred, moist tongue, and a frequent hawking up of mucous. We would recommend the mercurius to be given as follows: six grains of the third trituration in six teaspoonfuls of water; a teaspoonful to be taken every second hour until im-

provement takes place. We have treated at least a hundred cases of quinsy in the acute stages, some of which were of the most serious and dangerous kind, but by pursuing the two modes of treatment recommended above, we have not in *one* case failed to produce a rapid and perfect cure.

CHAPTER X.

PRINCIPLES OF THE WATER TREATMENT, EXPLANATION OF THE MODE OF USING AND WHEN TO USE THE WET SHEET ENVELOPE, THE DRY PACKING, THE SHALLOW BATH, THE DRIPPING SHEET, THE SITZ BATH, HEAD BATH, FOOT BATH, THE COMPRESS, AND THE WARM FOMENTATIONS TO THE STOMACH.

We shall consider, in a general way, the principles of the water cure, referring our readers for a further elucidation of them to the lectures we purpose publishing on this subject, in the *Water Cure Journal*, as our limits prevent us from doing so at any great length here. The powers of the water system are thus spoken of in one of our allopathic medical journals:—"His," *i. e.* Priessnitz, "treatment, although apparently constructed of such simple elements, is capable of being varied almost *ad infinitum*, according to the peculiarities of the case, or the fancy of the prescriber, and of being rendered so powerful as often to excite in the patients and spectators apprehensions of danger, and sometimes, no doubt, to produce it in reality. It is scarcely too much to say that he has modified the application of water, and some very few other means, in a manner so ingenious as to render them no imperfect *nominal* substitute, at least in most of the drugs in the pharmacopeia. He has his stimulant, his sedative, his tonic, his reducing agent, his purgative, his astringent, his diuretic, his styptic, his febrifuge, his diaphoretic, his alterative, his counteriritant. Combined with these are peculiar regulations as to diet, dress, and

regimen." Who could say more than this in favour of the water cure?

It has been erroneously supposed that the hydropathist considers the employment of water only, as all in all, in the removal of disease. No statement, however, could be further from the truth. The educated hydropathist regards the living organism as a complex machine, in which is contained in itself, the power of removing disease, which power can be brought into full and vigorous play by the proper employment of water, the judicious selection of food, the free breathing of a pure, cool, and bracing atmosphere, the proper regulation of the mental faculties, and the moderate use of the muscles of locomotion. In these, we consider, are contained the principal means by which health is to be restored, weakened constitutions invigorated, and constitutional tendencies to disease removed. These results the water cure, especially when combined with homœopathy, rarely fails to effect; and to the scientific and benevolent mind, nothing can be more interesting, pleasing, or satisfactory, than, to observe how these two modes of treatment so completely dovetail into one another. What a blessed light the unbigoted and independent mind is privileged with, who studies in honesty, searches in the spirit of truth, and watches in the bliss of kindness, the beneficial influences which follow the employment of these two discoveries of recent times.

The water cure, by stimulating, raises the reactive energy; by soothing, quiets irritation; by determining the blood from one part of the body to another, removes congestion, and by the internal excitement of organs, increases secretion, and there-

by the freer flow of the vital fluid through them. Homœopathy, by a specific action in individual tissues, aids this healthy tendency, and so hastens the cure, without being capable of doing injury.

Wet Sheet Envelope.—This is our most powerful remedy in the treatment of the first stage, where the febrile symptoms are high, of every specific fever or inflammatory action. It quiets the beating of the heart, and diminishes the increased flow of blood through the tissues; it cools the skin, and removes its arid dryness, producing, instead, a gentle perspiration. It brings out, with full activity, the most latent rash. It supports the vital energy of the frame during the progress of the disease, and, if used sufficiently early, frequently stops the course of it, in the first stage, without producing any bad consequences as a result. The mode in which the wet sheet envelope is to be employed is as follows:—A very thick blanket is spread on the mattrass, and on that a sheet which has been thoroughly wrung out of water at the temperature prescribed. The patient then lies down at full length in the middle of this, the sheet is then immediately brought over him, so as to come in close contact with every portion of the body, followed by the blanket, which is in the same way folded round him, and carefully packed at the shoulders and feet, so that no air can enter. In this way the patient is, as it were, hermetically enveloped—his face and head being the only parts left free. He should then be covered with a small feather bed, or one or two blankets well tucked in; the forehead should have constantly applied to it a cloth wrung out of cold water, and changed the instant it becomes warm. As a general rule, the

