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Contributors

Inman, Thomas, 1820-1876.
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Publication/Creation

London : H.K. Lewis, 1872.

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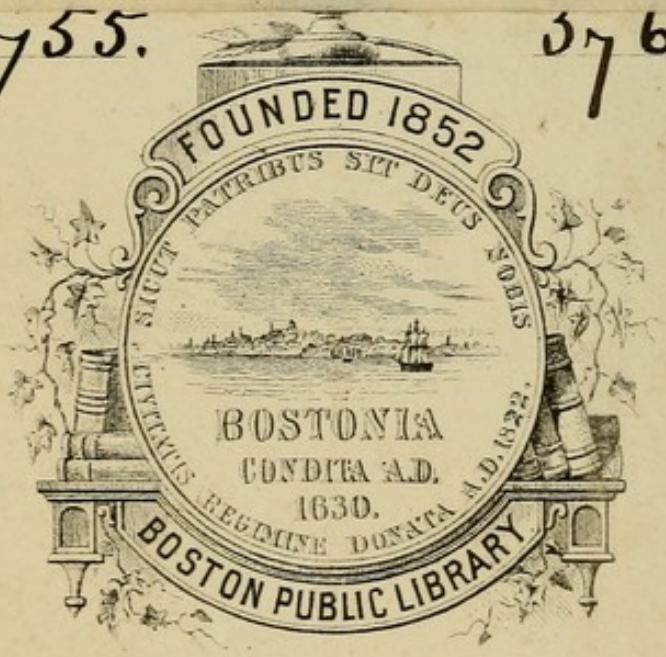

Received May 7. 1873.

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ON

THE RESTORATION OF HEALTH;

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BEING

ESSAYS ON THE PRINCIPLES UPON WHICH THE TREATMENT OF MANY DISEASES IS TO BE CONDUCTED.

By THOMAS INMAN, M.D. Lond.,

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"ON THE REAL NATURE OF INFLAMMATION,"
"ATHEROMA IN ARTERIES,"
"SPONTANEOUS COMBUSTION," "THE PRESERVATION OF HEALTH,"
"ANCIENT FAITHS EMBODIED IN ANCIENT NAMES,"
AND "ANCIENT PAGAN AND MODERN CHRISTIAN SYMBOLISM EXPOSED AND EXPLAINED."

SECOND EDITION.

LONDON:
H. K. LEWIS, 136, GOWER STREET, W.C.

MDCCCLXXII.

22.A.634

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LIVERPOOL:
PRINTED BY DAVID MARPLES,
LORD STREET.

BOSTON MED.
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PREFACE.

MANY of the following Essays originally appeared in the *Medical Mirror* in 1868 and 1869, and one or two at an earlier period in other professional periodicals. As far as possible, each brochure has been kept within the bounds that are appropriate to a single article in a medical monthly. When the subject has demanded a longer treatment, I have preferred to divide it, treating each head separately, rather than have the first and second parts separated by the interval of a month. Short dissertations, like brief sermons, are generally the most acceptable ones.

To effect brevity, I have endeavoured to restrain myself from the discussion of what may be called medical curiosities. As I hold the belief that the aim of the physician is to restore his patient to health, it seems to me to be quite unnecessary to burden my book with superfluous lore. I am indeed profoundly impressed with an idea which is expressed by Max Müller, in (pp. 7, 8) his *History of Ancient Sanskrit Literature*. London, 1859. "Knowledge, which has no object beyond itself, is, in most cases, but a pretext for vanity. It is easy, even for the most superficial scholar, to bring together a vast mass of information, bearing more

or less remotely on questions of no importance whatsoever. The test of a true scholar is, to be able to find out what is really important, to state with precision and clearness the results of long and tedious researches, and to suppress altogether lucubrations which, though they might display the laboriousness of the writer, would but encumber his subject with needless difficulty."

Still farther, my plan, both as a lecturer and a writer, has been influenced by a story which I heard when a boy. Rowland Hill is said—when he found his congregation very sleepy—to have broken off his didactic discourse, and to have uttered, in unusually loud tones, "Yesterday a man was hanged at Tyburn." Everybody was roused, but nothing more came of it. In like manner, I am in the habit of introducing, wherever it is practicable, a story, which may help to clench an important fact or deduction by a laugh. Democritus was not the less a philosopher because he was merry; nor are our lawyers, who sometimes enliven a dull cause by a joke, less worthy than those who are uniformly heavy.

Throughout the whole of the following Essays, the author has endeavoured, as he did in a preceding set of papers on the Preservation of Health, to write in such a manner that any reader would be able to understand him. Whenever he has had to choose between a technical and a common word, he has selected the latter, and if any exceptions can be found to this, they have arisen from inadvertence, or a desire to avoid tautology.

In many cases he has been obliged to use a professional word from the want of another expressing the same meaning.

For this endeavour to make Essays upon medical subjects "popular," or for writing them in language understood by the people, I have been taken to task by some reviewers. These have laid it down as a medical canon, that any physician who entertains notions, and adopts practices, different from those generally believed in and pursued by others in the same profession, is not acting fairly and honourably to his medical neighbours if he clothes his opinions in the vulgar tongue, or uses plain English. If we are to regard all doctors as members of a trade union, whether they choose to enrol themselves as such or not, we can understand the force of the objection; but if we desire to place medicine amongst the arts and sciences, we must refrain from speaking a jargon which the multitude cannot comprehend. In this matter, the earnest physician, like the divine, feels disposed to quote, as apposite, the words, "Every one that doeth evil hateth the light, neither cometh to the light lest his deeds should be reproved (or discovered); but he that doeth truth cometh to the light, that his deeds may be made manifest." (John iii. 20, 21).

We hold that it is quite as unpardonable, for doctors in medicine to keep their clients systematically in ignorance, as for a doctor of divinity to minister in an unknown tongue, and to oppose investigation by a

brother. At the present day there is a strong contest between two parties, one of which wishes to keep the mass ignorant, that it may be better ruled by the knowing ones; whilst the other demands for everybody full education, so that each pretension may be fairly tested. With the first party we have no sympathy; on the contrary, we feel great pleasure in opposing it. We gladly do everything to support the second.

When we are reproached for making the public a judge between rival creeds, whether in divinity or medicine, our rejoinder is, that it is the educated people, or an ignorant vulgar, that is invariably appealed to. What, let us ask, is the reason why "the Reformation" was a success in Germany and England, and a failure in Italy and Spain? Surely because in the former the disputants referred the matters in question to a comparatively thoughtful population, whilst in the latter the cause was decided by brute force and crass ignorance. Speak as we will, write as we will, scold as we will, it is the public which decides what doctors it will patronise. The people, by its verdict, raises or depresses any "pathy" which comes before it; and a verdict is always valuable according to the jurors' knowledge. To my fancy, a physician who dare not appeal to "society" does not really know his profession, or is ashamed of his practice. Let me for a moment ask the question, "Could the old ideas of hysteria, and some which are yet current amongst certain coteries, ever have stood their ground for a year,

if doctors had, in plain English, declared their belief that every young and pretty woman who complains of certain symptoms must be disbelieved?" Clearly not. So monstrous a proposition would have been scouted at once. Yet when this very assertion was put into technical language, it was a medical canon for centuries!

But we may envisage the question in another light. We cannot deny the right of any of our patients to ask, why we entertain a given opinion, or adopt a certain plan of treatment. Nay, though commonly a consultation between doctors is private, a relative of the invalid may insist on being present. Woe, then, to the physician whose medical mind has not been cultivated. Twice in my career have I had to undergo such an ordeal. In each a father called a consultation respecting his son's health; the men who had given opposite opinions were requested to meet, and discuss the matter before him; each had to state the grounds which he had for his opinion, and the parent decided to which of the lot his confidence should be given.

Let me invite the reader to consider how much good would be done to medicine, if a perfectly impartial lawyer should be called upon to decide which had the greater claim to rationality—homœopathy or allopathy; or whether either had a valid claim at all. Let him then reflect over the valuable aid which would be afforded to true religion, if any one accustomed to sift evidence, rigidly, was to sit as judge amongst a set of opposing divines, brought from every nation under

heaven, all talking intelligibly, both as regards their doctrines and practice. It is the systematic avoidance of appeals similar to those which we here sketch that has made both physic and divinity so muddled; the professors of both hate the light. They do, indeed, appear to address themselves to the masses, yet they appeal to the passions of the vulgar rather than to the judgment of the thoughtful, and talk in a manner which is conventional, rather than one which is thoroughly comprehensible. For example, what possible value can we set upon the verdict of an audience respecting the truth of M. D.'s theory of "inflammation," and of D. D.'s ideas of "baptismal regeneration," when there is not a single man present, including the opposing theorists, who really know what the words "inflammation" and "baptismal regeneration" mean? Force, however, each party to make themselves intelligible, from the beginning to the end of their arguments, and then the verdict of their audience would be worth having.

Entertaining these feelings, and being as ardent a foe to shams as Thomas Carlyle desires all men to be, I do not hesitate to say that I court the verdict of the public. And this I can not do unless my appeal is perspicuous, and the issues raised are clearly defined; if they are not so, I would fain hope that it is not so much a fault as a misfortune, in having to write on a subject which, like that of architecture and others, abounds in words that are purely technical.

12, Rodney Street, Liverpool,
January, 1870.

ADDENDUM TO SECOND EDITION.

THE Author is proud of having to notice a review of the first edition of this work, in the *British and Foreign Medical and Chirurgical Review* for October, 1870, in which his book is compared to Heberden's *Commentaries*—a work of which he has no personal knowledge—and wherein a hint is dropped that it would be interesting to know how his materials have been collected. As I have no reason for objecting to write such a bit of autobiography, and really believe that it may be useful to others, I may say that when I entered the profession as an apprentice, my master (my father's brother) told me what to study, and, still further, examined me frequently as to what I had read. Consequently, when I perused a volume, I felt bound to understand and remember it, so as to reproduce its main ideas; for, as another clever uncle taught me, whatever was worth doing, was worth doing well. When studying in London, I took notes of lectures—never in shorthand; every sentence of the Professor went through the cerebral alembic, and appeared in its spirit in my MS. Todd's *Student's Guide* was then my manual, and, influenced thereby, I made it a point of honour to answer every question at the weekly class examinations if it were based upon the

instruction given. I became for a time Dr. G. Budd's clinical clerk, at King's College Hospital, and began my duties by listening to a dissertation on the value of note books, illustrated by those which the Professor had made for himself. Dr. G. Johnson, the late Dr. Todd's clinical clerk, was then not only my colleague, but a valued friend; and as we lodged together, we had every evening, from midnight to one o'clock, a chat, not only over our cases, but over the opinions expressed by our teachers. This naturally developed habits of close attention and philosophic thought. The examination papers of the University of London induced me, long before I presented myself for examination, to endeavour so to imprint certain things upon my memory, that I could subsequently describe them as if they were under my eye. At last, whatever I looked at, with a desire to remember it, I could reproduce either with pen or pencil. This faculty made me careless about taking notes, except for particular purposes, *i. e.*, when numbers were involved, or when I was making necroscopic or microscopical observations. Whilst House Surgeon at the Liverpool Infirmary, I regularly sent myself to sleep by visiting the wards—mentally—and forming an idea of the probable termination of each case. I often think about my clients in like manner now. In my walks abroad, a similar process was, and still is, carried on. To me, a solitary promenade has ever been the analogue of the stomach's digestion. When in more regular practice than I have now, the same plan

has been followed, and during the time required to pass from the residence of one patient to another, the person last seen has occupied my attention. Every symptom has been in this manner observed and sifted. In the end, the case has been "pigeon-holed" in my head. As my experience grew, an intellectual hand used occasionally to pull from their cerebral niches case after case, until all were arranged in line for review. Then I could see in the mass, what I had failed to do in a solitary example. Just as a Forbes or Tyndall can deduce the rate of movement in a glacier better by a line of sticks than by one alone.

I am probably only repeating the experience of hundreds when I say, that habits of thought breed habits of observation, and *vice versâ*; still further, one may add, that when the brain is healthily active, and employed energetically in cogitation, it can, and does, notice occurences that pass before the eyes, but which may not be utilised for years afterwards.

To succeed satisfactorily in "observing," prejudice of all kinds must be laid aside. I once heard a clergyman—the most sensible one whom I have ever known—say, that he would not see something which is patent to everybody else, because such a fact was against his creed. After that, I ceased to respect his judgment.

Perhaps I may notice, in passing, that individuals in every profession who observe and think, are generally unpopular amongst their brethren, who neither do one nor the other.

Moreover, at a comparatively early period of my independent life, I was thrown much into the company of a shrewd Scotch doctor, Mr. Nisbet, of Egremont, rough and unpolished, yet for all that a diamond. One of his expressions was, that "in all doubtful cases he resolved himself into 'judge and jury,' *i.e.*, a court of justice. He examined the evidence for and against any particular theory in every doubtful case, and advocated both sides ere he gave his verdict." Hence I formed the habit of looking all round a question before answering it, and found the practice valuable, for it repeatedly required fresh testimony—that is to say, a closer observation than had yet been made—to decide which hypothesis was nearest to the truth. In every instance it was my endeavour to be guided by the laws of evidence; and I gladly take the opportunity of recording my gratitude to the authorities of the University of London, who made the first book of Bacon's *Novum Organum* a subject for examination. It is contempt for the laws of evidence which makes men bigots in medicine, theology, and political economy, even, we may add, sometimes in science. The technical word descriptive of the contempt referred to is "faith." The cognomen given to respect for evidence is "reason." The two must ever be antagonistic.

Having thus described the "raw material," it only remains for me to allude to the weaving of it into the perfect or imperfect article. The plan was this. About one or two months before any one Essay was required

for the printer, its subject was kept before my mind during my drives to and from my then country residence, *i. e.*, an hour daily. Memory was coaxed to give up her stores, the mental pigeon holes were examined, the brain gradually arranged what was collected; by continual musing, the fire kindled, and I sat down and wrote, *currente calamo*, the result in one day. If anything prevented me finishing an Essay within this time, the dissertation has, to my notion, been a literary failure. I never can compose or write, satisfactorily, brochures like the following, when out of health. From beginning to end of each article, I have been conscious of doing hard cerebral work, which has sometimes indeed eventuated in headache. So great has been the disinclination to read over what I have written, after it was finished, that my wife has had to overlook the MS. for me, and correct verbal errors, ere it went to the printers. Once I tried to write a chapter every week until I should have a store in advance; but the mental strain was too great to be borne, coming as it did in the midst of other literary work, of deeper interest to me, because it was, in my opinion, as new as it was important. If the Essays have any polish whatever, it has only been given in their passage through the press, when corrections are too costly to be much indulged in.

I thank the reviewer referred to for crediting me with a wish to consult my readers. It has been my aim to carry them along with me to the goal, without their having to bestow a thought upon the guide. As in the

Alps I should be disgusted with a leader who at every turn talked about the opinions of other mountaineers, so in literary regions I dislike to be stopped on my way by learned rigmarole. On the other hand, I am grateful when I am conducted by pleasant slopes to places which demand hard work. This having been my principle, it is pleasant to find that a reader has recognised the desire. In conclusion, let me say that I have endeavoured to show my appreciation of his sterling criticism by correcting the text wherever it has, in my opinion, been advisable to do so.

12, Rodney Street, Liverpool,
1872.

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In page 3, penultimate line, *for* "customer," *read* "merchant."
" 4, line 1, *for* "he," *read* "the trader."
" 7, " 1 of note, *for* "pedicide," *read* "fœticide."
" 81, " 3, last paragraph, *for* "depended," *read* "depends."
" 82, " 21, *for* "depresses," *read* "weakens."
" 89, " 21, *for* "during," *read* "between."
" 106, " 17, *for* "motion," *read* "emotion."
" 117, last line, *for* "ὄπνος," *read* "ὕπνος."
" 159, first line of heading, *for* "oftened," *read* "often."
" 189, penultimate line of heading, *for* "Stimulants not always good emetics," *read* "Stimulants not always good—Emetics."
" 238, twelve lines from bottom, *for* "pretest," *read* "protest."
" 240, four lines from bottom, *for* "are" *read* "is."
" 256, last line, *for* "patient," *read* "the patient."
" 266, line 3 of heading, *for* "eye," *read* "the eye."
" 269, " 9, *for* "came," *read* "come."
" 303, " 20, *after* "present," *add* "is to be avoided."
" 375, " 4 of heading, *for* "Curability and the reverse treatment," *read* "Curability and the reverse—Treatment."
" 390, " 4 of note, *for* "act," *read* "art."
" 418, " 21, *for* "The," *read* "That."
" 426, " 7, *for* "never," *read* "once"; line 21, *for* "and," *read* "but."
" 466, " 4 from bottom, *for* "intermittents," *read* "remittents."
" 479, " 11 from bottom, *for* "disease," *read* "complaint."
" 486, " 16, *for* "sciatic," *read* "sciatica."

THE RESTORATION OF HEALTH.

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ON THE RESTORATION OF HEALTH.

CHAPTER I.

PRELIMINARY.

Wealth without health—Monarchs, fat folks, and fees—Demand and supply in health matters—Traders and savages—Business and advertising—Cheapness and traffic—Sham goods—Coral in Africa—Testing traders in health—Oracular doctors and Delphic estimate of doctors—Example of a tradesman dictating to a doctor—Specimens of health traders—Humbug pays better than honesty—Quacks and their fortunes—Queer notions of the buyers of health—Decoys for fools—Medical traps—Books and puffing—Difficulty in choosing a doctor—Case in point—Author's plan about selecting a medical system—Ideal chats with doctors—Theories of rivals—Overwork and peccant humours—Causes of ill-health—Counteraction—Origin of disease—A cause guessed from its effects—Examples—Influences, transient or persistent—Fever poison—Scientific empiricism—Study of morbid physiology—Doctors and watchmakers—General principles in medicine—Remedies—Tzetze fly, its effects—Smallness of the virus—Fleas and sandflies—Small-pox crust—Great effects from trifling causes—Hydrophobia—Sypnilis—Mercury—Opium—Lead—Alcohol—Duration of influence of poisons—Of food—Influence of quantity.

Amongst the different remarks which the doctor hears in the course of his career, perhaps there is not one more striking than the plaintive wail, "What is wealth without health?"

Such an one was made to a friend of mine. The speaker was fabulously rich, his dwelling was situated in the midst of lovely scenery, it was surrounded by woods, whose variegated foliage transcended in beauty all the pictorial copies that were ever drawn from them; and by gardens, where lovely flowers charmed the eyes, and regaled the senses of all beholders. It would have been difficult to name a purchasable luxury which their owner did not possess, or could not buy; yet at the root of this tree of stately growth, there was a constant canker, in the form of indigestion. The owner of the wealth which we have described, had, when young, married for increase of riches, rather than for enjoyment; and he was not only a sufferer himself, but was surrounded with, and succeeded by scions who were not more robust than himself. If the gentleman in question could have purchased health, he would not have grudged paying largely for the luxury. Indeed, the gossiping annals of all lands are full of quaint stories, in which we are told that some pampered individual, fat as a lady's lapdog which has been fed upon chickens, and unable to enjoy any food except the daintiest of morsels, has been thrown into prison by a facetious monarch, and fed for some weeks upon bread and water; after a time hunger has made for him a *sauce piquante*, and the king has bidden his subject to join him in a substantial dinner in which salmis and entremets formed no part; and on seeing the captive enjoy his food once more, the royal host has claimed the fee promised to the physician.