sheet, in fever, should be changed every half hour, or whenever the patient becomes restless or feels uncomfortable, until the febrile symptoms have been subdued. It may be expressed, that so long as there is dryness of the skin, fullness, strength, and quickness of the pulse, no danger can follow the frequent or long-continued use of the wet sheet envelope. Every time the envelope is changed, the patient ought to be well rubbed for two minutes in a shallow bath, the temperature of the water being from between 60 to 70 degrees Fahrenheit. When the fever has abated, the patient usually falls into a gentle slumber, and a gentle perspiration is observed to bedew the whole surface of the body. When this takes place, the patient is to be rubbed in a shallow bath, of the temperature of 70°, for from five to eight minutes, well dried afterwards, and then put to bed between clean, well aired, cold sheets. We again repeat that no bad effects can follow the frequent use of the wet sheet envelope, so long as the sthenic febrile symptoms continue. Each time the envelope is changed, the patient is to drink from a quarter to a whole tumbler of water, so as to prevent the slightest congestion of any of the internal organs.

The Dry Pack.—This remedy in certain inflammations, such as in severe attacks of quinsy, rheumatism, gout, and influenza, produces the most beneficial results. It has in this country fallen greatly, but, we think, undeservedly, into disuse: the abuse of it, more than anything else, has been the cause of this; and we regret to find, that the spirit lamp and vapour bath are employed in many hydropathic establishments, and recom-

mended in some of our most popular works on hydropathy, instead of it. This we consider to be radically wrong, as the idea which leads to the employment of one or the other of these is quite different. For example: in producing perspiration by means of dry packing, we do so by heat produced in the system through the rapid change which takes place in the molecules of the tissues; while in the employment of either the spirit lamp or vapour bath, the heat is produced by combustion *from without* the body, and consequently, no increase of combustion is caused to take place in the tissues of the organism. This latter treatment is indeed exceedingly well fitted to make a fat person lean, but the former is the best adapted for the rapid and radical cure of any acute inflammatory disease, dependent on a gouty or rheumatic habit of body. We refer thus minutely to this matter here, because patients who come to us from other establishments, complain now and then of our giving them the dry pack, when the spirit lamp produces perspiration so much more rapidly.

Dry packing is performed in the following way. The patient lays himself, in a state of perfect nudity, upon a blanket extended on the mattrass. The attendant wraps tightly first the one side of the blanket, then the other, round him. Care must be taken that the blanket is in close contact with every part of the body, especially at the neck, so that the heat may be retained. The blanket thus tightly bound round the patient, is to be covered by a feather bed, or one or two other blankets, carefully tucked in on both sides. The head is to be kept uncovered, and a wet compress

applied constantly over the forehead, and changed the instant it gets warm. When the patient commences to perspire, he is to be allowed to drink freely of cold water, and to remain packed until the body is covered by a free and profuse perspiration. After this, the blanket is to be removed, and the patient immediately placed in a shallow bath of cold water, in which he is to be well rubbed, and thoroughly dried afterwards. No danger is to be apprehended from this sudden transition from heat to cold. It is a practice which has been pursued from the earliest times, and in almost every country; by the savage as well as by the most civilized nations. After being well dried, the patient must take exercise, either in a well-ventilated room or in the open air, until a fine glow of heat is felt over the whole body. The only danger which can result from the employment of the dry pack, is weakness, arising from the too frequent application of it; therefore it ought not to be repeated should the patient feel weakened after its use.

The Shallow Bath. — The effect of this bath in fevers, is to give tonicity to the frame, after the use of the wet sheet envelope, or dry pack; or to excite the external surface of the body, where there is lassitude or depression, with a sensation of creeping or coldness over the skin, the usual premonitory symptoms of all fevers. In the former case the patient is to be well rubbed in the bath for two or three minutes, the temperature of the water being from between 60° to 70°, and to be carefully and thoroughly dried afterwards: in the latter case the patient is to be well rubbed in the bath, until the surface of the body becomes warm, were it for six minutes, the tem-

perature of the water being about 65° or 70°, and to be dried afterwards, as mentioned above. The mode of drying a patient is by throwing a coarse, dry sheet over his head and body, *on* which the attendant and the patient are to rub their hands until the skin is dry.

Dripping Sheet.—This application acts in the same way as the shallow bath, but is best fitted for nervous and excitable patients, and for those who have a weak reaction. The mode of using this remedy is as follows:—A coarse sheet is to be well wetted in water, of the temperature recommended, and, while dripping, is to be thrown over the head and shoulders of the patient. *On* it the attendant and patient are to rub their hands, without moving the sheet, until a glow of heat is felt; after this, he is to be dried in the same way by an equally coarse sheet. This is one of the best remedies we possess for giving strength to the frame during convalescence: it does not rob the system of so much heat; nor does it require so much reactive energy in the patient as the shallow bath does.

Sitz Bath.—We would not recommend the use of this bath while the patient is labouring under an attack of fever, or as long as he feels exceedingly weak. The action of it varies according to the temperature of the water, and the length of time the patient sits in it. It may be made to act as a tonic, a stimulant, or a derivative. To produce a tonic action, the temperature of the water should be from 50° to 59° Fahrenheit, and the person should remain in it from seven to fifteen minutes. As a stimulant, by which term we mean the production of a powerful reaction, the tem-

perature of the water must not exceed 44°. In warm weather this low temperature may be obtained by means of ice or freezing mixtures. As a derivative, by which we mean the drawing away the fluids of an inflamed or congested part to a distance from the organ or structure affected, the sitz bath must be used from half an hour to one hour, or an hour and a half, the length of time depending upon the nature and severity of the illness, and the strength of the patient. The temperature of the water for this purpose may, according to circumstances, be varied from 50° to 75°. The dimensions of this bath are generally eleven inches deep in front, and fifteen inches behind, nineteen inches in diameter at the bottom, and twenty-five at the mouth; it may be made of wood or tin, but the latter is preferable. This part of the water cure is one of the best remedies we have for removing constipation, lessening irritation, and diminishing the congestion of any of the abdominal organs.

Head Bath.—A pudding dish forms a good substitute for the head baths used in hydropathic establishments. The dish is to be three-fourths filled with cold water and placed on the floor, a pillow is to be laid in front of it; the patient should then lay himself on his back on the floor, his neck and shoulders resting on the pillow, with the back of his head in the dish. Should the patient be seriously ill and confined to bed, it may be used there. This is an exceedingly useful remedy in delirium, in congestion of the head, inflammation of the brain, or in inflammation or congestion of any of the special organs of sense. It quiets irritation, lowers excitement, tranquillizes the ner-

vous system, and often produces gentle and untroubled sleep. It may be used without any bad effect for half an hour each time, every two hours. I have, in cases of high inflammatory delirium, and where there was great heat of the surface of the head, applied this bath for an hour each time, every third hour, for two days continuously. In some instances it is beneficial to bathe the forehead while the head bath is used; while in other cases it is not so. The doing or not doing of this depends entirely on the feelings of the patient.

Foot Bath.—In cases of irritation of the brain, excitement of the heart, or congestion of any of the abdominal organs, in young, weak, or elderly individuals, this bath is most beneficial. The water should never extend higher than the ankles, and the temperature of it should rarely be under 55°, and it may be as high as 80°. While the feet are in the bath the patient should never cease rubbing the one upon the other, in order to produce a reaction; and they should be well dried afterwards with a coarse cloth. The foot bath may be continued for from five to thirty minutes; if as a tonic for a short period, if as a sedative for a longer.

Compress.—This may be applied round any part of the body. Its action is of a soothing and quieting nature. It is well fitted to disperse swellings and indurations, for overcoming irritations or subduing inflammation in an organ. With the sitz bath and the occasional use of the wet sheet envelope, it scarcely ever fails, when applied round the stomach, to remove constipation and cure hemorrhoids. The compress is applied in the following manner: one third of a piece of stout diaper,

broad enough to cover the part designed to be acted on, and long enough to wind round it three times, should be well wrung out of cold water and closely applied to the surface of the body, and then carefully covered by the remaining two-thirds, which is dry; the whole to be fastened with tape.

Fomentations.—The fomentations are to be used either hot or warm. Hot, that is near the boiling point, should be used in cases of inflammation; warm, when the disease is one of the character of nervous irritation. In the former instance it is designed to lessen inflammatory action; in the latter to soothe either the termination of the nervous fibrils, or the central organs of the nervous system themselves. We would caution persons from using hot fomentations over the region of the stomach in any other than a recumbent position. They should be applied continuously from fifteen to fifty minutes at a time, once or twice a day, or only every second or third day; the frequency of the repetition depending entirely upon the acuteness and severity of the attack. They should never be used immediately before a meal, or until at least two hours and a half after. The warm fomentations may be used with advantage immediately before or immediately after a light meal. The flannel is wetted and heated in the following manner: a smaller or larger portion of flannel is dipped in hot or warm water, put into a dry towel, which is twisted round, either by the hands alone or with a stick, until almost all the water has been expressed out of it. It is then removed from the towel and applied over the part affected, covered with another piece of dry flannel, and changed as soon as it becomes diminished in tem-

perature, which usually is from four to six minutes. We cannot praise this remedy too highly when applied to the stomach in cases which depend upon irritation of the terminal nerves, or the central organs of the nervous system, that is to say, upon nervous irritation, such as is produced in childhood by teething, and in manhood by over or too long-continued excitement.