Now, experience has shown us that whenever there is a demand for any particular commodity, there are always a number of persons who profess to supply it. But the article is not, in every case, what the purchaser is told of, and that

which he expects to find. The rifles supplied to the Red Indian, and the muskets which the African trader sells to the dusky potentates of the Gold Coast, are not the arms of precision that Whitworth turns out from his workshops, nor is the gunpowder sold to the King of Dahomey such as would pass for the proper article at Wimbledon. In every department of commerce, the buyer is very much at the mercy of the seller, and that trader generally succeeds the best, who, by his ingenuity, is able to hit the mean between the four extremes of goodness and badness, apparent dearness and manifest cheapness. The man who has the best article to dispose of, cannot induce customers to purchase it until they have been convinced of its superior quality, and they will rarely buy it so long as another chattel of greater pretension, though of inferior manufacture, can be bought for the same money. It is the business of one who has a commodity to sell, to extol its qualities and praise it to the utmost; it is the business of the purchaser to ascertain whether the material is what it professes to be. In ordinary life, this can be done pretty well. A person if he does not know the points about a horse, can buy the opinion of one who does; and thus avoid purchasing a "screw," when he wishes for a 'blood' charger. A lady can judge of the value of the satin or velvet which she desires to wear, and a trader can form a judgment upon the cotton, sugar, tea, or hides which he buys from the merchant. There are, however, instances in which no just estimation can be formed except by the result; and this cannot be known until after an article has been tried. The man who would gladly sell, to the African customer, some cheap sham, in place of real coral, does not venture to do so until he feels safe from

detection; and as he knows that every counterfeit has been readily detected by the black, even where the white man is powerless, he refuses to buy even the best imitation from an European producer, and at last even to try it.*

Just such a commodity is health. The man who wishes to buy it cannot tell whether that which is offered to him, as a means for procuring it, is salutary or prejudicial; he must take the vendor at his word, and believe his statements implicitly, until he finds that his confidence has been misplaced. Even then it is possible that he may be cajoled into the idea that the result was inevitable; and that the end has really been staved off by the means employed. The Delphic and other oracles knew and practised this art perfectly.† But although no one has any real means of estimating the commodity which doctors have to sell, it is a fact, that a great many individuals consider that they are as learned as the physician, and could treat themselves equally well, did they only know the name of the particular drug wanted, and the proper dose in which to use it. This knowledge is usually attained by reading medical books, hearing professional chat, "pumping" doctors and the like: as a consequence, when such a person consults a medical man for himself, or for his family, he prescribes to the doctor the course of treatment which he is to follow.

When a patient lays down to his adviser the course he is to pursue, the latter has before him two plans open — the one

* It is a curious and not yet understood fact that the emanation from the skin of the negro discharges the colouring matter from every known form of artificial coral. This may withstand every other known test, it may impose upon the trader and the white belle — but the sham is invariably detected by the black man.

† See *Herodotus*, B. 1, cc. 90 and 91.

honourable, the other lucrative; the first involves the loss of a profitable patient; the second, the fleecing of a great fool. Let me, for an example, tell the following story, all the actors in which are now dead or gone. A wealthy tradesman who complained of fulness of blood in the head, and a variety of other symptoms which he attributed to impending apoplexy, and who felt sure that the remedy against this was venesection; summoned a surgeon to bleed him. The leech being honest and straightforward, refused to open a vein in the patient, because he recognised that the man was suffering from fatty heart, and that form of degeneration in blood-vessels which is increased by every debilitating agency. Instead, therefore, of using the lancet, he recommended tonic medicine and a good diet, and was dismissed, his fee being refused. The patient then summoned a physician who made it his aim in life to fill his pockets to the utmost, and whose success in that line was great. To him the case was told, and the treatment he was to pursue was laid down. This doctor, more wary than the other, assured the tradesman that his deductions were quite right; that they spoke well for his medical acumen; that if he persevered the physician's business would be gone, &c., but though it was true that the case required bleeding, yet it was one for the use of leeches rather than the lancet, and to this end half-a-dozen of the former were ordered, the aperient mixture which the patient wanted was prescribed, and a low diet was recommended. The result anticipated by the surgeon followed, and the patient had a paralytic stroke. Yet even then the physician affirmed to the sufferer that the result would have been prevented had he been called in earlier; and that as it was, the treatment had been successful in mitigating its severity, and

obviating death by apoplexy. It so happened that the two doctors referred to, were close and intimate friends, and the first very naturally remonstrated with the second upon his method of practice, but instead of hearing any apology, he received a lecture to this effect: "My dear fellow, if you want to get on as a medical practitioner, you must not fly in the face of the old fools who consult you. I knew as well as you did that bleeding was bad for the man, but if I had not taken him in hand, he would have gone to some one else who would, and I did not see any reason why I should not get as many fees out of him as I could; so I did all for the best, for myself in the first place and for him in the second; he was content to be bled by leeches instead of by the lancet, and thus he was not injured half as much as he would have been, had he gone elsewhere. You did not even get one fee, whilst I have pocketed my ten guineas." The first man retained his honesty and made but little money, the second continued to utilize his knowledge of the world, attained an enormous practice, and had a princely income.*

* The author takes the opportunity of animadverting upon the rapacity of advertising and other quacks, and the large fortunes which some of them make. The fame of Solomon, of Balm of Gilead notoriety, and that of Holloway of Ointment, and Morrison of Pill celebrity, was founded upon the action of thousands who applied for cures of what were generally quite imaginary ills. I have known young men who have consulted quacks because they feared that they had a true gonorrhœa, or some form of venereal disease, who have been then terrified into thinking that the complaint was fearfully real, and then fleeced out of tens and even hundreds of pounds. The men who take such advantage of the credulity and weakness of mankind in general, are not by any means either illiterate or uneducated in medical and surgical matters. There is one diploma-holding surgeon, whom I have heard of, who has sailed to wealth on the foul ship called Stricture of the Rectum. Others, if we believe Dr. Lee, and I for one have no reason to doubt his word, induce us to believe that many an M.D. has conquered fortune with the *speculum vaginæ*. A few, and those not in our own

An anecdote like this, which is strictly true, for I knew, personally, all the parties concerned, and heard the account from the three, may seem to many to be overdrawn, and the character of the tradesman may appear to be of a very unusual type; it is, however, far more common than the generality would suppose. Every one who selects a hydropathic establishment, as being best suited to the cure of his complaints, acts precisely in the same way as the individual above described; so also does a man who goes to any one who is notorious for following any particular form of practice. If a patient goes to a homœopathist, it is because he considers that the plan of Hahnemann is the one best suited to his own case; if he goes to a mesmerist, or one who "professes the power of the electric cure," he believes that such a treatment is more appropriate for him than any other. Or he goes from one doctor to another from the simple hope that some one will, at last, do him good.

When observing practitioners find that there is a class of individuals who wander about in search of health, it is very natural that some amongst them should invent a plan by which they may decoy such clients. A short experience suffices to show that each fool, whether young or old, can be bamboozled to a considerable extent before he cuts up rough; and, consequently, that every fish which comes to the net will have a tolerable lump of coin in its mouth.

country, have gained a store of dollars by practising pedicide. Such things are very deplorable, and not the less so because education seems to be powerless to prevent them. The Americans, whose general knowledge is far above the average, are quite as much the victims of quackery as the most illiterate Europeans; and in no country that I have read of, is the systematic recourse to abortion amongst women, whether married or single, so common as it is in the United States.

To manage any one of these medical traps, all that is necessary is to determine upon the bait, then to write a book on the subject, and advertise it in every paper enjoying a large Sunday circulation. Of course, the volume abounds in cures, which any one can manufacture to the extent he pleases; and it is garnished with a few hard words that the readers cannot understand, but nevertheless believe that they are proofs of deep learning and infinite research, and many plausible arguments which may be built upon fact or fiction, according to the writer's taste. By dint of puffing the author becomes widely known, and, like the spider's web, his consulting-room is very soon full of flies.

But the reader might very fairly complain if we merely presented to his notice one side of the picture, and he may ask what means we propose by which an individual who is unwell, can be enabled to select the best doctor, or, in other words, how a man may find out where to buy the best advice. A patient coming to a town wherein he knows no one, may naturally ask how he is to find out, amongst all the medical men therein, the one to whom to entrust himself. He cannot discover a man's ability and honesty of purpose by his name, by his face, by his house, by his door-plate, or even by the notice of him in the *Medical Directory*. To such an one, I would reply that there are no means by which the desired end may be attained with anything like certainty. On one occasion, I was requested to select, for a particular friend of mine, a doctor for his family, in a seaside place to which his wife and children were repairing; and with much labour, and reference to *Churchill's Medical Directory*, I selected a man whom I thought would suit. He turned out to be a hydropathist, and by his plan, he not only undid in a week the result of

months of care, but he laid the foundation of an illness which lasted for nearly a year. On another occasion, I was myself absent from home during nearly nine months on a professional continental tour. Whilst I was travelling, my family went to reside at a distance, and I was requested to say whom they should employ in case of illness. Now I knew nearly every doctor in the place, and that all were members of the orthodox old school, and with my estimate of their style of drugging, I naturally distrusted every one of them. I therefore gave my wife certain simple directions which would suffice for ordinary matters, and told her that if she must give physic, to buy a homœopathic medicine chest, and administer globules from the first bottle in one corner, and go round and across the box until the child was dead or better; for on such a plan I knew that, whatever its complaint might be, the patient would have a better chance of restoration by not being persecuted by drugs than by using active medicines.

But the reader will next inquire if there be not some means of selecting the best system of medication if we cannot select the best man. Is there any test by which we can decide whether we should choose a hydropathist, a homœopathist, an allopathist, or a rationalist? That such an expedient exists we doubt not, but it requires considerable knowledge and acumen to discover it, and to make good use of it when it has been attained. Let us examine the subject thus; an individual is out of health and wishes to get well; being undecided what to do, he goes to consult some half-dozen doctors in succession; each listens to the symptoms, asks a few questions, and prescribes a remedy which he assures the patient will counteract the disease; the client then replies,

but how will the remedy act; he is told by one, that there are some foul humours existing in the body which a course of waters-drinking will eliminate; that the liver is too full of blood, or bile, and that the physic ordered will regulate the quantity of both; that the medicine "covers" the symptoms produced by the disease, or that, if the individual were to take the globules or drops if well, they would produce the same sensations, &c., of which he complains, therefore it is certain to cure, because it is a "specific;" or the applicant may be told that the drugs which are recommended for him will remove the symptoms complained of, because if they were taken in health they would produce a condition directly opposed to that which is now present. At last we will suppose the rationalist is applied to, and he takes the same care as the others have done in ascertaining the symptoms with which he has to deal; his dictum then perhaps may be simply this, "You are overworked, you want a holiday; take one." At the end of all this, the patient may go through a course of reasoning like this: "I know that the last doctor is right, but I can't follow his advice now, for I have to prepare for this meeting, to conduct that case, to attend to important financial duties, and to manage a crotchetty partner; granting that I am overworked, and I am fully conscious that my brain work has been too heavy for me, perhaps it did not occur to the rationalist that such a cause produces peccant humours in the blood; the first man did recognise their presence, though he said nothing of their cause. Now, if I can get rid of the effects of overwork by drinking *aqua pompaginis*, the remedy will be easy to adopt, and it will suit me, inasmuch as I can then stick to my business." So the water plan is tried. Or it may be that

the patient is a "jolly dog," and cannot endure water without brandy in it, so he chooses a doctor who, while he physics him to get the liver right, will support his strength with tonics and generous wine. In such case the selection of a plan of treatment depends on some other conditions than the absolute value of the advice given.

Let us, however, enter a little more philosophically into the inquiry, what restoration of health involves. It is clear that any disorder must have resulted from some principle, element, leaven, or accident, which has disturbed the operations of the normal human body. So long as the cause is in action, so long will the disturbance follow, unless its effects are counteracted,* or the body becomes accustomed to its presence. The first point then in effecting the restoration of health is the ascertainment of the origin of disease. In some instances this is readily discovered, in others it eludes our closest inquiries; whenever the last is the case, we can only judge of the nature of the agent by its effects. Thus, for example, no one can isolate the physical materials, or discover the absolute conditions upon which typhus, smallpox, erysipelas, and puerperal peritonitis depend, nor can we isolate the *materies morbi* of gout or acute rheumatism, but

* In exemplification of the text we may call the readers' attention to the fact that, smokers of tobacco who are at first nauseated thereby, are ultimately able to tolerate and enjoy the fragrant weed. A person much accustomed to opium may, after long years, take with impunity a dose which would kill another wholly unused to the poison. In like manner, an individual who is partially drunk by imbibing too much wine upon an empty stomach, is almost sobered by taking a solid meal. A strong dose of quinine may cut short a course of symptoms originated by the typhoid poison, and a strong infusion of green tea or of coffee will enable a person to tolerate an otherwise deadly dose of morphia. The principles of counteraction ought to be studied as closely by the physician as by the military engineer.

we believe in the existence of a cause from the uniformity in the symptoms, which we regard as effects produced by an unknown entity. A series of close observations have enabled us to determine, to a great extent, the agents which are in operation in certain diseases. If a patient has tic, the doctor examines the teeth and the residence of the patient, and can frequently trace the complaint to a bad tooth or to climate. Yet there are various symptoms which we presume to arise from some source, but which we can by no means explain : we cannot, for example, discover even approximately the germ of chlorosis, nor of cancer, nor what determines the formation of an ulcer in the stomach, or the occurrence of large quantities of sugar in the urine, as in *diabetes mellitus*.

Granting that disease implies the presence of a cause which disturbs, it becomes the province of the physician to counteract it if he can. To do this, he endeavours to ascertain if the agent is still in operation. For example, bronchitis may be produced by some transient accident, or by the constant inhalation of some irritant, and a sore may be the result of an injury long past, or of something habitually present. In some instances, the distinction between an antecedent and a still existing influence can readily be made out; in others, there is greater difficulty. For example, when a person is stricken with fever, the doctor does not feel sure whether the patient has been hit once for all, or is still under the operation of the mysterious agency. An individual with small-pox may be compared to a prepared photographic paper, which becomes blackened by a momentary exposure to the sun as surely as if the exposure were prolonged.

When, from the nature of things, a doctor must be igno-

rant of certain matters, it behoves him to be very careful, lest in his zeal to effect good he should really do mischief. The life of the physician, therefore, becomes, to a great extent, one of close observation, mingled with scientific empiricism. He endeavours to ascertain the limits which bound his power; ere he can determine these, he has to practise a new form of study, viz., morbid physiology. He learned when a student all the phenomena of ordinary life and health; he is familiar with every wheel in the animal clock; but he is almost ignorant of what really happens when anything goes wrong. A timepiece's glass face may crack without a blow upon it, the golden cover become pearly white and brittle, the hands move with irregular speed, or the machinery stop in certain positions, or it may go unusually fast, or else stop altogether. The reason for all these things the watchmaker can recognise and rectify, for he can examine every part with his eye. No so the doctor, he can't see the diseased brain, heart, lungs, or liver that he is called upon to treat; he must then be content therefore with such knowledge as he can obtain. Yet in spite of all that he can do, he is often obliged to confess himself beaten, and driven upon what are designated "general principles."

These "principles" involve the use of "remedies;" the selection of any particular one under given circumstances, and the quantity which should be employed of any particular substance. I do not know anything in the whole range of medicine that requires deeper study than is required for the solution of these points. Let us, for example, consider the effects produced by certain insects: the "tzetze" fly punctures the skin of the ox, and of some few other quadrupeds, and implants a venom, whose quantity compared

with the bulk of the bulk of the animal is infinitesimal, and whose immediate effects are unrecognised, yet, in the course of a short time the creature droops, and at the end of a few months infallibly dies, yet the same fly does no injury to the horse. A gnat settles upon any portion of our frame, and introduces some poison which, perfectly harmless at first, becomes ultimately the cause of considerable swelling, the same may be said of the flea, and other creatures more minute—*e. g.*, the sand fly. Again, the crust of a small-pox pustule may be placed in the nostril of an unprotected man, and give rise to small-pox, without losing an appreciable particle of its weight; and a doctor can convey from one person to another the poison of puerperal fever without being himself conscious of its existence. There can, therefore, be no doubt whatever, that great effects will arise from very minute and transient causes.

Still farther, when we remember that a considerable interval of time, very rarely less than six weeks, and as some assert, greater than six months, invariably elapses between the introduction of the saliva of a rabid dog into the blood, and the development of the disease known as hydrophobia, we are bound to acknowledge that the effect of something introduced into the system may be recognised long after its entrance. Syphilis is a notable example of this, for the infection may be introduced into a parent and from him course through succeeding generations.

Not only are animal poisons thus potent in small quantities, but certain mineral poisons are of equal power. Mercury will, in some few cases, act quite as severely as syphilis in others, and quinine has been known to produce permanent deafness. Yet, as a rule, every substance which is used in medicine produces its definite effect in a very short period of

time, after which it ceases to have influence. For example, a dose of opium if it operates to-day will rarely operate to-morrow, nor will a blister applied to-morrow postpone its effects for a twelvemonth. If we could always generalise thus, we might be able to promote the art of medicine to the position of a true science; we are, however, unable to do so, because we find that a drug will do mischief long after its introduction into the system and its succeeding expulsion: for example, a dose of calomel may sometimes, though very rarely, bring about caries of the bones of the lower jaw, long after the drug has been eliminated; and lead will produce wrist drop, although we are unable to demonstrate its actual presence in the muscles of the fore arm. Still, farther, we can point to cases in which a small dose of alcohol has so completely altered the state of the constitution produced by marsh malaria, that ague and tic-doloreux have been suspended indefinitely.

Granting, then, that animal and vegetable substances can produce their characteristic effects even when given in very small quantities, effects which may last through very considerable periods of time, we nevertheless aver that, as a general rule, chemical potencies operate on the human body in direct proportion to the quantity introduced, and that the results depend upon the manner in which their inorganic potentiality modifies the vital force already existent. The absolute extent to which the vital phenomena can be influenced by chemical or foreign agency is only ascertained by trial, inasmuch as it varies in individuals. Commonly, that is to say in ninety-nine cases in a hundred, we may say that medicines act much in the same time, and their effects endure as long as that of a good breakfast, dinner, or supper. If the dose be large, the effect is commensurate, whether it be

of bhang, beef, beer, or brimstone. We no more expect to find the influence of a dose of medicine which has been taken on New Year's day, at the feast of St. Valentine, than we should expect to find a person drunk on May-day from a bottle of champagne swallowed on the twenty-fifth of March. In like manner, we conclude that the effects of a medicinal agent are in proportion to its quantity. The most nutritious soup or meat will not preserve life unless enough be taken, nor will medicaments operate unless in sufficient quantity. But, inasmuch as too much beef may operate prejudically, and too much water will drown an individual, so too much medicine may be prejudicial, nay, even poisonous.