Before we bring this branch of our subject to a close, we would say a few words in reference to the mind which reduced this mode of treatment to a system, and to the appearance of the frame in which it is contained. Self-reflection, acute observation, fine generalizing powers, with firmness and resolve, united to an unobtrusive mildness, are the characteristics of Priessnitz's mind. These are well illustrated and forcibly expressed by "his spacious head, his keen searching eye, his close set lips, in which there dwells fascination when it relaxes into a smile;" for, "notwithstanding several defects in point of beauty, and a sternness of outline in almost every feature, there is something uncommonly pleasing, as well as striking, in the whole expression of his countenance, and one reads there kindness of heart as well as firmness and decision of character."

Priessnitz is now in his forty-seventh year, of robust frame, and about five feet eight or nine inches in height. His habits are simple. He goes early to bed, and rises in summer at four, in winter at five o'clock, plunging immediately afterwards into a cold bath. He still retains the simplicity of his early life. He is a man of few words, and from the acuteness and comprehensiveness of his perceptive powers, never fails in his diagnosis, and

rarely in his prognosis. He is utterly ignorant of medical science, and entirely owes his powers as a physician to intuitive genius, united to an enquiring mind. Priessnitz's ancestors have lived for centuries and tilled the ground on which his large and famous establishment now stands. His father was a small proprietor, from whom he received a very limited education. Early in boyhood he is said to have noticed the treatment used by an old man, which consisted entirely of the application of water, in diseases of cattle. It is said that Priessnitz assisted in these operations, and thus learned the first rudiments of that science which is to aid so materially in the regeneration of society, and of which he is the founder.

By a serious accident which happened to himself, and which ultimately proved most salutary in its indirect consequences, he was led to turn his attention to the power of water in the cure of disease. Having broken two of his ribs, his surgeon, after examination, declared that he could never be so cured as to be fit for work again. Not being satisfied with this diagnosis, he, with an energy and firmness so characteristic of the spirit of independence, united to breadth of intellect, resolved to cure himself. "To effect this, his first care was to replace the ribs, and this he did by leaning with his abdomen, with all his might, against a chair, and holding his breath so as to swell out his chest. This painful operation was attended with the success he expected. The ribs being thus replaced, he applied wet cloths to the part affected, drank plentifully of water, ate sparingly, and remained in perfect repose. In ten days he was able to go out, and at the end of the year he was

again at his occupation in the fields. The fame of this cure soon spread abroad; others came to consult him; other cures were effected by him; his success, as is ever the case, provoked enmity; the *village* doctors joined the number of his foes; a complaint against him was forwarded to the authorities at Vienna; a commission of three physicians was appointed by the Aulic Council to proceed to Græfenberg, and to investigate the truth of the charges brought against him; the three reported favourably of him, and thus once more persecution served the cause it was employed to suppress. Allow me to introduce here an anecdote connected with the enquiries of the medical commission. While the members of it were in Freiwaldan, one of them visited a lady of rank whose little child was ill; he prescribed for it, gave it up, and then thought that he would test Priessnitz and the water cure. He accordingly sent for Priessnitz, and addressing him in the singular number, as he would a peasant, told him how the child was afflicted, and, pointing to it, added, "Well, and what canst thou do?" Priessnitz made no answer, but only smiled. The doctor left; and Priessnitz obtained from the mother permission to treat the child, the doctor having given it as his opinion that it could not survive until next day. Next day the doctor called, made his compliments to the mother, who, he was surprised to observe, appeared calmer than he thought suitable to the occasion, and, in a hesitating manner, as if afraid to touch a tender chord, he softly asked, "And the child?" "Behold it!" said the mother, pointing to it playing about at the other end of the room. From that moment, the doctor, with a superiority far above the petty jea-

lousies of professional prejudice, became Priessnitz's firm friend.