The judgment, then, of the physician is shown as much in the dose of the medicament selected, as in the selection itself. His aim, as I have elsewhere shown, at length,* is to gain the good effects of a drug without the bad ones; nor is the end unworthy of the aim, for it exercises the highest faculties of the mind. One who entertains such a belief can under no circumstances become a routine practitioner, nor can he even become a strong partisan. With varying experiences himself, hs is prepared to receive curious statements from others; and his own *bona fides* induces him to accredit others with the same.

We have now cleared the way so far as to enable us to speak of the principles which should guide the physician in all those doubtful cases in which he has to treat symptoms, without any definite or certain notion as to the cause producing them, or when, although conscious of the cause, he is unable to neutralise, counteract, or nullify it. But this we must postpone to another chapter.

* *Foundation for a New Theory and Practice of Medicine.* Churchill, London, 1861.

CHAPTER II.

ON THE PRINCIPLES WHICH SHOULD INFLUENCE THE DOCTOR IN THE SELECTION OF REMEDIES.

Principles upon which physicians act—Cases of doubtful nature, but certain danger—Plans of medication—Hydropathy—Homœopathy—Allopathy—Each described—Hydropathy, its good and bad points—Its professors not eclectic—The system 'pays'—Does not succeed in towns—The kernel—What water can do—Homœopathy, its original tenets—Mystification, power increased by being made less—Shaking medicine said to make it stronger—Specifics—Covering the symptoms—Inattention to diagnosis—Success at first—Decadence—Change of tactics—Allopathy described—Question whether opposing drugs to disease may not be harmful—Pests and disease compared—Temporising—Counteraction—Injudiciousness of opposing disease with poison—Plan of proceeding in patent complaints and in those whose cause is unknown—Emetics, blisters, venesection, their real value referred to—Allopathic doctors eclectic—Homœopathy as described by itself—In a transition state—Hahnemann partially repudiated—Few standard works exist by which thoughtful "Homs" *v.* "Allos" can be tested—Sir Thomas Watson's lectures not a standard for Allos—Puerilities of 'hom' 'provings.'

When a physician finds himself called upon to counteract an opponent whom he cannot see, and whose operations are not familiar to him, it requires very shrewd consideration on his part whether it is judicious to show fight at all, or whether it is for the benefit of his patient that he should

remain simply watchful. The calculation of medical chances requires a high order of intellect; the faculty of observation, with opportunity for exercising it; and a wholly unbiassed mind.

To illustrate my meaning, let me record, briefly, a case which presented itself for admission into the Liverpool Royal Infirmary. Amongst many patients one arrested my attention; but though profoundly impressed with the severity of the disease under which he laboured, I addressed him in the same tone of voice as I did the others; hoping to elicit some casual remark which would help me to form a distinct diagnosis. To my surprise, the man who had walked up to the Hospital just as the others did, and then into the room in which I saw him, was unable to say more than that he was "very ill." The only symptom which I could elicit was, that the man had a daily "shake," and had suffered from this for some weeks. A close examination detected nothing farther, and I took the poor fellow into the house, saying to the junior house-surgeon that he was very, very ill; that I could not discover his ailment; that I would not allow him to take strong medicine of any kind; and that he must be closely watched. Quinine in moderate doses was the drug prescribed. On my next visit, and at the one following, I sought in vain for some indication of the nature of the case, yet found none. But on no occasion did I cease to recognise the extreme gravity of the disease. The patient died suddenly; and a *post-mortem* examination was permitted. This revealed the fact that the man had, at some time prior to his admission, an abscess in the 'mediastinum,' at the base of the heart. The cavity left was a large one, and it was clear that the 'matter' which it had contained had

found its way through a large opening into the right ventricle of the heart; consequently, the man was suffering from a constant commingling of 'pus' and blood.* It is clear that no medication could have cured this disease.

On another occasion, I saw an old patient, a relative of my own, who looked so exceedingly ill, that I could not help remarking the fact, and making myself disagreeable by the importunity with which I asked, in the presence of another, about the state of his health. My uncle, æt. 45, repudiated entirely any sensation of illness, and I left him with a heavy feeling of undefined anxiety. I felt sure that something very serious was impending, but I could neither form a guess what it was, nor how the danger could be met and warded off.† In less than half an hour, the man was struck down

* To make this very extraordinary case complete, I may say that the patient never exhibited any sign of 'pyæmia,' nor had a symptom of disease of any organ of the body. The daily 'rigor' was slight, and not ague-like. The functions were carried on regularly. The death was sudden; apparently from syncope. From what I could gather from his friends, his own account, and the appearance of the abscess, I judged the duration of the illness to have been about six weeks.

† Since the text was written, I have met with one other such case, to which I was summoned, in consequence of relatives recognising a sudden change of features, or rather in the expression of the face. Again I was able to recognise danger; but the patient was quite unconscious of illness, and ridiculed her friends' anxiety. I was once close beside a young man, who, whilst skating, went through the ice where the water was very deep. He did not utter a sound, but there was upon his face the marks of intense fear, suddenly replaced by desperate resolution to save himself. The frightened look which he bore always comes before my mind whenever I attempt to describe the countenance of the individuals referred to. An artist, if he had the skill to depict human beings, like Landseer paints dogs, might portray the expression to which I refer. My pen is not fitted to the task. Within an hour after I saw her, the lady, whose face had so alarmed her father and sisters, had a paralytic seizure, apparently from cerebral hæmorrhage.

by an apoplectic stroke, which proved fatal. In cases such as these, the doctor is clearly powerless. In like manner the physician feels himself impotent in the presence of an internal cancer, of a severe attack of consumption, a serious fit of the gout, an infliction of asthma, typhus, in which the pulse will persist in beating 140 times in a minute, or some organic diseases of the heart. The most experienced doctor feels very humble when called upon to treat plague, cholera, malignant fever, boil, or small-pox, dysentery, and the like. Yet, though he may often feel helpless, he nevertheless hopes that he may be able to do some good. To effect this, it is advisable that he shall form, act upon, and yet closely scrutinise some principle of action.

Now there are various plans which have been adopted for the cure of disease, and many, if not all of them, are very plausible in their pretensions. As it would be all but impossible, in the course of a short chapter, to describe them all, we will select three of those which are most conspicuous at the present time—Hydropathy, Homœopathy, and Allopathy. The attempt to cure disease of all kinds by the use of water, internally and externally, is founded upon the belief that, under certain circumstances, there is some material formed in the human body, which, when once produced, is retained in an especial manner in one organ or another; and that, when this is so invaded, the functions of the part affected are disturbed, and the tainted viscus acts excessively, irregularly, or not at all. It is still farther believed that this material is soluble in the blood; and as the imbibition of large quantities of water increases, temporarily, the volume of that fluid, so water becomes practically a solvent for the hypothetical *materies morbi*, and thus cleanses the body,

much in the same way as Hercules cleared the stables of Augeas by turning a river into them.

The hydropathic system, however, does not stop here. Its upholders assert that the morbid matter depends to a great extent upon certain errors in diet, or a superabundant use of flesh meat, or of alcohol, salt, tea, coffee, vinegar, &c., &c., or upon a redundancy in the body of materials which ought to be evacuated by the skin or other organs. Consequently, a regulated diet attends the use of water, and baths, in one form or another, are said to be necessary to keep open the pores of the skin.*

In favour of this plan much may be said. Many physicians, from Hippocrates to the present day, have believed in "crudities," "peccant humours," or "poisons in the blood." We all acknowledge that too much alcohol will give rise to "delirium tremens" in the adult, and "purpura hæmorrhagica" in the child; that too exclusive an animal diet will bring on convulsions; that gout is very often the result of indulgence in eating and drinking; and that the sot and the glutton are both alike the subjects of indigestion. Many

* If the public, or even the profession, were closer observers or better physiologists than they are, there would not be so much nonsense talked about the necessity for keeping the pores of the skin open, and the value of water for effecting this object. The fact is, that the skin is so formed that its pores cannot be closed effectually; and even if they are choked, as a few sometimes are, by an accumulation of the secretion which they form, this produces no ill effects. Who, let us ask, ever thinks of washing cows, cats, pigs, elephants, rhinoceroses; or ever heard of their being ill from rolling in mud and filth? The Red Indian smeared over with his 'war paint,' and the savage covered with 'tattoo,' are as open-pored as a bathing Britisher. Those, again, who live in hot climates, if they use ablution, almost always follow this by the application of ointments or oil to the skin. Indeed, the general notion about closing the pores by dirt is on a par with that which would assert that the Artesian well at Grenelle, Paris, could be stopped from flowing by a cork over the orifice.

of us have realised, practically, that a headache follows a jollification ; and that inordinate use of tobacco brings about palpitation of the heart, and excessive nervousness. Knowing all this, we can readily understand, that a plan which is based upon the removal of the superfluity, and preventing the formation of any more, is a sensible one ; provided that in the process of expulsion, &c., it does not effect, by the means employed, a greater mischief than the "peccant matter" itself.

If this proviso were always duly attended to, I doubt whether a really scientific hydropathy would not become the most popular, and the most successful, plan of therapeutics. By neglecting the proviso, the system has fallen into disrepute. But there is reason for the belief—I would say, indeed, for the hope—that it will be purged from its faults, and assume its proper place. The faults to which we refer are, however, almost inherent to hydropathy, so long as it is practised by exclusive professors. These, by attributing every ailment which comes under their notice to some cause removable by water, and, by their persistence in the remedy when it has been manifestly prejudicial, weaken * the body

* Although I have called, and shall more than once call, attention to the influence of cold water and low diet combined, I wish to notice here how completely the two acting together prevent the beneficial results of an enlightened hydropathy being apparent. The normal heat of our body is 96°—98°; this standard is kept up by food; privation and fasting reduce the standard materially. The prostrating influence of a glacial temperature upon animal and vegetable life has long been recognised. Speaking generally, it paralyses the nervous system. It is then manifestly prejudicial to use a very low temperature as a cure for symptoms produced by the brain being overworked. But of all the means for extracting heat from the body, not one is more efficacious than a stream of cold water. Let us for a moment see it in its operation. A man, already sufficiently ill to require advice, takes off in a cool room, say 54°, the clothes which he has warmed.

and constitution, by too frequent use of cold fluid, and by impoverishing the blood by a low diet. We call these faults inherent to the system, so long as there are professed hydropathists; because such make their living, perchance their fortunes, by the duration of time for which they can retain patients in their establishments. Suppose, for example, an overworked artist, writer, merchant, lawyer, or other professional man goes in search of health to any "water-cure." Such an one considers that it is the fluid which does the good, and consequently he expects to have to take it in a variety of forms, and for a certain period. As this idea "pays," the doctor naturally fosters it. To tell such a patient that he is in reality benefited mainly by his rest from toil, by pure air, and plenty of it, would be equivalent to saying, "My establishment is really no better than any pleasant country resort, and the money you expend for fees, and the time you give to baths and douches, is all thrown away." To make a speech like this would be like writing oneself down as an honest ass. Yet, that such a dictum would be true, none can doubt, who are aware of the fact, that hydropathy has never yet been successful in any large town in which it has been tried, and who hear the unbiassed opinions of the professors themselves. A personal

He is then douched with water at about 50°—56° for a certain time, he is next dried, then dresses himself in the attire which he doffed quite long enough ago for it to get cold, and then he must warm himself by exercise, which is in itself an exhausting process, and the bathing is generally renewed often in the day. Now for a robust man to stand this without injury, he ought to eat largely, to keep up the natural standard of animal heat; yet this necessary is prohibited to the victims of current hydropathy, and an insufficient diet is generally made a part of the treatment. I have never met with a better example of what I am referring to than in an autobiographic chapter in *London Society* for June 1867, which is, I doubt not, strictly true to life.

friend of my own, but now dead, of whose sagacity I entertained a high opinion, became on one occasion a prey to certain symptoms, which were very probably the precursors of the insanity from which he subsequently suffered. Failing to obtain relief from his own medicines, or those prescribed by his friends, he had recourse to a medical acquaintance, who ruled at a celebrated water-cure establishment. To him he told his case, and asked, "Can you do me any good?" As the two had been cronies in youth, and still felt genially towards each other, the reply was as hearty as the application, and ran thus:—"If you were not a doctor, and a personal friend, I should promise you a cure; just as I do to everybody else who applies to me; for it is my business to make money by my establishment, and by my fees; but it is not my business to take *your* money, so I'll tell you plainly that hydropathy won't do you any good. What you want is a rest from work, frequent change of scene, pleasant companionship, and a reasonably good diet."

These observations are sufficient to show that it is not the value of water which is decried by the doctors, but that it is the present system which raises the medical ire, just as the abuse of a good thing often leads individuals to deny that there is any value in it whatsoever. If we wish to put an end to the faultiness in the so-called water cure, it is clear that we shall not do so by instructing the professors, who have nothing besides it by which they can gain a livelihood. So long as there is a large public who believe in hydropathy, during that period will it "pay" doctors to become professors of the art. When the public learn the real value of the water cure, physicians will find that exclusiveness will not fill their pocket. We doubt if this will occur until the Millennium.

It is the less likely to happen, because hydropathy, "like the toad, ugly and venomous, bears yet a precious jewel in its head." Personally, I have a high respect for water in its proper place; I have a strong faith in it as a preventitive of gout; I believe that hot water is one of the best aids we have in the relief of coryza, catarrh, croup, bronchitis, colic, spasm, inflammation, and many other ailments. I hold it to be an essential part of the education of every practical physician, to learn thoroughly all the uses to which ice, cold and hot water, and steam, can be put advantageously, and how best to apply either the one or the other. Water judiciously used will regulate the bowels, relieve strangury, and go very far to the cure of gonorrhœa. Water alone will suffice for the safe guidance of a patient through ordinary fever, small-pox, measles, scarlatina, and the like. Even in pregnancy, if a woman will but drink regularly a tumblerful of water every morning, her vomiting will be cured in time. I have known patients in acute rheumatism get well, whose only medicinal treatment was a draught from the pump whenever they pleased; and I am quite sure that I could also "cure" a vast number of other complaints in a similar fashion, provided only that my patients would attend to the other directions which I should give them. Being myself an enemy to every form of humbug, I have never yet prescribed coloured water, or *aqua fontis*, as a drug, but I know those who do so. Dr. Laycock habitually orders, in the Edinburgh Royal Infirmary, one, or the other, to his patients who are suffering from sleeplessness in delirium tremens, and with great success. The artifice is quite as laudable as the use of bread pills, and my only objection to it is, the desire which I feel that people should be taught the real value of

medicine, and so depend upon it less. If a patient who consults me insists upon taking some drug, when I think that any medicament would be prejudicial, I simply prefer his room to his company, and consign him to another *medico*. But the plan, however pleasant it may be to my feelings, has a very decidedly prejudicial effect upon the pocket, and I do not recommend its indiscriminate adoption, until the period has arrived when doctors are paid for preventing people from being ill.

The second system which we notice is called Homœopathy; and as far as I can gather from the ever-changing practice of those of its professors who write upon it, the plan consists in giving, in small doses, medicines which "cover the symptoms" * of any disease. The grounds on which the system is based are, the assertion that two distinct diseases cannot co-exist in the same body; and that if certain materials, when taken into the body, modify the phenomena of life in a definite manner; the symptoms so produced may be said to be produced by a drug disorder. That in real disease certain symptoms are to be observed, which arise from the influence of a something upon the organs of the body; if the phenomena thus produced resemble those following the use of a drug, then it is said to be clear that there is a similarity of action between the known and the unknown agent. Conse-

* By the expression, "covering the symptoms," is meant an apparent unanimity in the effects produced in persons who have taken a drug, experimentally, and when in good health, and in those produced by disease in the patient. Thus, Iodide of Potassium, which produces brow ache, running of the nose and eyes, with sore throat, is chosen as the peculiar remedy for a cold in which those symptoms are most common; and belladonna, which produces a red rash upon the skin, and a peculiar affection of the fauces, is the homœopathic remedy for scarlet fever, in which complaint a red skin and sore throat are the most obvious signs of the disease.

quently, as it is assumed that two diseases cannot co-exist together in the same man, it is affirmed that the physician has only to excite a drug disease to cure that of unknown origin. But, as it is evident that no one would be benefited by the substitution of one disease for another precisely similar, it is held that the drug disease induced by the physician must be infinitesimally small, consequently, the dose of medicine selected must of itself be innocuous; but, though minute in quantity, its potency is to be developed by trituration, succussion, and the like; thus, although a pigmy in reality, a genuine homœopathic dose is dynamically a giant.* Such a drug when selected passes by the name of "a specific," and the aim of the physician becomes fixed upon the 'totality of the symptoms' occurring in the disease which he is called upon to combat, and a comparison between them and the totality of symptoms produced by a

* I must explain to my readers that the word *dynamically* signifies *potentially*, or, in plain English, "in power." I have often wondered why such hard words as "dynamic," "potency," and the like, were used in Homœopathic works, and could only come to the conclusion that they were so because they mystified readers. The assertion that the influence of a drug could be increased by diminishing it until it became a practical nonentity, would be too ludicrous to pass for truth. But by using difficult expressions, and talking learnedly about the difference of a golden sovereign, and a piece of aurumal leaf, when the precious metal was required for gilding, people began to have a happy idea that a few shakings up of a bottle would make a drop of laudanum strong enough to medicate an army as numerous as that of Xerxes. The nail was clenched by talking of the potency of minute quantities of such poisons as that of certain snakes, and then the problem was considered proved—*i. e.*, that one atom had more power than two, provided, of course, that the first had received an increase of potency by having been shaken or triturated by some agent who used strength in the manipulation. I scarcely need inform the intelligent reader that there is not a single entity or thing whose power is not diminished, and at last wholly destroyed, by successive dilutions, diluted lightning, even, will not hurt a fly.

certain drug whose operation has been learned by experiments upon healthy persons. If any drug produces effects so exactly alike as to "cover" the symptoms, produced by the disease, that is the one which is selected for use. That drug is a specific in the disease. When once selected, the amount of the dose used is of comparatively little moment—at least, such is the prevalent opinion now.

With this system of medication, there is an abstinence from all such active interferences as purging, blistering, bleeding, and the like. There is not, so far as I can learn, any settled principle of diet.

In the sketch thus given, it will be seen that the symptoms presented by any particular disease are regarded as being of more importance than the real disease, consequently, the homœopathic doctor has to trouble himself very little about the actual state of the organs of the body. Thus, for example, cough is, with them, simply cough, if it stands alone as a morbid symptom; whilst with us it is an indicator of relaxed uvula, nervousness, disease of lungs, liver, stomach, or bowels. So much may be said on both sides, that I forbear from entering on the question farther than to say that the homœopathic plan of treating symptoms only, whether adopted by the "allos" or the "homs," has an absolute tendency to deteriorate diagnosis, and to render the statistics of those who practise it valueless; whilst, on the other hand, it has a decided proclivity to increase our knowledge of the value of medicaments. *E. g.*, we do not know the nature of ague, yet we know that quinine generally cures it. Nor can I tell why Peter's tooth aches to-day, though I know that a drop of chloroform will relieve it. When so many able physicians confess themselves to be philosophical practi-

tioners, and eclectics in empiricism, it would be well if they were to extend their operations by fraternising more cordially than they do with the followers of Hahnemann.