In conclusion, we would say, let Priessnitz's ignorance be forgotten in his genius; let his independence, his uprightness, his firmness of character, be the light we would follow. But let not his disciples lean on that broken reed which too many ape Priessnitz in,—a contempt for the sciences upon which medicine is based: for he who does so, will be sure to bring disgrace upon himself, and throw discredit, at least for a time, upon that scientific mode of treatment which an uneducated man was privileged to benefit society with. The hydropathist, to perform his duties with skill and efficiency, must understand and fully comprehend the mechanism of the human organism; the laws by which its individual organs are retained in health; the circumstances by which their actions are modified or deranged; the power of the reactive energy in different constitutions and in different diseases, so that he may be able to adopt with vigour and skill the many modes in which the water-cure may be employed. In a word, he must be an anatomist, a learned and practical physiologist, an experienced pathologist, a laborious student, and an independent thinker.

Sick Room and Bed Room of the Patient.—Temperature—Ventilation.—It is of the first importance that the purity and temperature of the atmosphere in a sick room be carefully attended to. The ignorance and unconcern with which this subject is generally regarded by the public and the members of the medical profession, is a matter of deep regret to those who have paid attention to the subject.

"The importance of ventilation may be judged of by the fact, that it constitutes one of the universal principles of nature:—wherever there is air, there ventilation must be going on. Countries lying in the temperate zones, are ventilated by the continual changes of wind, common to those latitudes; those near the equator, by breezes, alternating with day and night, or others which blow in one direction for months together. By such means the atmosphere of every portion of the earth's surface is maintained in a fit state for the health of man and other animals."

This is not the place to detail the facts which prove the importance of ventilation. To do so, we should require to enter into a consideration of the respiratory forces; of the circulation of the blood; of the constitution of the atmosphere, and of the relation of animal to vegetable life. We shall only here explain how ventilation may be efficiently produced.

There are two kinds of ventilation—natural and mechanical; the former includes chimneys and fire-places; the latter, valves, fans, and other contrivances affixed to these.

Ventilation takes place in every room in which there is a fire-place; for, when the fire is lighted, movements occur in the atmosphere of the apartment. To shew this, let the following simple experiment be made: open about three-fourths of the door of the room, place a lighted candle near to it on the floor, and the flame will be seen to be bent in the direction of the fire-place; this is occasioned by the current of air moving in that direction: next, lift the candle to the upper part of the door, and the flame of it will be observed to point outwards. These phenomena prove, that

when a fire is lighted in a room, a stream of air is always rushing in at the lower part, and out at the upper. This degree of ventilation, however, is not sufficient to change the air quick enough, when the room is occupied by human beings, to keep it pure; for, according to Dr. Reid, each individual requires a supply of ten cubic feet of air (a quantity almost double the bulk of a human body,) per minute; from this it is apparent, that unless an equal quantity is admitted into the room, and an equal quantity allowed to pass out, which is deteriorated, the air cannot be in a fit state for breathing. One of the simplest ways of ensuring the free egress of air, is to make an opening close to the ceiling, and through the breast of the chimney. Two, three, or four bricks only need to be removed. In this space, Dawe's ventilator, which can be had from J. Allen, maker, *22*, Guildford-street East, Wellington-square, is to be placed. By this means we secure the rapid change of the air in the apartment; for, the air which has been breathed, from its being warmed, ascends to the upper part of the room, and is carried, by the draught in the chimney, out of the apartment. As fast as this foul air escapes, fresh air rushes in from below, or from the window, to supply its place; and thus a pleasant and wholesome atmosphere is continually kept up. If this means of ventilation cannot be obtained, a free circulation of air may, to a certain extent, be kept up by having a gentle fire in the room, and the door constantly open. The window ought also to be frequently opened for a few minutes during the day, so as to allow a free and rapid current of air through the apartment. The temperature of the sick room should never exceed 66°, or fall below 60°.

CHAPTER XI.

HOMŒOPATHY.—CHARACTER OF ITS PRINCIPLE; SKETCH OF HAHNEMANN; MODE OF PRACTICE; STRENGTH OF MEDICINES USED.