In support of homœopathy, the main testimony offered by its supporters is its good effects; and, upon the adage that "nothing succeeds in this world better than success," the evidence has sufficed to float this system bravely. At the period when it first raised its head, the results which it gave over the old system of doctoring were so startling as to be almost incredible. The statistics of the new school were then depreciated, and its professors decried; yet some independent spirits were found to verify the first and to believe the last. Being convinced of the success of the modern plan, they discarded the ancient, and, like true apostles, became fervent trumpeters of the doctrines of Hahnemann. But the good fortune which was once so very conspicuous as to stagger all but philosophical inquirers, has begun to pale in the presence of the rational medication of the present day, such as adopted by men like Bennett, Brinton, Chambers, Hilton, Johnson, Paget, Skey, and others, who are, or have been when alive, conservators rather than destroyers of nature's powers of recuperation; consequently the original doctrines and practice of Hahnemann are being modified, so as to enable homœopathic professors to combat on better terms with their thoughtful and observant rivals.

The effect of the new system upon the old was immense, and it will continue to be felt in future generations. The history of homœopathy will be as much thought of as that of the "weapon salve" of Sir Kenelm Digby. The one has taught physicians that active medication is generally very prejudicial, the other taught surgeons a similar lesson. It

speaks badly for the acumen of the doctors of comparatively modern times that the discovery referred to should have been postponed for so long a period. My own belief is, that when the present generation has passed away, the doctrine of Hahnemann will be sent to join that of Sir Kenelm Digby, as an honoured, because an useful fallacy.

There is, amongst thoughtful minds in the profession, a feeling that all those who profess to seek after truth ought to be united in their efforts, and that rival systems of medicine ought not to exist amongst those who are honest in their wish to cure disease. To secure this end, it is well to endeavour to narrow, as far as possible, the questions at issue, and to make them so clear that a bystander, who knows nothing technically, can assist the combatants in their aim.

With this view, we may shortly state the doctrines of what is called Allopathy, as held and practised by the practitioners of the existent school. They may be thus described. When a physician finds himself in the presence of a certain unknown power, say,—for example, that which produces typhus, small-pox, measles, or any other affection,—his first and most natural endeavour is to counteract the unseen agency; if that produce fever, he will meet it with something which shall prevent the development of feverish symptoms; if there is much redness of skin, he will endeavour to bring about pallor; if there be cough, he will endeavour to quench it; and if there is purging, he will try to lock up the bowels, or *vice versâ*. This is the old plan as it has endured for centuries. Yet in recent times, doctors have considered that it is doubtful whether two powers acting in different directions in the human body may not really be acting in concert, so far as undermining life is concerned. They see that, in actual

warfare, the invasion of the country by a northern army is not neutralised by an invasion of a southern host who fights the first; either of the two may conquer, but, no matter which side is beaten, it is certain that the invaded land will be impoverished, its tenements destroyed, and its people all but annihilated.

Having once recognised this truth, the allopathic school set themselves to examine, so to speak, the enemy's tactics, and to ascertain how far it was judicious to fight heavily against disease. In doing so, they found that irruptions, even of the most formidable kind, were very generally followed by a retreat, speedy or otherwise. In this, Disease resembles those inflictions which are met with in certain countries, and act like blights for a time. In Prussia, for example, there are incursions of mice; in Norway, of rats; in Syria and Egypt, of locusts, which destroy all before them. To arrest the devastation caused by these loathsome hordes, human measures are futile; there is no cure save endurance; and, with the certainty that the plague will cease spontaneously, persons are content to tide over the difficulty as best they may, and to hope for better times when the visitation is past.* Such is the plan which the intelligent doctor follows in many diseases of so-called poison origin; he tries to palliate disease, and to save his patient, in preference to fighting a mysterious, it may be an unconquerable foe.

Yet the physician knows that he sometimes has to deal with symptoms that are produced by agencies with which he

* It is, I believe, a well-established fact, that in the year immediately following the catastrophes referred to, the country that has been thus rudely intruded upon, is unusually prolific. It is certain that many an individual, who has been ailing for a long time, is occasionally cured by an illness which, having been regarded as critical, has been allowed to take its own course.

is acquainted, whose effects he thoroughly knows, and whose influence on the constitution is distinct. It then becomes a question whether, if a sufficiently large quantity to produce death has entered the system, such a poison may be safely counteracted, or neutralised. Such an observer can readily see that if oil of vitriol and fluid potash are taken together, the two, forming a neutral salt, will be comparatively innocuous; and he will readily recognise the fact that if either be taken for some time before the other, the second will be powerless to undo the mischief already done. Even ice will not restore a limb burned in the fire, nor can boiling water cure a frost-bite. The question, therefore, remains how much can be done in any case, by the plan of counteraction? Herein there is necessity for the closest observation and the most extended experience. A man may have taken an overdose of laudanum, and a physician be asked to overcome its effects. Such an one may see that though the impression made by the drug is deep, it is not deadly; and, consequently, will allow the individual to sleep it off, as many a man "sleeps off" his drunkenness.

Yet if the phenomena are such as to cause danger to life, the question then becomes important whether, and by what means, the opiate shall be counteracted. The choice is then made whether a supposed chemical antidote shall be used, or something else which is not of itself dangerous to existence. Actuated by the thought enunciated above, the physician declines now to employ a large dose of any drug which of itself would be prejudicial. As laudanum produces inaction, he opposes to it a muscular movement compelled by the galvanic battery; and, where possible, he uses green tea or coffee, which are comparatively harmless, but whose effects

are, under ordinary circumstances, to produce sleeplessness. Yet, and the reservation is important, if the doctor should find a tendency to death by syncope following an overdose of opium, he would have recourse to such remedies as the inhalation of ether or alcohol, even although such drugs have much in common with the juice of the poppy. But, under such circumstances, he does not use them to counteract the poison, but rather one of its effects.

Again, the doctor endeavours to obviate death from the use of prussic acid by giving brandy; and he may succeed in keeping one bitten by the deadly cobra alive, by the free use of *eau de luce*, or other powerful stimulants.

Not long ago, a man was brought into my ward in the Liverpool Royal Infirmary, who was rigid from the effects of a poisonous dose of strychnine, yet within five minutes he was comparatively comfortable, in consequence of the subcutaneous injection of a solution of morphia. From cases such as these, the doctor recognises the value of opposing medicaments, of contrary tendencies to each other.

Yet, although he recognises the principle, the intelligent physician finds that it is not of universal application. He may find opium wholly useless, and sometimes positively prejudicial, in the sleeplessness of delirium tremens, arising from excess of alcohol. In such instances, some have found success in heroic doses of digitalis, an antidote which I confess that I dare not use, and whose efficacy, if the drug be pure, I greatly doubt. If forced to make a selection, in a bad case of drunken mania, between opium and green tea, I should certainly prefer the last, as being comparatively innocuous.

When the cause of any symptoms, or of a prominent one,

is patent, the course of the doctor is plain; but when, as in tic douloureux, vomiting, purging, constipation, diabetes, sciatica, and other complaints, the cause is hidden, the question becomes important, What shall be the method adopted to counteract the symptoms? The allopathist answers that his plan is to administer, with such judgment as he can command, drugs whose effects are to produce phenomena, the most opposed to those resulting from the disease, *e. g.*, opium for the relief of pain, and a dose of opening medicine to clear out the bowels when overloaded.

But it does not follow that, because either one or the other may be appropriate, it can be used in indefinite quantity; hot water may cure pain, whilst boiling water will produce both suffering and death. Hence we say that judgment is required, even in the use of a well selected remedy.

Recourse to such powerful measures as venesection, blistering, emetics, and the like, forms no essential part of the system of allopathy now. Yet the ordinary physician does not scruple to employ any of them under given circumstances. For example, in many cases a small loss of blood relieves a patient wonderfully, in that distress of breathing which is produced by aneurism of the aorta; it acts, indeed, like a charm. It does the same in skin diseases. In like manner, an emetic assists in disgorging the lungs in suffocative catarrh; and under its influence I have seen large quantities of mucus expelled, which were immovable by coughing. As for blisters, I know no remedies more valuable, where appropriately used. See Chapter xx. of my *Foundations for a New Theory and Practice of Medicine*, London, Churchill, 1861.

From the foregoing remarks it will be seen, that physicians who are called allopathic, are so to a very limited extent

They are, in reality, eclectic empiric philosophers, ever learning, always watchful, thoughtful, and observing whether the remedy which they employ is what they believe it ought to be, viz., conducive to the restoration of health. Having in reality no theory to uphold, the so-called allopathist physician is free to select his plan of treatment according to the results of his judgment; and he is the most successful practitioner who uses his judgment with the greatest caution.

In writing thus, we confess that we are giving our opinion of what a physician ought to be, rather than a description of what doctors generally are. We are fully aware that many are too bigoted to use their own judgment at all, and follow throughout life the practice taught to them when young; yet, though we acknowledge this, we feel justified in the hope that succeeding generations will be more highly educated in the art of mental training than the present has been; and that they will consider that the aim of a medico should be to cure his patient, as speedily as possible, rather than to uphold a theory, or to fill his own coffers. When that happy day shall have arrived, the terms hydropathist, homœopathist, allopathist, and the like will only be known as obsolete words; and those who use them will be regarded as gropers after truth, like the alchemists of old, who, though obscurely digging, and never finding what they sought, yet discovered the mine of exact chemistry.

At the same time that the above Essay appeared in the *Medical Mirror*, and simultaneously with a sentence of mine in a reply to Dr. Hayward in the same periodical, viz., "what real homœopathy is now no one can find out with certainty," there appeared in the *British Journal of Homœopathy* (quar-

terly), the following remarks by Dr. Elb, Medical Councillor of Dresden: "Plainly stated, the homœopathy of to-day is no longer that of thirty years ago," "much . . . . has been given up, though amid violent opposition; nothing is left but the skeleton of Hahnemann's theory, the three cardinal points, the law of similarity, the proving of drugs on the healthy subject, and the sole employment of single proved remedies," "the laying down of these fundamental propositions, which contain the quintessence of the homœopathic doctrine, is sufficient to establish for ever the fame of Hahnemann," "only those physicians, in our opinion, rightly claim the title of homœopaths who publicly acknowledge the above mentioned fundamental maxims and make them their guide in practice." "The administration of comparatively large doses, so long as the three laws in question are held firm, would not constitute a departure from the rule of homœopathy." "We no longer believe in the week-long duration of a single dose." "We no longer ascribe any curative power to the smelling of diluted drugs. Finally, we no longer acknowledge that by progressive dilutions of medicines their effect is increased. To sum up, it is evident that, for all schools of homœopaths, the only bond remaining is, the three before mentioned maxims." "Should anyone reproach us that we content ourselves, as regards the choice of homœopathic drugs, with an identity of the pathological process, he would show a misapprehension of our standpoint." "We take leave, finally, to propose for the acceptance of German and Foreign Homœopathic Societies, the following statement of our law of cure." "Select, in order to cure diseases gently, quickly, safely, and durably, such drugs as have caused identical diseases in the healthy human organism."

Again, in a very sensible paper, entitled "Science and Sectarianism," written apparently by the editor, Dr. Drysdale, whose acumen everybody who knows him gladly acknowledges, we find: "Whilst we, professing only to employ medicines on the principle *similia similibus curantur*, in all cases adapted to such treatment, of which we pretend to be the best judges, and, as a corollary from this, the proving of medicines on the healthy, hold ourselves at liberty to avail ourselves of all the acquisitions to the healing art whencesoever they may come." "We desire to assert, for the therapeutical principle *similia similibus curantur*, its true place in medicine, whatever that may be; we hold no exclusive dogma, but are quite prepared to give up any doctrines at present held by us, as soon as further discovery shall show us something better." "We set up no pretensions to the possession of any infallible dogma, nor are we bound to any particular class of remedies."

In my desire to be just to those who differ from me in opinion, I have added the preceding quotations. It seems to me that they demonstrably prove that homœopathy is renouncing, in general, as it has long done in a few particular instances, the transparently absurd theories of Hahnemann; and is gradually becoming strictly eclectic, *i. e.*, that it adopts every remedy which is, after due consideration, believed to be the best in any particular case. When this point is attained, I hope that all medical practitioners will be able to fraternise together. As I should feel personal regret if the tenets of Allopathy were to be drawn now from the popular *Principles and Practice of Medicine*, written by Sir Thomas Watson, so I can imagine a homœopathic physician being annoyed at his school being judged by the writings of Hahne-

mann. Yet so long as the one and the other are regarded as "orthodox" by the majority of Allos and Homs, respectively, the more advanced minority must chafe in comparative silence; much like Mr. Disraeli must have done amongst the Tories until he educated his party.

I believe that, in the text, I have fairly described homœopathy as it was originally held by the majority of its disciples. I cannot yet describe what it is, for that is not settled, even amongst its most enlightened professors. As to the position which it will ultimately attain we must be discreetly silent, for it is impossible to believe that it can do otherwise than retrograde, if it is only upheld by such writters as Drs. T. W. Payne and E. M. Hall, in the homœopathic quarterly, whose medicinal "provings" are puerile; *e. g.*, of what value as symptoms produced by Ant. tart. can these be, "very sleepy, drowsy, uneasy, fretful, don't want to be touched or looked at?" or of Bovista, "itching when the body is warm, not relieved by scratching. Blunt instruments make deep impressions in the skin (as from holding pen between fingers)?" Æsculus hippo, "dry cough with hoarseness aggravated by speaking, swallowing or breathing deeply, in patients subject to hæmorrhoid?" Millions of such observations, instead of advancing a science of any kind, except psychology, would only drag it to the dust; and an edifice built on such so-called facts would be like a heavy embankment laid upon a hidden bog, which will at last disappear from its own weight, and miserably repay the pains with which it has been reared.

CHAPTER III.

ON THE TREATMENT OF HEADACHE.

Headache a very common complaint—Changes physiognomy—Its various causes—A party of doctors—Headache in children—In youths—G. F. Train, and mental work—Headache precedes fevers—Arises from brain exhaustion—Classification of causes—Does not arise from repletion—Bilious headache—Increased by purging, &c.—Cooks, salts and senna—Water in the head a disease of debility—Apoplexy from poor living—Case of artist softening of brain from poverty, &c.—Withering of the brain and other parts—Comparison with plants—Principles of treatment—Judged by details—Cases in point—Cutaneous imbibition of whisky and water—Dr. Marshall Hall on phthisis—Extension of inquiry to adult age—The plan of treatment dictated by careful observation—Rest and quiet—Advantages of—Brain debility—The use of drugs in—Want of sleep—Hydrate of chloral and opium—Intestinal worms and headache—Case in point—Other forms of headache—Bisulphide of carbon—Duration of a belief no proof of its value.

There are few individuals who pass through life without suffering from headache, and some are such martyrs to it that their physiognomy becomes changed; and the eye, which once was bright and sparkling, becomes heavy and dull, and half covered by a drooping lid. Every one who has suffered from cephalalgia knows how painful it is during its continuance to move the eye-ball, or to remain in a bright light. Hence probably follows the change which we refer to.

Of all the symptoms which occupy the attention of the

physician, not one, if we except vomiting, owns such a variety of causes as headache, and none is more apparently capricious. Amongst those who habitually suffer from it, are many who imagine that they have found a remedy which will cure everybody; yet they have only to induce some friend to try this panacea, and its worthlessness is at once recognised. This arises mainly from the almost impossibility of discovering upon what the symptom in question, in any particular case, depends. I once formed one of a party of physicians who, whilst driving to a friend's house, whiled away the time by giving to each other their personal experience. One of them had a "splitting" headache, which he attributed to a shocking cold; but which those who had been with him over night would more probably have associated with an over-dose of brandy and water. This served as a text, and each one in his turn described the cause of the worst headaches he had ever experiened. One attributed his to exposure to very severe cold, when travelling on the top of a coach over bleak Yorkshire moors, in a freezing drizzle, which covered the windward side of the vehicle with a half-inch coating of ice, to the consequent imbibition of much hot ale, spirits, and water, followed by a struggle for life with a street ruffian, the last being the exciting cause. On other occasions, he had found that a similar headache, though by no means equally severe, had been produced by prolonged exertion in fresh and in salt water. Whilst at school, he had joined in a swimming race; and had been obliged to retire at an early period, from the intolerable headache which came on; one which did not leave him for many hours subsequently. Another said that with him prolonged fasting always produced intense cephalalgia; and that if he went out

to a late dinner, without taking lunch, he was almost blinded by the pain, which continued, though steadily diminishing, until he had drank about half a bottle of wine, after which it left him. Another of the party said "influenza" had given him the worst headache that he had ever felt, during which it was distressing to speak, and all but agony to cough. Another had found that, in the early stage of typhus fever, a similar affection had been produced; and the last averred, that his most poignant suffering had arisen from trying to impress upon his mind the whole of Johnston's "Physical Atlas" in a week. He informed us that he could not afford to buy the book, but that he had an opportunity to see it daily for a se'nnight; and he wanted to master it, so as to be able always mentally to refer to it. From this point, the doctors made many a digression to other cases than their own; but, instead of following in their wake, we may as well examine the subject independently for ourselves.

In the first place, we shall do well to ascertain the different causes which give rise to headache. We find it described by young children as short, sharp, stabbing, agonising for a time, and then passing away suddenly; or heavy, dull, and enduring day by day. In them, it is the result of organic change, or of very rapid growth, and a mind over-tasked by lessons. What takes place at the early period of life occurs likewise towards its close; and headaches are in the aged very frequently an indication of organic cerebral changes, and often of impending apoplexy, or softening.

Amongst youth of both sexes, the most common cause of cephalalgia is growth and exciting mental work. We have already dwelt upon the advisability* of allowing the period

* Chap. xii., *Preservation of Health.*

of life included between the years seven and seventeen to be tried less hardly than it is the custom to tax them; and I would fain repeat the remarks here. Not long ago, I read the report of a speech made by the eccentric G. F. Train, in which he stated that he did not permit his daughters to learn to read before they were ten years old; and yet that all of them were now very accomplished women in every way—good linguists, fair musicians, painters, &c. To his experience I could add that of others, to demonstrate that, if there is the necessary ability existent, it will show itself more conspicuously by expanding in a strong body, than in a weak one. I can myself remember suffering from headache for nearly a whole year, in consequence of the severity of my lessons at a time when I was growing very fast.

Headache is in youth a common, indeed almost constant, accompaniment of the early stages of such complaints as scarlet fever, chicken-pox, small-pox, erysipelas, or other eruptive fever.

In adults, the causes of headache are exhaustion, no matter from what it may result; mental work, or worry; irregular, or incessant noises, especially if discordant, sharp, heavy, and irregular; want of sleep, insufficient food, a too great indulgence in spirituous liquors or opiates, the existence of gout in the system, inordinate losses of blood from any cause; and such fevers as typhus, or, indeed, any severe impending disease arising from what is called poisoning of the blood.

When youth has advanced to mature age, a very common cause of headache is rheumatism, produced by exposure to cold winds, &c.; or neuralgia, from a decayed tooth; or some more recondite influence. In these cases, the pain is situ-

ated outside the bony brain-case. Of such, we do not now treat. When manhood has begun to decline towards decadence, and in more advanced age, headache is generally indicative of physical change in the condition of the brain. We are now prepared to classify the causes of headache thus :—

1. Organic change, usually of a destructive nature.

2. General debility, the brain being exhausted in common with all the body.

3. Special debility—the result of excessive mental labour.

4. Changes effected by certain drugs and poisons, such as quinine, iron, opium, alcohol, &c.; or by hypothetical agencies, like those producing influenza, typhus, small-pox, gout, &c.; or by circulation of organic compounds, such as bile, urea, "crudities," by which I mean materials taken up with the chyle from the lower part of the bowels, but which ought naturally to have been discharged.

5. Anomalous causes, such as "worms," external cold, &c.

Whilst reading over this list, the reader will doubtless have his attention called to the fact, that we have entirely omitted to mention, that too much blood in the brain is a cause of headache. The neglect has been intentional, and deliberate ; for we aver that in no single instance is cephalalgia due to an increased supply of blood alone. To make this proof apparent to my readers, let me ask anyone of them to experiment upon himself, on the slack rope or horizontal bar of the gymnasium; or, if not athletic enough himself to go through such labour, to catechise those who are. In either case, let him satisfy his mind whether hanging with the head downwards for five, ten, or even twenty minutes will produce headache. On the other hand, let him remember

every case which he has seen of enormous loss of blood, and then try and recall to his mind how very few of them were unattended with severe cephalalgia. Moreover we may say that, as a rule, headache is relieved by the recumbent, and aggravated by the erect posture.

When once the physician has persuaded himself that headache does not arise from repletion, he will readily recognise the fact, that all forms of depletion are far more likely to do harm than to effect any good. Indeed he will see, that even purgatives can only be expected to be useful in those instances where the bowels are habitually costive, and the fecal matter is absorbed by the capillaries and lacteals of the lower bowel.

Our first deduction as to the plan to be adopted for the cure of headache is therefore negative; pointing to what is to be avoided, rather than to that which is to be done. Yet it is not therefore useless. As I write, a host of recollections crowd upon my memory, in which servant maids, and their mistresses, hard-working students, and indefatigable men of business have for years been martyrs to "sick headache," from the senseless habit of "routing out the bowels," as if a visit to Cloacina was equivalent to attendance upon Hygéia, and the consequent receipt of her blessing. I have known "domestics" to be almost useless in a household, from the frequency and intensity of their sufferings from cephalalgia; which they have attributed to "biliousness," and which they have pertinaciously aggravated by blue and colocynth pills and black draughts; who have, nevertheless, become valuable women once more, by a steady course of generous living, and a forbearance from pill and potion. Cooks, whose business in the kitchen and in the house is a very exhausting

one, and whose appetite is generally very bad, are particularly subject to headaches, and they too often ruin themselves by using immoderate purgatives. Such an one is in my service now. Years ago, she left my mother from ill health, brought on solely by hard work and her fondness for salts and senna. Yet, although twenty years older, she is is a valuable servant, having given up her affection for the druggist's shop. Another, whom her mistress told me was laid up in bed, on an average, one day in every week, in consequence of a sick headache, from which she had suffered for years, was completely cured in about six weeks by tonics, generous diet, a daily shower bath, and total abstinence from aperients. She was a fine buxom woman, and few would have fancied that she was suffering from a weak head, &c.

From this negation we turn elsewhere, and ask ourselves, What is the correct treatment of such cases as impending water in the head in infancy, and of apoplexy in old age? Ere we decide, let us put to ourselves a question or two. 1. Who are most liable to these affections? 2. Upon what do they depend? Now it is a certain fact, that hydrocephalus is not a common disease amongst the children of parents who are constitutionally, and actually, in perfect health, and without family taint. It is equally certain that water in the head is very general amongst the children of the scrofulous, the consumptive, and those who live in unhealthy localities. It is fostered by misery, and is most deadly amongst the poor, the ill-fed, and those who suffer from diarrhœa. Consequently, it is a phenomenon attendant upon a deterioration of the system in general, and of the brain's condition in particular.

If we now inquire into the style of persons who are most

liable to apoplexy or softening, we find that they are not those who live well, unless such should be constantly endeavouring to counteract the effect of heavy dinners and strong potations by powerful purgatives, or by some other means of effectually reducing the system. Such folks often remind me of a story told of a townsman, who went to live in the country, and there kept pigs. Being anxious to get from them nice ribbon-like bacon, prettily streaked with fat and lean, he inquired of a friend, at whose house he first saw the coveted rashers, how the matter was to be accomplished. The last, who loved a joke, replied that he brought about the result by alternately feeding and starving his pigs for a month at a time. The gentleman tried the plan, and stuffed his grunters incessantly for the appointed month, and then starved them — to death.

Next to the guzzlers, who dose their over-wrought stomachs with blue pill, &c., those are most liable to apoplexy whose constitutions, never strong, have been impaired by "danger, long travel, want, or woe;" the sons of mental toil, hard fare, bad food, and the like. One such case I well remember. An artist, of no mean talent, but with an overweening opinion of his own merits, and a propensity to decry those of others, which made him many enemies, and did not add to his friends, gradually fell into circumstances that became daily more and more straitened. Too proud to ask for aid, he lived, as far as victuals were concerned, almost entirely on his acquaintances—a lunch here, a dinner there, tea, or supper elsewhere, being too often the only meal of the day —and one of these sometimes sufficed for more days than one. Few, if any, individuals knew his wants while he lived, for in the depth of his misery he was ever a polished gentle-

man. At length, whilst sitting after tea at the house of a friend, he spoke of headache, and in a few minutes was apoplectic. On taking him to his home, it was at once apparent what his state had been, but the hand of kindness came too late to save him. Ere life departed, luxuries, long unknown, appeared before his eyes, and the artist smiled his thanks for them lovingly; yet he never spoke again, and in a few days was dead.

For one well-fed, luxurious man who dies from apoplexy, a dozen poor folks fall; or, as we have elsewhere shown *(Foundation for a New Theory of Medicine)*, apoplexy and cerebral softening are consequent upon a condition of the blood vessels in which the coats are brittle and thickened, so that they do not allow the nutritive parts of the blood to transude through them as readily as they do in health; and, accordingly, the brain structure is nearer to death or destruction than it is under ordinary circumstances, as is evidenced by its softened state.

2. If we now examine into the physical condition of the brain in water in the head, we find that the normal structure is being, or has been partially, replaced by a material inferior in quality to that of the perfect cerebrum. This may be simply a watery, softer, or less consistent stuff than it ought to be; or it may be that something which develops into tubercle; or there may be a change which none can adequately describe, except by comparing it to the blight which is frequently seen in the vegetable world—the part begins to wither.* In all these cases, the brain is more

* There are phenomena in "life" which have hitherto eluded our research. One man has a withered pair of arms, another has his lower extremities blighted, another loses the sense of smell, of sight, taste, or hearing, another loses the voice; many a woman ceases to nurse or conceive,

prone to die than it ought to be. I may again explain my meaning by reference to a plant or flower. Everyone can see the difference between a healthy and a sickly rose bush, and can understand that, though the latter is not dead, it is much more likely than a healthy one to die soon; under appropriate treatment by the gardener, it may survive and thrive. So it is with our body, or any part of it: it may be sickly or dying, yet not dead; failing, yet with energy enough to recruit itself, and become healthy once more. Rough usage may destroy it outright, judicious management will restore it to its pristine state.

When the physician recognises this state of things, whether in age or in youth, he sees the necessity for counteracting the tendency to death. But the basis upon which he is to build his treatment is more readily described than the method by which the design is to be carried out. It is, indeed, almost impossible to give a full account of the detail without appearing tedious. Everything has to be avoided which would

and many a man to procreate, long before others of a corresponding age. In like manner, I have noticed plants decay wholly or in part without apparent cause. It is a very common thing to see one branch of an apricot tree die without a comprehensible cause; and the difficulty of rearing seedlings of the Clianthus Dampierii is known to gardeners. I have heard a nurseryman express his opinion that the scions of "forced" fuschias were rarely strong, and often prematurely died. In like manner, a son, who trades on the basis of a father's name for his capital, instead of his parent's funds, often collapses. I believe that "life" may be "hoarded." I hold the opinion that a man and woman who marry without having any such treasure will preside over a house bankrupt in point of health. How, let us ask, can those who procreate with one foot in the grave, as it were, hope to have offspring exempt from decay? The medical history of everybody really begins long before birth; and I feel sure that it is the part of that biography which is always suppressed — except in such cases as that of Tristram Shandy — that accounts for many a premature death from brain disease.

in the smallest degree tax the brain, or injure the system; and everything has to be done which will strengthen the constitution, and improve the condition of the brain.

Yet, in speaking thus, we lay ourselves open to a charge of vagueness, for anyone might very naturally say, "How can we judge of the 'principle,' unless we understand the detail?" We will endeavour, therefore, to be explicit, and record two or three cases of "water in the head" in different stages. "Oh, doctor," said a lady to me, "my little nephew is such a funny fellow; he is playing with all the vivacity of childhood one minute, and at another he is asleep as soundly as if he were in bed." "Does he ever look or speak as if he had headache?" "Oh yes; but it only seems to me as if it arose from his being tired, for he soon forgets it." Knowing the child's family history, I looked grave, and spoke earnestly, to the effect that the lad was threatened with brain disease; that he was to have no lessons for the present; was to be allowed unlimited sleep; and to have generous diet, but not to repletion; was to have some tonic medicine, saccharine oxide of iron, for example; pure air and warmth; and, if requisite, other appliances, such as oil-rubbing, local stimulants to the skin of the head, even chloroform inhalation, if necessary. Since that consultation many years have elapsed; the quondam weakly child is now a sturdy-looking though really a delicate man.

On another occasion the complaint was in a more advanced stage. After years of contest with headache, sickness, languor, and the like, a child had an attack of convulsions, following vomiting and purging, The head was pungently hot; the body painfully cold. Chloroform inhalation checked the fits; oil-rubbing over the chest and back restored

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the general circulation; cold to the head moderated the destructive conflagration there; and well-sugared wine and water gave an easily-digested food for the stomach to assimilate. The result was satisfactory, and the patient is now a fine young woman.

Subsequently to seeing the preceding individuals, I was called in, "apparently to sign a passport to eternity" for a child who seemed "deaf to time." The "orthodox" medication had been carried out; and nothing apparently remained to be done but to watch the agonies of death. But, in my opinion, the adage, "Whilst there 's life there 's hope," is true, as respects children; at any rate it was acted upon, and the plan adopted for restoration was thus laid down: "Stop all medicine, feed the patient with vegetable food, spirit and water with sugar, watching the effects, and modifying the quantity given according to the results produced; endeavour to augment the constitutional vigour, by gently rubbing the whole of the body, one part after another, with salad oil, allowing the child to lie in the greasy garments thus necessarily produced; apply to the head a nightcap well sprinkled with whiskey, and covered by "oil silk," that there may be no evaporation;* and when convulsions appear to be immi-

* As I am desirous to give to every one that which I believe to be his due, it is right to say that the direction in the text originated thus. The late Dr. Marshall Hall stated, in an essay, where published I do not remember, that the best local application for phthisis was, in his opinion, alcohol and water applied as the surgeons use "water dressing" to the upper part of the chest. After pondering over this for a long time, and having subsequently ascertained that turpentine, cantharidine, and other strong rubefacients were absorbed through the skin, and operated decidedly upon the parts below the surface to which they were applied, I came to the conclusion that when the brain's circulation and nutrition was languid, it might be improved by the local use of stimulants, &c., not instead of, but as adjuncts to, similar constitutional remedies. Having now had considerable experience

nent, then give a "whiff" of chloroform. These were the directions, and they were followed out by the mother, who showed herself to be a consummate nurse ; and now has the pleasure of seeing her quondam patient independent of the doctors.

Does the same principle apply to those who are threatened with apoplexy or softening of the brain ? will next be asked. Unquestionably, is the reply, only that the details of the treatment differ. If a brain is liable to instant solution from want of good blood, it would be madness to reduce its supply still further, by bleeding the patient in any form. It is then wise to ordain perfect mental repose, and such a diet as will give ample nourishment, whilst it will not tax too greatly the digestive or other powers of the constitution. Nor is this last direction to be lightly passed by, for just as a full dinner will make a healthy man sleep, so too heavy a meal will determine the occurrence of apoplexy in one predisposed thereto. When I was young, an old Medico told me, that he was examined at "the Hall," and then asked the question, "What would you do if called to a man dead from apoplexy ?" that his answer was, "I would bleed him till he fainted," and he added that the quæstor's rejoinder was, "Quite right, sir." At the present time, a man who opened a vein under such circumstances would be considered much in the same light as if he had cut a throat; and brandy and water cautiously administered would, in the vast majority of instances, though certainly not in all, appropriately replace the use of the lancet.

in this line, I feel confidence in the expression of my opinion that the appropriate use of cutaneous medication is an important adjunct to therapeusis in cases like those which I am describing.

Our next inquiry is respecting the plan to be adopted under the other circumstances to which we have referred.

Where headache arises from general debility, it has to be treated by hygienic measures, amongst the most prominent of which are perfect quiet in every sense of the word, and the recumbent posture. Few persons, who have never been ill themselves, can form an idea of the influence of certain sounds upon those who suffer from cerebral exhaustion. Under such circumstances, the tick of a watch or clock is unbearable, the rustle of a silk gown grates upon the nerves like the filing of a saw's teeth, and a creaking pair of shoes will produce the most agonising sensations. In like manner, the banging of a door that shakes the house, or, what is worse, the irregular flapping of a loose window, or the startling rattle of the deal uprights arranged in a timber merchant's yard, a heavy tread across the room, the chirping of birds outside, the vibration of cars and carts, the odour of flowers or of artificial scents, even the light of day, each and all are painful and prejudicial.

I have often been told by individuals that they experience no relief from an attack of headache, such as is here described, except from burying themselves in the quietest room in the house, and cutting off from their senses everything which would offend them. The diet in such cases is a very difficult matter, and no general rule can be laid down, except that it should be ample in quantity, and appropriate in quality. What is appropriate can only be judged by observation and experiment in each individual instance. It is very doubtful whether there is a medicine which is really advantageous in these cases. Opium, in one form or another, promises most fairly; but at the best it is often a broken reed, and occasion-

ally prejudicial rather than useful. The same may be said of alcohol. Good tea is more frequently useful than any other article, but it must not be taken too freely. A tight binder round the forehead and head usually gives relief; as it serves to direct more blood into the brain than would otherwise go there. Pressing strongly the temporal arteries has a similar effect.

When the headache is due to special debility of the cerebrum arising from excessive mental labour, the only safe method of treatment is to give the brain repose. It is not absolutely necessary that the cessation from work shall be absolute, it is sufficient if the head be relieved of some of its labour. A man, when first he takes to riding, fencing, rowing, or any other exercise which requires muscular exertion, very commonly "pays his footing" in pains, of greater or less severity. Yet he does not give way to absolute indolence; so far, indeed, is he from doing so, that he forces his aching limbs to go through a certain amount of fatigue, so that they may sooner be accustomed to it. So it is with the head. An unusual strain may produce cephalalgia; but the man who knows that such work will often have to be undertaken, will toil on in spite of pain; though he will not attempt to go through, whilst the headache lasts, so much labour as he did ere the suffering began. In such like cases, however, the cure is always slow, sometimes it never comes until perfect repose is attained.

Of course, under such circumstances, medicine is of no avail whatever to do good; it is as useless as it would be to take quinine because our sides ache with laughter. But if the individual so suffering were to take blue pill, &c., under the idea that the headache was due to biliousness, he would

lay a foundation for ruined health. I have occasionally had under my care individuals who have taxed their brains to the utmost amount that the human frame can bear, and who have treated every headache by low diet and aperient medicine, carrying on the plan until they have brought themselves to the very verge of insanity, which some indeed have overstepped. In such instances, the time required for repairing damages exceeds a twelvemonth, and the utmost care is necessary when the mental strain is renewed, so that it shall not be too great. So that in the end time is lost, not gained, by inattention to the necessity for rest. Where the headache arises from what is called poison in the blood, whether it be quinine, opium, iron, alcohol, typhus, small-pox, or gout, &c., I know no cure save perfect quiet, and sleep if it can by any means be obtained. The power, however, of inducing repose is not given to everybody, and, if present at other times, it is, under the circumstances which we have named, often taken away. As far as my own experience has enabled me to judge, cases like those here alluded to are best treated by "egg-flip," "milk and rum," or any other fluid and gently stimulating food; a comfortable bed or sofa, with the light behind the person's head; and some such book to read as "railway anecdotes," where the stories are short and the interest particularly mild. Where sleep cannot be obtained by these measures, there is, in my opinion, no drug which equals the Hydrate of Chloral. I have personal knowledge of its value as compared with every form of opium, Indian hemp, chlorodyne and other narcotics, and can recommend it most highly, in the pain both of splitting headache and of gout. But the dose must be large enough, say thirty grains, to produce sleep, and the sick room must be still enough to

insure quiet repose. There are few cases which will withstand the combined effects of frequently repeated food and amusing stupidity. Where there is reason to believe that headache arises from matter absorbed from the intestines,—a thing very common in young men and women, whose bowels are habitually costive,—it is absolutely necessary that a judicious medical scavenger be appointed, which shall remove the filth without carrying away with it much, if any, valuable matter.

In the early part of this paper, I stated that cephalalgia sometimes arose from such anomalous causes as worms. The most marked case of the kind which I ever saw, occurred in my own household at a time when I was abroad. On my return, I found that the patient was our young nursemaid, the shape of whose cranium was peculiar, and who had epilepsy in her family, a mother and three sisters being affected by it. She told me that she had pain in the head, which came on during the afternoon, and gradually increased in severity until she had a fit. The fits were unlike any which I had ever seen, heard, or read of. Suddenly the hands were pressed against the temples, and the woman darted about the room with frantic gestures, and cries of pain; now upright, now stooping, now darting against a wall, now under a table, chair, or bed, now rolling upon the floor, and now rushing about as if her dress was on fire; yet with the hands always pressed against the head. A large dose of opium on the first, and another of quinine on the second night, prevented the fit, but had no effect upon the fearful headache. After long thought, I came to the conclusion that the cause might be tape-worm; and though there was no other evidence on the subject, I ordered her to take a dose of kousso. The result was that a very

large dead tape-worm was voided, and the cephalalgia and the fits ceased.

In other instances, the cause of headache is the near occurrence of the monthly period. When this is the case, a hot bath if possible, and abundance of heated, stimulating, and spicy fluid, is the most appropriate remedy. For rheumatic headache, arising from external cold, I know no better cure than great but dry heat to the scalp; and copious draughts of hot tea, coffee, or other mild drink. The use of strong alcoholic stuff is absolutely prejudicial.

For headache arising from fasting, I cannot suggest anything beyond sleep, food, and wine. For the cure of other anomalous forms of cephalalgia, I cannot do better than copy the following letter from the *Medical Times and Gazette*, July 18th, 1868, which promises more fairly than any other plan yet suggested.

BISULPHIDE OF CARBON AS A CURE FOR HEADACHE.

LETTER FROM THE LATE DR. GEORGE KENNION.

(To the Editor of the *Medical Times and Gazette*.)

SIR,—I am desirous of bringing before the notice of the Profession a very simple and, at the same time, a very remarkable cure for many kinds of headache.