The following extract is, we think, a sufficient apology for our devoting a few pages to the explanation of the principle and practice of homœopathy. "Health is of such paramount importance to man, and homœopathy—if homœopathy be true—must be of such paramount importance to health, that the subject ought to command the attention of every class of readers, without regard to the conclusions they may eventually arrive at concerning its merits. Both indifference, which cares not to know, and dogmatism, which stops not to examine, are courses deviating no less from the practice of a sound policy, than from the principles of true philosophy." "Homœopathy has now attained the growth of nearly half a century; old Saturn has spared it, the devourer of fashions and baubles, of shams and lies. Hahnemann's system has outlived its promulgator, and no signs of a shaken or threatened vitality as yet appear. A numerous body of men—most of them trained up in the purest academical orthodoxy—have made, and are making, their willing choice of homœopathy, and practise it in various quarters of the globe. There is such a thing as a homœopathic literature, periodical and otherwise, expounding the doctrine, exhibiting its methods, and challenging enquiry into its results:—there are official statistic documents to be appealed to in homœopathic hospitals:—there are

dispensaries, or similar establishments, in the chief towns both of Europe and America, bringing daily to the test of experience the efficacy or inefficacy of infinitesimal doses, and throwing open their doors to a friend or foe alike. If all this is too little to establish the truth of the system, is it not at least too much, far too much, to allow it to be taken for granted, that homœopathy is an obvious fallacy, or an absurdity."

The discoverer of homœopathy was Samuel Christian Frederick Hahnemann, the son of a porcelain draftsman, at Meisen, in Saxony. He was born the 10th of April, 1755. The son of an upright and energetic man, he was educated from his childhood with the utmost care, and taught from his earliest years to rely upon his own observations. When a boy, he was noted for his great industry, and unusual powers of acquiring knowledge. While at school, he was looked upon by the head master of the academy more as a companion than a pupil. While recovering from a severe illness, occasioned by close study, Hahnemann first resolved to study medicine; and at the age of twenty, rich far beyond his fellows in knowledge and learning, but with twenty crowns for all his outward wealth, he left his home for the first time to become a student of medicine. A laborious and thinking student, he became well acquainted with the history of medicine, and with its effects as a curative agency. But, dissatisfied with the uncertainty and danger attendant on it, he relinquished practice altogether; for, (to use his own words,) "the thought of being a destroyer of human life was so dreadful, that, soon after my marriage, I gave up treating any one, lest I should aggravate his disease, and occu-

pied myself entirely with chemistry and authorship." Chemistry yielded to him those productive fruits which medicine denied; and some of the preparations and tests he discovered are well known, (for example, the method for detecting arsenic,) and still retain his name. Hahnemann, the eager enquirer after a solid principle of healing, could not be satisfied with the confused heterogeneous state of the materia medica. The practice of medicine gradually appeared to him more and more unworthy of reliance. He therefore resolved, in that nobility of nature, which is the first fruit of honest thought united to true genius, to withdraw as much as possible from practice, till he might, happily, find a surer guiding star, and in that case resume it with a clear conscience. But his wife and six children wanted bread; he had, therefore, to make up the deficiency of medical fees by translations from French and English authors. "There must," said Hahnemann, in one of his moments of enthusiasm, "there must be a thorough change. Medicine must be reformed from head to foot. The quiet mildness of a John Huss is not enough; we must have the hot zeal of an immovable Martin Luther." We shall give here, in the words of one of Hahnemann's friends and followers, the manner of his discovery of Homœopathy. "While he was busy, in the year 1790, with a translation of the Materia Medica of Cullen, the celebrated English physician, he fell into such indignation at the confused attempts to explain the way in which cinchona suppressed ague, that he determined to cut the Gordian knot by making trial of the medicine on his own healthy body. No sooner thought than done. He

took, accordingly, at several times, strong doses of cinchona, such as the physicians of the day prescribed for the sick. How great was his astonishment, when he found himself suffering from a strong paroxysm of ague! Then flashed upon his mind the lucid thought which gave him the key to all specific treatment." "Does the cinchona bark," he asked himself, "which cures ague, produce the same? Is the so-called specific curing power based on this principle? Does the same faculty of producing artificial diseases, similar to those natural ones for which they are remedial, exist in all admitted specific medicines?" He then tried a series of active substances, singly, on himself, and found his experiment with cinchona confirmed by the corresponding results in each case. Every remedy of approved value brought on him, on trial, a disease similar to that for whose cure it was ordinarily given. He was also astonished at the great abundance of other symptoms undreamed of in the old materia medica, which these tried medicines presented to him. These hitherto unknown and peculiar effects of medicines, inspired him with the hope of being able to cure many other diseases, that had a characteristic similarity to the affections primarily produced. His theoretical presupposition was soon crowned with the most splendid success. He was now rapturously confident that he had discovered the desired simple principle of healing, namely, "cure the existing natural disease by a medicinal disease as similar to it as possible."