I have not the least claim to the discovery of this remedy, nor, indeed, am I at all aware who was its originator, but I believe that it is unknown to the Profession generally. Having used it in a large number of cases during the last twelve months, and very rarely without affording immediate relief, I am desirous of making it more generally known.

I heard of it first from a gentleman whom I was attending last year, and who told me that he thought it was used by a French physician. If this should come under his notice, I hope that it may be the means of inducing him to throw off his incognito, so that he

may receive the thanks of many to whom he has hitherto been an unknown benefactor.

The remedy, as I have already observed, is simple; it is the bisulphide of carbon. Its mode of application is no less simple. A small quantity of the fluid (about ʒ ij.) is poured upon cotton wool, with which a small, wide-mouthed, glass-stoppered bottle is half filled. This, of course, absorbs the fluid, and when the remedy has to be used, the mouth of the bottle is to be applied closely (so that none of the volatile vapour may escape) to the temple, or behind the ear, or as near as possible to the seat of the pain; and so held for from three to five or six minutes. After it has been applied for a minute or two, a sensation is felt, as if several leeches were biting the part, and after the lapse of two, three, or four minutes more, the smarting and pain become rather severe, but subside almost immediately after the removal of the bottle. It is very seldom that any redness of the skin is produced. The effect of this application, as I have said, is generally immediate; it may be reapplied, if necessary, three or four times in the day.

The class of headaches in which this remedy is chiefly useful, is that which may be grouped under the wide term of "nervous." Thus, neuralgic headache, periodic headache, hysterical headache, and even many kinds of dyspeptic headache, are almost invariably relieved by it; and, although the relief of a symptom is, of course, a very different affair from the removal of its cause, yet no one who has witnessed (and who of us has not seen?) the agony and distress occasioned by severe and repeated headache, but must rejoice in having the power of affording relief in so prompt and simple a manner.

As regards the *modus operandi* of this remedy, it is difficult, perhaps, to form a decided opinion; but I am disposed to attribute it to the sedative effect of the vapour of the sulphide absorbed through the skin, and acting upon the superficial nerves of the part to which it is applied. The remarks of M. Delpech (*Annales d' Hygiène*, January, 1863) point out very clearly the remarkable prostration of the whole nervous system produced in workmen, who, in certain manufactures, are exposed to the vapour arising from the bisulphide

of carbon; and we can readily understand that a somewhat similar effect upon a small scale may be produced by the application of this vapour to a limited portion of the surface.

I am, &c.,

GEORGE KENNION, M.D., F.R.C.P. Lond.

Oak Lea, Harrogate, June 4th.

P.S.—I have omitted to mention, that I always procure the bisulphide of carbon from Mr. Morson, the eminent chemist, in Southampton-row, Bloomsbury, who will also furnish the bottle with which the vapour should be applied, and a wooden case — a very necessary adjunct, on account of the offensive smell of the bisulphide.

After reviewing the treatment of cephalalgia which we have thus indicated, we find that the most important therapeutical positives are rest and appropriate food; and that the most important therapeutical negative is the avoidance of purgatives, and of every other thing likely to produce or foster debility. And yet for centuries the use of aperients has been thought to be of more service than any other plan! Thus we recognise once again that the duration of a belief is no proof of its value; and that it is possible to adopt a method of cure which positively aggravates the mischief which it was the aim of the sufferer and of his professional adviser to cut short. Nor can we wonder, when such is the case, that many rival systems of medicine start up, as soon as individuals begin to recognise the malignant impotence of that which has so long been cherished.

CHAPTER IV.

ON CONVULSIONS, CHIEFLY INFANTILE.

My firstborn in convulsions—Thoughts on the occasion—Old ideas rejected—Treatment used—Results—Inquiry into former notions—Search after solid ground—The cause of convulsions, details respecting—Poverty—Disease—Foul air—The approach of death—Bloodlessness of brain—Blood poisoning, &c.—Irritation, as of teething—When excitants irritate—Animal food—Cases in point—Milk *versus* oatmeal—The *physique* of children liable to convulsions—Babies buttocks—Nervous system, effect of fatigue upon—A lady's observation—Effect of general debility—Deductions from preceding—Treatment suggested—Convulsions and hard labour—Patients and athletes—Bad air—Cold and moist air—Tonics and oil rubbing—Chloroform as an inhalant—Case—Things to be noticed—Sylvester's method for producing artificial respiration—Chloroform in staving off convulsions—A model mother.

More than twenty years have elapsed since I was called up during the dead of night to see my first-born, who had a sudden and violent attack of convulsions. The messenger was my father, at whose house the lad was staying; and as we walked together to the country, I pondered over what it would be my duty to do on my arrival. That the danger was great I felt sure, but of the best means of averting the probable result I was very doubtful. My wife had already used a hot bath, without any perceptible effect; and what could I do

more ? For upwards of half an hour I recalled to my mind, and pondered over, what books and lecturers had recommended me to do under the circumstances; the lancet, the leech, the powder, the enema, the vesicant, and the rubefacient, all passed under review. A visit on the preceding day had told me that my son's teeth required no attention; and when at length I found myself in the presence of my wife and struggling child, the sum of my resolves was simply this, that, come what would, the boy should not die of the doctor.

It required no small effort, however, to watch the writhing limbs and distorted face of the helpless child, and to do nothing more than look passively on; yet I felt that, small as was the hope of life, it would be lessened if I adopted any of the means then in vogue for the cure of convulsions. At length I gave an enema of laudanum and assafœtida, and, seeing no manifest effects, I repeated it — how many times my memory fails to say. The result was, that in about twelve hours the fits gradually ceased; but then, symptoms of narcotism came on, and for some time it was doubtful whether he, who had escaped death by convulsions, would not succumb under the poison of opium. Not one of the doses injected was large, of that I had been careful; but it was clear that none had been absorbed until the spasmodic attack gave way; and then all which had been given was taken up at once. The distress of watching the deadly quietude caused by the drug was more painful to bear than the sight of the facial antics produced by the disease; for, if my child died, I felt that I must consider myself as its destroyer, and that, with the best intentions, I had done the very thing which I had resolved to avoid. He lived, how-

ever, and from that time to this I have anxiously sought to ascertain the treatment best adapted for the cure or the palliation of convulsions.

Whilst thus searching, it soon became apparent that there was scarcely a single tenet then taught in medical literature which would bear a logical examination. The only remedy which was worth anything was lancing the gums, when they needed it, and clearing out the bowels when there was evidence of their being gorged; both of which contingencies are very rare. After having un-learnt old ideas, it was important to adopt others of a more trustworthy character.

In seeking after the treatment appropriate to any disease, it is important to understand upon what state of things the condition which we hope to rectify depends; in other words, to try and find out the cause of the effect. Pursuing this plan with convulsions, by which term I do not now include epilepsy, let us inquire upon what they are contingent, or under what circumstances they are produced.

1. We find them very common and fatal amongst the lower orders in our large cities; and, on inquiring still further, we discover that the disease is more deadly amongst the very poor than amongst the decent artisans. Hence we conclude that poverty, misery, cold and starvation have more to do with convulsions than good diet, plenty of it, and comfort.

2. Amongst the "well to do" we find that the complaint is more common amidst the children of consumptive, strumous, syphilitic, and otherwise diseased parents, than in the flocks of those whose family history is faultless; consequently we infer that "convulsions" are allied to exhaustive diseases.

3. We find the complaint to be more general in crowded towns than in the country; whence we infer that it may be

due to an inadequate supply of wholesome, or the inhalation of foul air.*

4. Experience tells us that convulsions are, in many instances, the immediate forerunner of death. In reading over, for example, the phenomena of dissolution, we often meet with the words "cold sweats, convulsions, and death," arranged consecutively. In cases, too, of death from many exhaustive complaints, "twitchings of the face, arms, and feet," are almost certain signs of imminent danger; consequently we infer that convulsions are caused, amongst other things, by a condition of brain closely allied to mortification, or the cessation of life.

5. Experiment has demonstrated that convulsions of great severity will arise from sudden stoppage of the flow of blood to the brain, as by tying the arteries supplying that organ, and that they will cease on the restoration of the current to

* I think it right to call attention here to a subject, which, so far as I know, has not hitherto been noticed, except by myself. Crowding horses together produces glanders; packing negroes closely, as in a slaver's hold, gives rise to dysentery, and those who escape death, and are sent into hospital, communicate typhus to their nurses. In the crowded holds of sailing ships that carried multitudes of Irish, during the famine year, to America, typhus broke out, and was as deadly as the disease in African slavers. It is our duty to investigate the cause of these affections; are they due to air made foul by respiration or by transpiration? The first cause has been inquired into, but not the second. I assert as a fact, that the skin of every one secretes, produces, or exhales a gaseous material, which, if it is not allowed to escape,—as for example by covering the skin with some impermeable material,—gives rise to cutaneous inflammation. It is to get rid of this that house-wives so carefully turn the bed clothes down after they have left their couch, and air the room. If a sick body lies during many hours between the sheets, he or she becomes uncomfortable, until the space between them have been ventilated. Every one who has worn a mackintosh during the day, will be able to remember the comfort experienced on taking it off. It is the inhalation of this material that I fancy has, when there is overcrowding, most to do in producing fever and other diseases.

the usual channels. We then remember to have been often struck by the very great pallor of the skin which exists amongst the victims of the disease under consideration; consequently, we infer that the complaint in question may be closely allied to deficiency of blood in the brain.

6. We next recall to mind that convulsions are frequently noticed in the early stage of such diseases as scarlet fever and measles; and after the taking of certain chemical substances. We therefore infer that they may be due to the existence of poison in the blood, or, in other words, to a vitiated condition of that fluid; to a particular form of which, arising from a certain diet, we shall refer shortly.

7. We know that convulsions are common during teething, and that they are then occasionally cured by lancing the gums; that they sometimes are produced by such surgical operations as that required for the cure of hare lip; that they may be associated with constipation, and cured by the use of aperients. Consequently, we believe that the complaint may depend upon what we call an irritant; just as we see lock-jaw arise in many instances from an injury.

Yet, at the same time, we know that calves and puppies, kittens and colts, cut their teeth without convulsions; and that many irritants may be present without producing spasmodic affections; we therefore conclude, when convulsions arise during human teething, that there is some other cause in operation besides the growth of incisors or molars.

It is not altogether a paradox to affirm that an irritating thing is not always obnoxious. We may explain our meaning thus: There comes in front of my window an organ-grinder, whose music I can tolerate whilst I am alone; but if I am "out of sorts;" or deep in an important con-

sultation wherein the sounds of the heart and lungs have to be examined closely; the barrel organ becomes an intolerable nuisance, and a powerful irritant.

As teething, then, *per se*, is not an efficient producer of convulsions, we ask ourselves what additional cause is required ere the first comes into operation. To this the answer is simple, viz., anything which deteriorates the general health makes excitants in general more irritating, and the process of "tooth-cutting," in particular, a source of "convulsions." Similar observations apply to the presence of worms in the intestinal canal, which may have existed there for months or years without giving rise to any notable effect. The evidence which tells us of the condition of body that favours the active operation of irritants is readily to be recognised, but we postpone its consideration for awhile.

8. The last cause of convulsions which we shall notice is one not generally recognised, even if known, yet it is of vast importance. It is the use of animal food ere the teeth are all cut. Without having a definite idea of what they meant by the term, the effect of the premature use of flesh was that which, I believe, the ancient writers called "Crudities." I do not know any single thing which is more decidedly operative.

To enable my readers to appreciate the influence of meat diet, I will record a few cases, as they occurred to my notice in chronological order. A man, aged twenty-four, very emaciated, was operated on for stone; after this was extracted, he was placed on a generous scale of provisions, having meat four times daily; as a result, he experienced the most frightful and prolonged attack of convulsions that I ever saw; the meat was suspended, and the convulsions did

not return. Another man in the same hospital was similarly treated after amputation of the thigh, and had an epileptic seizure; the diet was then altered, and no convulsions appeared. Once more, beef and mutton were given largely, and again the disease followed, subsiding when the flesh food was withdrawn. Neither of these men had ever before had similar attacks. The next case was that which heads this essay, wherein the cause of convulsions was the profuse exhibition of beef-tea; when this was given up, no general attack appeared afterwards; but if egg was substituted in its place, a partial convulsion was recognised under the form of false croup, which, by a process of exhaustive experiment and observation, was proved to be due solely to the ovoid diet. After this I saw twins who were being wet nursed, but who for the time were ill, inasmuch as the milch-woman was herself in bad condition. The two had "fits," which began as false croup, and generally ended in a convulsion of the whole frame. These attacks were readily traceable to the use of beef-tea; and it was remarkable that one of the infants, whose dislike to the animal concoction was very great, was not attacked unless it took beyond a certain quantity. I doubt whether I could have persuaded the family doctor and the parents to acknowledge the association between the beef-tea and the convulsion, had it not been that the latter child, who was living chiefly upon a milk diet, became convulsed within an hour after drinking voluntarily a large cup of the fluid in question, which had been prepared for his brother. During the early part of my attendance, I was not able to induce the medical attendant to change the plan of victualling the sick, and the child made no progress towards recovery; when the beef-tea was given up, there was

not a single recurrence of the fit of convulsions. On another occasion, I was called in consultation to see a child, and found that my opinion was required as to the desirability or otherwise of increasing the amount of calomel already given. The one doctor had no faith in mercury, until it produced green stools; the other feared that if this characteristic action was produced the child might die. On inquiry, it appeared that the patient was taking freely of such diet as veal or chicken broth, beef-tea, &c., and on asking the first medico about his usual treatment of children when they had green stools, I found that he always excluded animal food from the diet, and that he effected by milk that which he imagined was due to calomel; thus attributing to one cause what was really referrible to another. The result of our consultation was to abandon mercury and beef-tea; and on our subsequent meetings we found that the convulsive seizures had ceased; nor have they ever returned. The next case was still more striking. A friend asked my opinion about his young son, who had been suddenly taken with fits; yet the closest examination failed to elicit any apparent cause, until I came to the question as to the beef-tea, &c. It then was found that the child had for the first time been partaking largely of beef gravy with potatoes, and had a small slice from the joint. I gave the necessary directions, but was surprised, a few days afterwards, to be summoned under the same circumstances as before. Again, a patient inquiry failed to elicit a probable cause for the attack; and I hesitated ere I asked my friend if he had attended to my instructions to withhold meat. "Ah," said he, "there you have me; the truth is, Doctor, I did not believe you, for I had never heard gravy and beef blamed for

convulsions. I have given my child both flesh and its juice, and now that I am convinced, I will not do so again until he is older."

Not to multiply cases farther, let me say that convulsions arising from the cause just mentioned are usually sudden and severe, according to the amount of the animal food taken, and that they very rarely have premonitory symptoms. In some few cases, however, where the quantity given has been small, I have seen excessive irritability and feverishness occur, without going so far as convulsions. The children most liable to convulsions from the cause in question are those who have a tendency to delicacy generally, and water in the head particularly.*

Of convulsions arising in the infant from causes operating in the mother we need not speak.

When we investigate the "physique" of children who suffer from convulsions, we almost invariably find that their flesh is soft and flabby. A friend of ours once remarked that married men generally, and doctors especially, put their hands under a child's petticoats so as to feel its "nates," whenever an infant is put into their hands, by mother or nurse, for their admiration. Pleading guilty to the charge, I tested the reason for my thus acting, and found that I had unconsciously discovered that the condition of the buttocks is always a good indication of health in a baby. If these are firm and elastic, one may be always sure that the little one is strong and well;

* The cases detailed, and many others of which I am cognizant, but which have not come under my own eye, justify me in speaking as I have done in the text. Yet I am bound at the same time to notice, that I have seen accounts in which exceedingly delicate children, who have been unable to take any other food, have lived and thriven upon rasped raw beef or mutton. I have had no opportunity of testing the real value of the diet.

but if, on the other hand, they are soft, as if they were boiled turnips in a bladder, it is certain that the child is "out of sorts." To the philosophic physician, it is clear that, if the nates or "glutei" are soft, the heart must be so too, as well as all the other fleshy masses; it is equally clear that the muscular substance cannot be weak without the nervous structures being "out of condition;" and if all these are deteriorated, it is pretty certain that the stomach and bowels cannot be in first-rate order—*Ex uno discimus omnia*, or *ex pede Hercules*.

The question now suggests itself, whether convulsions arise from some change in one particular structure, such as the nervous, or whether they depend upon a certain condition of the body generally. There are many considerations which favour the belief that, as a general rule, they depend upon the state of the first-named system; but there is also evidence to show that they are frequently associated with decline in the other parts of the body.

To understand this proposition thoroughly, let us for a moment examine into the experience which we have of the effect of debility upon our own frame. We find that when we are tired, the brain is more irritable, and the mind less able to address itself to deep thought, than usual; that we are "nasty;" apt to explode in wrath at trifling things; and that we detest the noise of play, music, &c.,* more than we do

* In preparing this chapter for a second edition, I venture to indulge myself in recalling a conversation which brought the subject spoken of in the text prominently to my mind. It occurred at a dinner party, wherein I had a seat beside the host's daughter, who was the most accomplished woman I remember to have met. She was much interested in schools, and had, if I understood rightly, one under her own management. Thrown into narrative, the remarks which she made ran thus, "I have occasionally, when teaching, found all my class stupid. They had not learned their lessons, were

when in health; at the same time our appetite is capricious; and if we test our muscular powers at billiards, bowls, or rifle-shooting, we discover that we have lost the fine sense of "strength" to which we had before educated our arms, hands, and fingers; consequently, we know that when we are "out of sorts" our muscles are as unreliable as is our nervous system. When once we recognise the fact that debility increases, promotes, or produces irritability, we can see that, when the first is present, the nerves will be more excitable and the muscles more capricious than they are ordinarily, and we can understand that an impression made upon these will have a far greater effect at one period than at another. Hence we draw our deductions as regards the treatment of convulsions.

As convulsions are favoured by everything which impoverishes the body, so everything is to be avoided which can deteriorate it still farther. In this category must be reckoned aperients of every class. All are bad; but mercurial purgatives, which are often exhibited under the name of "alteratives," are the worst of all. A very short experience, if associated with close observation, suffices to prove

inattentive to what I said, dull in answering questions, and in other ways disagreeable. At first I attributed this to the weather, to the wind, to something wrong in the air of the school-room; but, never allowed myself to express my provoked feelings. At last, whenever I found two or three pupils in succession scoldworthy, I retired to a room by myself, and inquired into my own physical state. As a result, I discovered that what is attributed to the scholar is oftentimes due to some 'infirmity in the instructor.'" I most cordially agree with the lady's observation, and assert that an individual never has greater difficulty in exercising control over the tongue than when he is tired. My own rule of life has been never to utter a sentence that I should wish to recal. The task of keeping to this when exhaustion is present is so great that I have repeatedly been obliged to take refuge in silence.

that an opening dose of "blue pill," "grey powder," or "calomel," has a curiously depressing effect upon the nervous system, even when taken in comparative health. They are far more prejudicial when taken during illness.

In the same category we must place bleeding, whether general by the lancet, or local by leeches. Yet, as we write, memory brings up to our mental vision the spectres of young infants, whose skin, blanched as the paper on which my pen moves, seemed to be yet whiter by its contrast with the dark colour of that coronet of leeches which a doctor of those days had ordered for their young brows.

Side by side with aperients and bleeding, we must class the low diet which usually accompanied them in days gone by, and often does so still.

Let us pause for a few moments now, and think over what a convulsion is. It is an excessive use of all the muscles of the body; so excessive, indeed, as to be attended sometimes with rupture of the contractile fibres. In what way, then, let us ask, does it differ from the strain put forward in such exercises as rowing, leaping, boxing, and a variety of athletic sports? "In nothing," is the reply, "except that in one case the exertion is voluntary, and in the other it is compulsory." Now, the healthy man, who has been hard at work at the oar, or in any other way, finds that his work has given him an appetite; it has produced great expenditure of tissue, and a human instinct calls for fuel to feed the animal locomotive. Supposing to such an athlete we were to give water-gruel for dinner, and senna-tea for breakfast; is it not clear that his force would soon be reduced to a very low ebb? In like manner, if we give to one, who has spent his strength in convulsions, only a banquet upon porridge, with a dessert

of brimstone and treacle, is it not certain that we shall make him weaker than he was before ?

Again, amongst depressing agencies is to be reckoned bad air, by which we mean that kind of atmosphere, wherever met with, which operates prejudicially. To one, town air seems so bad, that country air, which is its opposite, appears to be absolutely good ; yet country air may be even worse than that of cities. A child living in a low built house, with close rooms, small windows, and surrounded by trees, is as badly off for pure air as if it lived in a cellar in a crowded court. *Cold and moist air can be found anywhere, and this it is which has to be guarded against.*

We have already sufficiently indicated that a meat diet is to be avoided ; we must equally shun too large a supply of vegetable or milky food.

As in the treatment of convulsive attacks we must discourage all things which deteriorate the condition of our patient; so we must patronise everything which has a tendency to improve it. For example, we may use preparations of iron, bismuth, or manganese, always seeking, if possible, for such forms of them as are palatable. To these we must add fermented or alcoholic liquids in appropriate quantity, cream, milk, cod-oil beaten up with yoke of egg, like custard, or in any other palatable form. Yet the physician, when he recommends these, must ever remember that they may be overdone. Too much of any one of them will produce feverishness, headache, nausea, and illness. Some children are literally unable to tolerate either stimulants or tonics. With them, diet alone forms the staple remedy. To these things we may add a diligent rubbing of the body with salad or other pleasantly-scented oil. I know of no roborant so

generally useful as this, and none to which children, as a rule, take more kindly. It may be used frequently during the day, and the invalid should be allowed to remain in the greasy coverings, if it desires so to do.

As cold is one of the things to be shunned, so warmth is everywhere to be promoted. The bed-room should not be lower than 70°, and promenades in a perambulator, or a regulation walk, during winter time, are to be avoided. The air of the house, if properly heated by warm air, is often preferable to the atmosphere outside the walls.

I have gone thus far without mentioning one of the most important aids in the treatment of convulsions,—keeping it to the last, as a school-boy retains the best bit of his cake,—I mean chloroform inhalation. The first individual to use this powerful remedy was an Edinburgh physician who was in consultation with the then Dr. Simpson, over a newly-born child apparently dying with convulsions, and the success of the plan brought it into notice. I well remember the first time that I used it myself. Returning home from a country journey, I found my daughter, aged twelve, in strong convulsions. She was ill with scarlatina, and during the day had been frequently attacked with vomiting, ejecting everything which was given. The urine was scanty, albuminous, and bloody; and when I came back she had been in convulsions during three hours. Two medical friends were beside her, but we could not raise a hope amongst us. Being anxious to bear my grief solitarily, the consultation was short, and I soon was alone at the bed-side. A chloroform bottle was at hand, however, and I administered some. In far less time that it takes me to write this, the convulsions were over. The effect seemed magical. Yet, though the formidable paroxysms

were over, insensibility remained, and there were frequent spasms of the eyelids, mouth, and limbs. Among other things, I noticed that both the cardiac and respiratory movements were irregular. Each twitch, as it arose, was the signal for more chloroform, and, to make the story short, four hours of close attention and frequent inhalation brought the patient round. Many years have elapsed since then, and as each fades into the past, it leaves a stronger impress upon its successor, of the value of chloroform inhalation in convulsions.

This drug may be used during the fit in every case. I do not know an exception; but the doctor must ever have his attention fixed upon the state of the respiration, and use the drug accordingly. Whilst administering it, I have seen the breathing as it were entirely suspended, and death apparently imminent. In such cases the method of artificial respiration to be adopted is that known as Dr. Sylvester's. It is managed thus:—The patient's elbows are firmly grasped, and the doctor then presses them with his own strong arms against the false ribs. This produces a pretty loud "ugh," or groan. The chest is thus emptied of superfluous air. Immediately after, the operator throws the arms outwards and slightly above the level of the head. This movement causes inhalation. A few seconds of this style of operation soon re-establishes respiration, if it is possible to do so.

In my own practice I never use, or recommend, anything but the naked hand as a vehicle for the chloroform, by which it is considered than an overdose cannot be given.

This inhalation of chloroform may be adopted both in the convulsions of pregnancy and parturition, as well as in epileptic seizures.

When once a drug has established for itself so good a reputation, as a curative agent, like chloroform has, it is certain that many will endeavour to ascertain if it is equally valuable as a preventive. As yet the amount of evidence, on one side or the other, is small. Some have reported that the regular daily use of the drug in vapour diminishes the frequency and severity of epileptic attacks, if it does not cure them entirely. My own experience is negative, for I have never yet seen any advantage result from chloroform as a means to stave off "falling sickness."

That it will, however, check and prevent the convulsions of children experience fully proves. An experienced mother or nurse can soon recognise in a young person, who has already been convulsed, the first indication of the fit, or the circumstances under which an attack is likely to come on. The use then of a small quantity of the vapour will check the advance of the disease. One such mother I well knew; she had such accurate information of the natural history of convulsions, and such perfect confidence in chloroform, that she was not alarmed when a fit drew near; nor did she seek for the physician's aid, unless the case should be more complicated than usual.*

* In the first edition of this work, I spoke of this lady in the present; alas, the past tense has now to be used. I refer to her again as a model mother. She could never at anytime count upon the assistance of a medical man, until many hours had elapsed after the message requiring his aid had been sent. During the interval her maternal heart was often sorely tried, and she, like every sensible woman would do, inquired what could be done under given circumstances, until the doctor came. Sympathising, as I did, with her difficulties, it became an object to reduce these to the smallest dimensions. She was instructed by my advice. My knowledge was increased by her experience. Every doubtful detail was discussed, and opinions, whose expression occupied in the writing of the above essay a few minutes, cost years in collection. My practice has thrown me much amongst those who live far away from their medical adviser. I write accordingly.

Let me therefore recommend to my readers who are likely to be concerned in the management of infancy and childhood, never to be without a bottle of chloroform in the house. To parents, nothing can be a greater boon. To the inexperienced mother, the period between the appearance of the convulsive fit, and the advent of the first doctor sent for, is something dreadful to bear. Yet if she has in her boudoir a bottle such as we recommend, and can find the courage to use it, with or upon the naked hand, that period will be shorn of its terrors. All she has to do is to undress the child, to keep it warm, to pour some chloroform on her palm—as if it was a clean handkerchief, and the drug a scent-bottle—and then put her hand before the loved one's nose and mouth, repeating this process as the fluid evaporates. To fill up time, she may then rub the body over with oil, and wait with calmness till her medical adviser comes. With such information as that given above, none of my readers need experience the miserable emotions of the writer, who, with all his medical honours thick upon him, was called upon to intervene between his son and death, without feeling able to take the stand desired.*

* The critic in the *Medical Quarterly* takes me to task for not referring to Schröder van der Kolk, in the preceding essay. I could not, for the simple reason that I have not, to my knowledge, read any of his works. As I make no claim to originality, I have a real pleasure whenever it is possible for me to quote an authority, or mention a name that deserved honour, before I ever thought of writing. My rôle has been that of an independent inquirer, rather than that of a bookworm. In all my work, I am actuated by the sole desire to advance the cause of truth, and to assist in placing our profession upon a surer foundation than it used to have; and I have too great a pride and interest in the labours of others, whose intent is similar, to feel envy towards them. I ought, perhaps, to have quoted Kussmall and Tenner's experiments upon the convulsions produced by loss of blood in the brain; but, as I believe them to be well known, I have been content to supplement their observations with others drawn from clinical experience.

CHAPTER V.

ON EPILEPSY.

Author's first acquaintance with epilepsy—Dr. Budd upon—Tonics—Cases—Influence of diet—Discontent breeds inquiry—Causes of the disease—Cerebral change—Physical character of epileptics—The muscles in epileptics—Epilepsy and sleep—The condition of the brain in sleep—Epilepsy and convulsions—Excitants do not always act as such—Convulsions before parturition—Exciting causes, other than physical change—Poisons in the blood—Treatment—Influence of age.

During the period when I was "serving my time" as an apprentice, I was living in the house of a master who was a pious "evangelical," and considered it a part of his duty to educate me in ecclesiastical as well as in medical matters, and I became, amongst other things, a teacher in a Sunday school. I had not sat upon my stool, in the centre of three sides of a square, half-a-dozen times ere I was astonished at one of the pupils, a lad of about thirteen years of age, tumbling over, and almost knocking me off my perch in his fall. Doubtless my face indicated astonishment, alarm, and sympathy, for another lad said, "Never mind him, sir, its only the falling sickness, and he 'll soon come round." He did as was foretold, but he was often attacked in the same fashion, and there was always some excitement in my mind whenever

the boy was present, for he used to fall down as if shot, sometimes backwards, giving his head a sonorous bump against the stone floor, and at other times sideways, or forwards. Of course, it was not in medical human nature to endure this Sunday after Sunday without my trying to study the disease, and to effect a cure.

It was not difficult to induce the sufferer to put himself under my care, and to me it was rather pleasant than otherwise to have to deduce a plan of treatment from every book to which I had access. The conclusion that I drew was precisely the same which Dr. Budd subsequently enunciated, in his lectures upon "The principles and practice of Medicine," at King's College, viz., that all the remedies which had been vaunted for the cure or relief of epilepsy were tonics. As a result, I ordered, prepared, and gave to the lad different drugs, such as quinine, steel, salicine, gentian, and others, said to be "strengthening." Very proud of my success I was, as week after week passed by without any return of the attacks. At length nearly two months had elapsed, and my vanity rose proportionately, only to be dashed to a low depth by finding the poor fellow one day lying in the passage to the surgery, apparently dead, certainly quite motionless, his face to the ground, and all his limbs relaxed. A long time elapsed ere he came to his senses again, and after that event the old medicines seemed to be wholly powerless.

The next case of epilepsy which came under my notice was remarkable for many curious points in the history. The patient was a servant man, aged about twenty-four, but looking much younger, for he had no hairs on his upper lip, cheeks, or chin. Like the person whose case precedes this,

he was, I discovered, a confirmed onanist, and had persevered in the habit until he had begun to imitate the young shepherd whose history is related in Richerand's "Physiology." The organ having been rendered insensible to the ordinary stimulus, it was excited by means of an instrument passed into the urethra, the implement employed being a pocket pen-holder. After a dinner party, in which he had drunk a great deal of the wine left by the guests of his master, he retired to bed very nearly intoxicated, and, ere he slept, introduced the plaything so deeply into the urethra that he could not withdraw it. He fell asleep, and when he was hurriedly awaked next morning, at four o'clock, by the gentleman, who ordered him to get up instantly, saddle the pony, and ride to the neighbouring town, he forgot all about what he had been doing overnight, rode his ride, and then, when he did recal his difficulty, it seemed to have cured itself, for the water pipe was clear. But he soon began to experience pain in the bladder, and very considerable suffering in the glans penis, which increased until he was unable to do his work. His master treated him kindly, and requested a doctor to attend him. After a visit or two, the youth confessed the cause of his condition, and he was sent to the Liverpool Infirmary, of which I was then the house surgeon. The story which I have narrated was given in the presence of the whole Medical and Surgical staff; an examination was made by a "sound," which confirmed the tale, and it was resolved first to try and extract the pen-case by the use of forceps, and, if that failed, to cut, as for the stone. When on the operating table and tied as for lithotomy, it was noticed that there was a large bedsore over the sacrum, and that there was general emaciation. The instrument was at last withdrawn, and resembled the figure 8, each end

having lain in contact with the bladder, and being covered with deposit of lithic acid.

After the operation, the man was ordered to have an exceptionally good diet, eggs for breakfast, meat at twelve o'clock, the usual dinner hour for the patients; again at half-past three, the officers' mess time; at half-past five, the patients' tea-time, there were two eggs added to the youth's portion, and at ten p.m., he had some sandwiches of beef and bread. To this was added two pints of ale or porter daily. In about a week's time the fellow had an epileptic fit, but so slight that comparatively little attention was paid to it. He was ordered an aperient only, but otherwise the preceding plan was followed. In a few days more the nurse told me that the man refused to take any food at all, and he complained of a curious sensation of stiff neck. Being of opinion that overfeeding had much to do with the symptoms, I took no active measures to restore the appetite. When next I went round, at night, it was reported that there had been a second fit, but, as the patient was asleep, no questions were asked him. Twelve hours afterwards I found him in strong convulsions, wholly insensible and unable to swallow. During the day he got worse, passing from one epileptic fit to another with frightful rapidity. I left him at midnight, hopeless of his recovery, yet the next day he seemed to be all right again. The heavy meat diet was now stopped, and the fits never returned.

My colleague, the house apothecary, now told me of a somewhat similar case, in which epilepsy had supervened upon amputation of the thigh, and in which the cause was clearly traced to excess in an animal diet. I subse-

quently met with, in young dogs, somewhat similar cases, that could only be referred to a like indulgence in beef and mutton.

In subsequent years the number of cases which came under my notice increased greatly, and my interest in the subject increased greatly also, when I became a lecturer upon the Principles and Practice of Medicine.

Being discontented with what had hitherto been written, it became my earnest aim to discover something better, or at any rate more certain. But in that, I am forced to confess, I have singularly failed.

My first aim was to ascertain, if possible, whether there are any valid distinctions between convulsions generally, and that particular form which is designated epileptic. If this could be done, then it is probable that the one is due to a different set of causes, and demands a different plan of treatment to the other. But, except in age, I can draw no true distinction between the convulsions of children and the epilepsy of adults. Both arise from certain conditions of the brain, both are paroxysmal in their nature, and both are equally formidable. In infants, there is a variety of the complaint, which is called by nurses "inward convulsions;" in adults, there is a corresponding variety, consisting in sudden insensibility, lasting only for a few seconds, but unattended with spasms; a form to which the French have given the name of *Petit mal*, or incomplete epilepsy. The close relationship between the affections which we refer to is seen in the frequency with which children who have been liable to convulsions in youth become confirmed epileptics in their old age; and how the presence of epilepsy in parents, or even their exposure to those causes that are likely to produce

falling sickness, will determine the frequency of convulsions in the offspring.

Before we allow ourselves to think that "the sacred disease" of the Romans and convulsions in the young are allied, it is advisable to consider what will be the result of the hypothesis, and whether it will tend to assist us in the cure. We are inclined to think that the grouping is beneficial, inasmuch as it enables us to understand the causes and treatment of both better than if we regard the two as separate. For example, the doctor, when called to see a case of convulsions, endeavours, during his attendance, to discover whether they depend upon casual and temporary causes or upon permanent ones. Amongst the first he classifies blood poisons of various kinds, loss of the vital fluid, by bleeding or by purging, lack of food, insufficiently pure air, injuries, over feeding, the irritation caused by teething, worms, &c.; amongst the latter he includes such organic brain disease as hydrocephalus in one of its many forms, or some malformation. One or more of these causes are in operation in cases of epilepsy; consequently, we feel justified in regarding the complaint as curable, until we have decided evidence of cerebral disease.

Leaving for a time the consideration of the curable causes of epilepsy, let us inquire into the circumstances which would induce us to believe that the affection depended upon some organic cerebral change. Amongst the most prominent of these is hereditary tendency. Of all the offspring born of epileptic parents, thirty-three per cent. have the disease, and sometimes they show, in their bodily configuration, as great a peculiarity as is found in those who are subject to infantile hydrocephalus, to phthisis, or to scrofula. There are few

observant doctors who have not noticed the misshapen heads of those afflicted with falling sickness. A large proportion, again, of confirmed epileptics have some or other mental peculiarity, sometimes moral, sometimes monomaniacal, and occasionally violently maniacal. These developments may be simply transient, and pass away with the fit, or they may be more or less permanent. Thus, excessive sexuality, intoxication, fits of brutal violence may be due to the same class of changes which produces the epileptic seizure.

Without dilating farther upon this point, let us in imagination transport ourselves, first, into the ward in which confirmed epileptics or epileptic lunatics are collected, confined, and treated; and, secondly, into the dead-house where their brains are examined. In the first, we find individuals who are for the most part pale, somewhat emaciated, with soft muscles, sleepy eyes, and languid movements. Each one, almost without an exception, has a peculiar cranium, and is affected with some form of spectral, aural, or other delusion. Experience has told the keepers of such poor folk that their disease is aggravated by low living, or anything which depresses the nervous centres; it has recorded the fact that the most potent factor in producing, or rather in determining the occurrence of, the first attack has been fright, or some long-continued mental emotion, and that, before the affection became confirmed, there were night terrors, troubled sleep, or else somnambulism, all of which indicate an enfeebled brain. On the other hand, a judiciously generous diet serves to increase the intervals between the fits of the disease.

In the dead-house, when we examine the heads of the invalids who have died with the complaint in question, we find

sometimes atrophy, sometimes softening of the brain substance, occasionally induration, and other changes, none of which it is in our power to cure. Sometimes it is said that hypertrophy has been found, but this I greatly doubt.

Let us now pause awhile, and, leaving the brain, fix our attention on the muscles, say of the arms. In our mind's eye we see a healthy deltoid, firm and red, of a definite size and thickness. We then examine another, and notice that it is pale and soft, and probably fatty. The first belongs to a healthy man, with a faultless medical pedigree. The last is owned by a consumptive man, or one in whose parents cancer, or other disease of degeneration, existed. We will now suppose that some or other cause induces both these men to use their deltoids for many hours, during every day, for about six months; and at the end of that time we find that the first is larger, redder, harder, thicker, and in every way stronger than it was before; the second is either atrophied, indurated, or inflamed. It is clear that the work which has strengthened the one has injured, if it has not disorganised, the other.

For 'muscle,' let us read 'brain.' Then we recognise that there are certain men, like Cuvier, Sir J. Y. Simpson, and others, who can use the brain day by day, until it, by its increase in bulk, encroaches first upon the thickness of the cranium, and finally distends it in all directions. As a rule, hard head-workers have skulls which are unusually capacious and thin. This is a true cerebral hypertrophy, yet there is no epilepsy. Where, on the other hand, men of indifferent constitutional power exercise their brains beyond a certain extent, the organ is injured, and epilepsy, insanity, or both combined, result, for the cerebral substance is softened, or otherwise deteriorated.

Everything, then, points to the belief that in epilepsy there is a low state of vitality in the nervous system, and a degenerate physical condition of its largest organ.