He continued with silent perseverance to prove medicines, and obtain curative results in conformity with his new views for six years before he

ventured to offer his discovery to the world. The following important truths also unfolded themselves to him:—

1st. We must distinguish the primary effects of a medical substance from the secondary. The first are the proper, pure powers of the medicine; the latter belong more to the reaction of the powers of life, which endeavour to ward off every foreign attack on its organism, and to oppose, if possible, by a contrary charge, the condition which it passively received in the beginning from the medicinal agent. The action of bark, for instance, is primarily tonic and astringent, but secondarily weakening and relaxing, as is sufficiently evident from the puffed faces and swollen bodies of those who are over dosed with this medicine. Digitalis, which at first diminishes the secretion of urine, produces an increase of the same as its secondary effect. After the primary cooling action of camphor, heat and perspiration immediately follow as secondary effects. It is the same thing with saltpetre, only in a slower manner. Purgatives which excite and produce liquid discharges from the bowels as their first effects, occasion constipation as their secondary effect, and so forth. So that it is only by careful trials, made with medicines on persons in health, that we can arrive at the true distinction between their primary and secondary effects. The want of this knowledge has hitherto caused the great confusion that exists in therapeutics and in the materia medica. No physician, follow what system he will, who wishes to administer medicines with certainty, can treat disease satisfactorily without this knowledge.

2nd. If the physician continue to practice on the

old principle of contraries, he must employ an antipathic* medicine, that is such a medicine as in its first effects produces a state contrary to the disease, for instance, the primary constipating effect of opium against diarrhœa. He must use this medicine in strong and in often-repeated doses, because he has not only to keep down the disease, but also the fever of vital reaction, which endeavours to counteract the first effect of the medicine. Should he, on the other hand, practice on the principle of similarity, he must employ a homœopathic medicine, that is, one which in its first effects creates an excitement in the organism as similar as possible to the disease itself. By such a medicine the powers of life will be stimulated to act, not only against the original disease, but also against the medicinal excitement similar to that disease, and to overcome both. It is well to observe that the new excitement or disturbance must not be identical, but only similar; for instance, it would be absurd to wish to cure the diseased state resulting from immoderate drinking, by giving more strong drink; but the homœopathic use of nux vomica, which in its primary effects produce symptoms resembling those that succeed to intoxication. If the second excitement were the same as that which first caused the disease, it would not only not extinguish it, but would add force to it, because there would be no essential difference between the two. But a similar or analogous excitement, proceeding from an essentially different cause, will endeavour to remove the original disease from the affected organ, and to produce, at the same time, the reaction of the powers of life, and thus effect, by this

* Of contrary properties, that which has contrary influence.

double attack, *in favourable cases, an immediate cure*, and in those that are less favourable, a modification and gradual recovery.

3rd. The homœopathic treatment requires far smaller doses than the antipathic. The reason of this is that the homœopathic medicine affects the diseased part with a new similar excitement, of which it is already in a high degree susceptible. The antipathic, on the contrary, must force upon it a contrary state. By a relatively small dose of homœopathic medicine, the organism is favourably altered, the powers of life excited only as much as is absolutely necessary, and in this way, without danger, a gentle cure is obtained. On the contrary, by a strong dose, such as the antipathic system of course requires, such an increase may be easily produced, that the reaction may either not take place at all, or only after unnecessary excitement, while the life of the patient, in important cases, might be seriously endangered. The relatively small doses to which Hahnemann was led, by experience, in the homœopathic treatment, was just as rational in this mode of healing, as relatively large ones are indispensable in the antipathic mode. Hahnemann proceeded gradually in reducing the doses, being at first very moderate in his views, and was far from descending to the thirtieth dilutions, to which his "potential" theory subsequently reduced him.

4th. But medicines, homœopathically used, must not only be given in relatively small doses, but must be given singly, without admixture with any other medicinal substance, because, if it were not so, the physician could not estimate its proper effects. As the substance, proved on persons in health, was in

its individual state, so, according to the results of this proving, must the choice of the remedy be made for a corresponding disease; and it must, therefore, be given to the patient in its individual unmixed form. Every combination with other medicines would convert it into a new substance, the effects of which could not be calculated beforehand, because the united substances do not retain the added properties of the individuals, but a new integral quality. It is only when two or more single substances are in chemical union, thus constituting a new remedy, and previously proved as such on the healthy body, that its use can be justified as homœopathic. This is the case, for instance, with cinnabar and hepar sulphuris, in Hahnemann's materia medica.

5th. As a necessary sequence to the above, follows the principle of diet to be observed during the homœopathic treatment, namely, to abstain from all kinds of food and drink which contain medical properties, and therefore not only distract the observant physician, but alter the true character of the disease, and injure, prevent, or entirely destroy the pure effects of the medicine. Homœopathy, therefore, rejects such disturbing dietetic articles, as cinnamon, pepper, cloves, ginger, saffron, and other similar substances, which are in fact medicines. Of course a moderate use of these spices is not forbidden to persons in health.

To make, as far as possible, the principle of homœopathy more plain and more easily comprehended by the general reader, we shall shortly give, in as popular a way as we can, the views we hold, as to how cures are effected by it.

Every tissue has its peculiar susceptibilities, its

peculiar associations, its peculiar sensations, and its peculiar symptoms, when diseased. For example, one may tear, cut, or burn the lateral ligaments of the ankle joint without causing pain; but should they be overstretched or slightly inflamed, the pain produced in them is intolerable, and of a specific kind. You may touch the retina with a cataract needle, however gently or however strongly, yet a faint spark merely, and no other sensation, is produced; but if a ray, however small, from the sun impinges upon the retina, although the impulse is not perceptible, yet a flood of light is the consequence. The bony tissue may be cut, sawn, or punched, and yet scarcely any pain will be felt; should it, however, be inflamed, then mere pressure upon the bone affected will cause the most excruciating torture. There are contained in these illustrations examples of the specific susceptibility of tissue, with, at the same time, a peculiarity of character in each of the series of symptoms called forth, distinctly shewing that the power to produce effects depends less upon bulk or force than upon fitness and susceptibility. In the same way as just described, medicines have their specific action, and produce their peculiar results in a certain tissue or tissues, the power, energy, and force of which depend more upon their fitness for each other than upon bulk. Again, every tissue and every organ have their peculiar symptoms and abnormal sensations when affected by disease; thus the mucous membrane of the stomach, when inflamed, causes a burning internal heat in that organ, violent burning and unquenchable thirst, accompanied by severe diarrhœa, &c. &c. When any part of a bony tissue is inflamed, there is a

gnawing, aching, and torturing sensation in it. And so we might go on illustrating our position by examples taken from every tissue in the animal frame. In the same way from the physiological action of medicinal substances, we can prove that they have a certain tissue, series of tissues, or organs to act upon, and that they cannot directly act beyond these. As, for example, aconite on the circulation of the blood, belladonna on the brain, arnica on the muscular tissue, arsenicum upon the mucous tissue, bryonia on the serous tissue, &c.

These medicinal substances must, from what we have already said, produce in the textures on which they primarily act, symptoms and sensations analagous to those which are the result of disease. From this it follows, that if a disease is to be cured scientifically, and the medicine given destined to produce a direct action, firstly, the symptoms in the part affected must be closely observed, and their character studied; and, secondly, that medicine must be selected for the purpose which produces symptoms in the diseased organ, when in health, analagous to those now existing in it. In the relation here noticed, we think that there is a sufficiently clear explanation, at least in the present state of our knowledge, of the apparent paradox contained in the general expression of the homœopathic law, "similia similibus curantur;" or in other words, substances producing analagous symptoms to those presented by a disease, cure that disease. Again, an irritant so small in quantity, or so weak in power, as not to be able perceptibly to affect an organ when in health, may, if that organ be inflamed, so increase this diseased action as to cause serious derangement or death of a part; just

as an unburned finger may be held much nearer to the fire, without producing any pain, than one which has been recently burned. For the same reason, and with as much justice, the homœopathist dares not give, as a curative remedy, the same quantity of medicine as he would give to produce its specification in the tissue when in health. Is there not, contained in this sentence, a sufficient reason why homœopathists use what are now commonly termed infinitesimal doses, in the treatment of disease? Our apology for not entering further into the consideration of these interesting subjects is, that we have already gone far beyond the limits we had prescribed ourselves. In conclusion, we would state, that those interested in the principles of the water cure and homœopathy, will find them entered upon at some length in the future numbers of the "*Water Cure and Hygienic Journal.*" For the time has now passed for making either homœopathy or hydropathy the panacea for all diseases. The homœopathist and the hydropathist must be united, before the healthy revolution needed in medicine can be effected. Medicine is now in its transition stage—the public mind is being disabused—silent doubt, or dead scepticism in the profession, is not sufficient; the people have begun to inquire for themselves—hence, the reasons why we purpose considering, in the "*Water Cure Journal,*" the principles of these two systems which at no distant date, we believe, will form one.

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