We now call attention to the important fact, that a very common time for epilepsy to show itself is during sleep. There are many individuals who have this complaint without knowing it, from the fact that it comes on in bed. Those who have opportunities for observation tell us that the most general period of invasion is when the person might be said to be just dropping asleep. I have myself seen this once, and shall not soon forget the incident. Mrs. ——, æt. fifty, tall, and spare, took a poisonous dose of laudanum, but was seen before she became comatose. She was then walked about between two men for about twelve hours. She then begged hard for permission to sleep. I gave it; and within a minute of her closing her eyes, there was a convulsion, and she seemed to be dead. She recovered. This associated itself with the fact, that when I have fallen asleep in church I have been repeatedly awaked by "a start." When a hard-working student in London, and a most diligent note-taker, I always fell asleep during the lecture before dinner, and "the start" which awoke me often sent my note-book and ink-stand far away. At night, after some hours of study, I was generally awaked, ere I finally "went to sleep," by a general convulsion; and repeatedly, when my children have been slumbering in my arms, have I seen a similar style of movements.

Upon what, then, does sleep depend? is naturally our next inquiry. The charts that hang up in surgeries, about the symptoms produced by poisons, generally ended the category with the words, cold sweats, convulsions, and death. *Somnus*

imago mortis then comes into our mind; and we ask, What is the relationship between the slight convulsions which precede and accompany sleep, and those which precede and accompany the act of dying? Physiologists tell us that in sleep there is a withdrawal of a considerable quantity of blood from the brain. We know that it must be so when dissolution is at hand. The careful experimenter demonstrates, by holes bored through the cranium of a canine or feline victim, that the brain contains less blood during repose than when the animal is wide awake.* The circulation of the blood is also slower.

We now begin to recognise the advantage of associating epilepsy with convulsions generally, for both experience and direct experiment have shown that most tremendous convulsive movements may be produced by suddenly cutting off the natural supply of blood to the brain. Kussmaul and Tenner not only showed this fact in rabbits, &c., but they held up a mirror to British doctors, which convicted them of faultiness in observation, bloody-mindedness in practice, and of being, in reality, vampires, when they desired to be beneficent.

We have hitherto concerned ourselves about cases of confirmed epilepsy, with the intention of drawing from them every observation which we can make of their state during life, and of the information to be gleaned after death. We now complete our remarks, by stating that in some instances,

* At one time it was supposed to be a medical or physiological canon, that the brain, being a closed box, must always contain the same amount of blood; and I can remember having been, in a gentlemanly way, laughed to scorn, for asserting, some twenty-five years ago, that the amount of blood within the cranium is variable, *mais nous avons changé tout cela*; and the one who should now dare to uphold the old theory, against the light of facts, would be stared at, much in the same way as Britons gape at a giant, a dwarf, two women with only one pelvis between them, or any other *rara avis in terris*.

where the body of a confirmed epileptic has been examined, a piece of bone, or some other irritant, has been discovered within the cranium, and has been regarded, probably correctly, as the cause of the attacks. But then it has been observed by Sir Thomas Watson, that, in instances like these, the "spiculum" is constantly in the brain (after having been formed), but the fits are not always in the body. A patient with an ossified *falx cerebri* has often had no epilepsy for weeks; months, indeed, have elapsed between one fit and another. Consequently, remarks the thoughtful baronet, there must be something besides the foreign body which determines the paroxysm. No sooner do we recognise the shrewd sagacity of the remark than a flood of memories crowd upon us. We remember A B and C D, who had occasional fits of tic douloureux during two years, which ceased on the removal of a bad tooth. And children, who may be represented by the other letters of the alphabet, who only had one convulsion, although each "cut" at various times some two dozen teeth. Bill Stumps had occasional fits during two years, and has no more when he has voided a tape-worm. Mary, Matilda, Martha, Jane, Elizabeth, and hundreds of other women, bring forth children, yet only one or two have convulsions. Thousands of wealthy folks gorge themselves, in China and elsewhere, with animal and other food, yet have not epilepsy. Why, then, should beef and mutton be blamed for this disease in a Liverpool Infirmary?

The question, then, "What determines a convulsive attack?" is quite as important as, "What predisposes the individual thereto?" A loaded gun at "half-cock" is harmless; it is that which brings it to "full-cock" and pulls the trigger which explodes the gunpowder. We have examined this point

in so far as it regards children who are liable to convulsions. It next becomes our business to investigate it as regards those of an older growth. Let us suppose, for example, that an individual has a tape-worm in the bowels, or a peculiarity in his cranium, or in his cerebrum, and is liable to fits; under what circumstances will one come on? We answer, generally, anything which materially disturbs the equilibrium of the nervous system, and particularly excessive mental emotion, great excitement, bodily fatigue, influenza, catarrh, diarrhœa, venereal and vinous debauchery, loss of blood, accidents, and the like. In one patient of mine, a fit was determined either by indulgence in gymnastics or music. As the privation of these luxuries was greatly felt, the young man made many experiments upon himself, whether he could not indulge in one or the other; but his hopes were always dashed. The lad inherited brain disease, and his first epileptic paroxysm was determined by assisting in a grand chorus at an oratorio. He had been able for many months to go through his part in the singing, and to take exercise in the gymnasium; but when his brain had been upset, by the influence of a performance unusually grand, and what the audience doubtless called 'soul-stirring,' he could not endure, without evil effects, the moderate pleasures which he had before. The patient was ultimately cured, and, when last I saw him, had been free from fits for two or three years, and had resumed attendance both at the music-hall and the gymnasium.

To the list before enumerated, we may add the presence of certain poisons in the blood, such as smallpox, scarlatina, arsenic, mercury, syphilis, and others.

But though everyone recognises the fact that there are causes which very frequently determine the occurrence of a

fit, it must be acknowledged that a paroxysm will come on without any apparent change from the usual humdrum course of life. We may, indeed, compare a paroxysm to a flash of lightning. Clouds collect slowly, and increase from day to day, but pass by some places without discharging their load of water and electricity; other places determine the fall of the electric fire by their height, or by tall monuments or churches. But in the end, the over-charged clouds dash their thunderbolts to our earth quite irrespective of terrestrial accidents.

Notwithstanding this, we may say that the physician has, when called upon to treat epilepsy, at least two distinct indications of the plan which he must follow. The one is to remove, where it is possible, a prejudicial irritant; the other to do everything to improve the condition of the nervous system.

To enter into details upon these two points would occupy a greater space than we wish any one of these essays to extend to; we will, therefore, conclude by giving an account of the routine practice which we generally follow. If the patient is aware that a paroxysm is imminent — and he is often forewarned of it, or his immediate friends are, by the appearance of some ocular or aural delusion, by a change of voice or manner, and the like,— we recommend for trial, in successive times, the inhalation of chloroform, quinine with opium, quinine alone, bromide of potassium to a large amount, hydrate of chloral in a full dose, or a dash of cold water into the face, or over the head. We have known one or other of these at some times stave off a fit entirely; at others all seem to be useless. When the fit is on, the first point is to stuff anything handy between the jaws to prevent the tongue being bitten, to loose the cravat and collar, and to

shade the eyes from the light. The inhalation of chloroform seems to shorten the duration, and diminish the severity, of the paroxysm. When the patient is out of the fit, it is advisable to give a tentative aperient, to satisfy ourselves as to the existence of tape-worm; then the individual may be recommended to try bromide of potassium in large doses, which seems to be the best drug; to take a sufficient amount of exercise in pure air, with the design of using as equally as possible the muscular nervous force, as well as the mental and the sensitive; by some means or other, to secure sound sleep at night, and to refresh the system, on awaking from sleep, with a shower-bath. If the bromide fails, we next have recourse to the frequent inhalation of chloroform in scruple doses at a time; or, if the patient prefers it, sulphuric ether may be substituted. Some writers have spoken highly in favour of both these remedies. Even if unsuccessful with these, we do not despair, until we have tried oil rubbing, cod oil, milk and rum, and the vegetable or mineral tonics.

In extreme youth, advancing age seems often to effect a cure, after even all the drugs tried have failed. I have, indeed, known a boy get perfectly well during the age of fourteen and twenty, although everything that could be reasonably thought of, added to the utmost care bestowed by a medical father, were used prior to puberty, and although after this period the young man indulged in every kind of debauchery. We do not for a moment suppose that his loose mode of living influenced the disease for good; but we must conceive that the curative power that age exerted was very powerful, when it was not thwarted by excess of venery and habits of intoxication. He ultimately died of consumption when about thirty years old.

CHAPTER VI.

ON THE TREATMENT OF PALSY.

A gale in the Atlantic, its effects—Palsy—Questions suggested—Wasting palsy—Muscles or nerves—Case in point—Causes of palsy—Change in nervous centres—Cerebral hæmorrhage—Apoplexy, old ideas respecting—Modern views of treatment—Counter-irritation—Cantharides—Palsy from enforced quiescence—An Abyssinian captive—Electricity—Palsy from muscular causes—Cases—Anomalous causes—Shaking palsy—Palsy from poison—Lead—Mercury treatment—Wrist drop, its management—Hysterical palsy—Palsy from mental causes—Case cured by mental emotion—Hypnotism—Mesmerism—Hope—Fear.

Our scene opens on the present occasion with a heavy gale in the Atlantic. Into the wind's eye is driving a huge steamship, which cuts the waves too impetuously, driving her prow deeply rather than superficially into their masses, and thus sending copious showers of spray and floods of angry water along the decks from stem to stern. The month is March, and with the tempest, blinding rain, driving snow, and hard hitting hail come careering madly along. On the deck of the ship in question stands the captain, in frame robust, young in age (thirty-two), a teetotaller by habit, and a seaman from his early youth. For two whole days and a night he is upon the deck, or bridge, of the steamer, holding on to anything

which will enable him to retain his legs. Nothing beyond hot coffee, taken as opportunity offers, passes his lips, for the vessel demands undivided attention, and a solid meal cannot be taken. At length the hurricane abates, the danger ceases, and the mariners can think once more of creature comforts. The weary captain is glad to take off his sea boots, which reach to the top of his thighs, and as they are pulled away he finds them full of congealed snow and ice. The limbs are cold as stones, and almost as insensible. From that time they fail more and more, until they are at length, after two years, powerless to support the body. This was the epoch at which I saw the case. The man, unable to walk without assistance, came staggering into my room with two sticks and an attendant, looking almost a Hercules in the trunk, and having a countenance apparently redolent with health ; yet both lower extremities were more like dead pig than living flesh, white, frigid, insensible, soft, and moist ; all manly propensities had departed, the parts were withered, and no larger than those of a child. There was, however, power over the bladder and rectum. The patient, after seeing me, went to Buxton, and there took baths according to local medical advice, first warm, then cooler, then cool, and in a few days was completely paralysed in both lower limbs, and in the bladder. Once again he became my patient, and on this and all subsequent occasions he followed my directions implicitly. These were to do everything which was possible to make the limbs warm, and to keep them so ; hot bottles, hot bladders, hot bricks, hot tea, hot negus, a warm room, friction with oil and turpentine ; the use of a catheter, an occasional enema, were to be tried judiciously, but no medicine of any kind whatever was to be taken. For months the

plan was followed, and, after a lapse of a year-and-a-half, the patient was walking about my room without any assistance; his legs were warm, and their muscles firm; there was perfect power over the bladder; and it was not without pride that he announced that he felt quite able to marry, as soon as he had found a woman to be his wife.

The reader may well conceive that a case like this would set the physician a-thinking. He would ask himself, What part was here the most affected, the blood, the muscles, the nerves, the spinal cord, or all combined? Will cold applied to the legs disorganise the central organ of emotion and sensation; or, if it do not quite disorganise it, does it inflict an injury upon it short of absolute destruction? In other words, is palsy a result exclusively of nervous injury; may it not arise from some alteration in the muscles themselves, wholly independent of cerebro-spinal alteration? Whilst thinking upon this question, we ponder over the effects of extreme cold, as reported by Arctic and other travellers, and we find that it takes away power from the limbs, produces a gait resembling that of a drunken man, thickness of speech, and gradually increasing drowsiness. Their experience scarcely helps us. We then pass in review those cases of wasting palsy, described by Cruveilier and Dr. Roberts, in which the muscles wither without the nervous system being affected; and we remember our own winter experiences when hands and feet sometimes became palsied from the effects of cold, whereas every other portion of the frame appeared to be sound. Yet, no sooner do we recall these facts, than we recollect that one very common cause of apoplexy, and its consequent paralysis, is prolonged exposure to cold; that a keen blast playing for some time upon one cheek will produce

tic douloureux, or palsy, in different persons; and that a protracted subjection to a wintry sky will give rise to sciatica in some, and paralysis in others.

With such considerations before him, it is probable that the physician will hesitate to decide whether lesion of the nervous centres is necessarily the cause of palsy; and will ask himself whether there may not be, in many instances, something wrong in more portions of the frame than one. No sooner has the inquirer formed this question, than he remembers that all practitioners of experience practically divide paralysis into two categories, that which arises from definite injury or other lesion of the nervous system, and that which is not attended with any change in the cerebro-spinal system which can be detected. We then recall to mind the memorable case told in Watson's *Practice of Medicine*, on the authority of Dr. Abercrombie, which is to this effect: — A girl, æt. twenty, sprained her back whilst removing furniture. She felt very little of it at first, but gradually became palsied in the lower limbs, then in the body, the upper limbs, and the neck, the head alone seeming to live. In this state the patient existed for twenty years. Yet when she died, and her body was examined, both the brain and spinal cord were pronounced by experienced observers to be perfectly healthy. But we meet occasionally with even more striking examples than this. Not long ago, a gentleman, calling upon another, was shot at by the latter, and struck somewhere about the neck, the effect of the wound being to produce total prostration; another bullet struck not far from the first, and roused the man into life and energy; though wounded severely, he fought like a tiger, and so injured his adversary that the last died shortly afterwards. It is difficult here to understand

how, if palsy arose first from a real injury, a second lesion could have neutralised the first.

Leaving then all attempts to classify the phenomena in question with rigid accuracy, we content ourselves with saying that palsy arises (1.) from changes in the cerebro-spinal system more or less capable of demonstration, such as concussion, hæmorrhage, surgical injuries, softening, &c., (2.) from muscular affections, (3.) from doubtful causes.

1. It will be evident, we think, to all, that if palsy in any case can be fairly traced to some damage in the brain or spinal chord, the treatment of such a case must be directed more towards the organ affected than the paralysed part. For example, if we find a man suffering from inability to use one side of the body, and we have reason to believe that a vessel within the brain has been bleeding into its substance, thus forming a clot, we know pretty well that chafing the limbs will not cure the phenomenon. No; in our mind's eye we see a mass of blood and serum, which we cannot return into its proper vessel, and which must undergo changes similar to those undergone by that which escapes under the skin when severely bruised. We know that the blood can only be removed by nature's own processes; and that the ultimate condition of the brain around it will be governed by the vital power inherent in the cerebrum itself. We then have to study why the clot is there at all; to ascertain what determined the rupture of an artery; and whether the same cause is still in operation, and likely to reproduce the same effects. We find that prior to the bleeding there has been a gradual change in the cerebral arteries, which have become thicker in their coats, but far more brittle than usual. From this condition it follows that the nutrient parts of the blood have

not such access to the brain around the vessels as they ought to have, and consequently that the cerebral matter is softer than usual. Whenever, then, any unusual strain comes upon the artery, it breaks in the portion where it is most brittle, and where the tissue around gives it the least external support; or it may part from a decay of a portion of the brain itself, extending to the artery which permeates it. Hence we allege that apoplexy and consequent palsy are due to an unusual strain upon the vessels, or an increased poverty in the structure of the cerebrum; softening and apoplexy being often almost convertible terms. If we are true in our deductions, it follows that our treatment of cerebral hæmorrhage must be, to promote quietude in the circulation, richness in the quality of the blood, and a sound condition of body. With this aim we prohibit active head work—mental emotion, if possible—and the too free use of stimulants of any kind. We also do everything in our power to bring the whole system into a healthy state, by generous diet and tonic medicines, if there is reason to adopt them; by warmth, comfort, good air, pleasant cheerful nursing, and the thousand and one luxurious small distractions which befit the sick room. At the same time we carefully avoid reducing the constitutional powers by purgatives, bleeding, mercury, and the like. That we are right in shunning these so-called remedies, experience has amply shown. Mercury, indeed, used for the cure of syphilis, has repeatedly been found to induce cerebral hæmorrhage; and few who have been treated with that drug, in large quantities, have made a satisfactory recovery from hemiplegia.

There is, to my mind, nothing in the history of medicine which is more depressing to the thoughtful man, than to see

the method in which experience has been thrown away. The reader will see, in old treatises on apoplexy, a host of cases in which the invariable treatment of the doctor has been venesection, cupping or leeching, purgatives, and very often mercury. With this there has been associated an amount of mortality which almost appals us; and yet the sole lesson learned by the doctor was the severity or gravity of apoplexy as a disease. He never once asked himself what influence his treatment had upon the result; nor whether an opposite line of practice would bring about a very different mortality. Conspicuous amongst the offenders against medical logic was the late Dr. Abercromby, of Edinburgh, whose work upon cerebral hæmorrhage I would, if I were a descendant of his, gladly suppress, as being a record of medical manslaughter; and yet I have heard a distinguished physician, conspicuous for his literary attainments and his extensive medical and general reading, enunciate, *ex cathedrâ*, that "orthodox medicine" consisted in believing, and acting upon, doctrines which this very Abercromby, and other writers of a similar stamp, had published.

But in the treatment of paralysis from cerebral hæmorrhage, we may do something beyond leaving the patient to nature's powers alone. We may, when there are signs of a suspended improvement, inaugurate it once again by the gentle influence of a vesicant to the neck. And here let me notice, shortly, the design with which I use blisters and rubefacients. The idea that they are "counter-irritants" ought to be wholly abandoned. They ought to be regarded (when they are not used simply as a punishment, or as excitants to arouse from lethargy, or to distract attention,) as means whereby a stimulating material can be made to permeate

through the skin to deeply-seated tissues, where thus it may influence an injured part, as satisfactorily as resin ointment will an indolent ulcer of the leg. The subject of vesicants, &c., is treated at length in my work, *Foundation for a New Theory and Practice of Medicine*, and to this I must refer my readers who are interested in the question. This form of medication is nearly the only means, besides the ordinary circulation of the blood, by which we can influence the substance of the cerebrum.*

We must now bear in mind that prolonged inactivity in a limb, no matter what the cause thereof may be, will produce, after a time, immobility of its muscles. One of the captives, for example, recently released from Abyssinia, has, I understand, wholly lost his capacity for moving, in consequence of the pertinacity with which he was forced to lie motionless on the ground. A man, too, who recovers from a fractured arm

* It may very naturally be asked, Why, if cantharides is used externally, is it not applicable internally?—Indeed, my critic in the *B. and F. M. C. Rev.* puts the question pointedly. The answer is too long to be crowded into a note, or to be incorporated into the text. The subject is discussed fully in the book referred to. The shortest way in which I can give a reply is, that if a dose of blistering fly is given by the mouth, sufficient to produce in any given spot the same effect as a blister, the effect would be universal, and not local. Vinum opii, and a solution of nitrate of silver, are appropriate remedies in certain cases of inflammation of the eye, but I never heard of a surgeon combining their internal with their outward use. In like manner pain may frequently be deadened, or killed outright, by the local employment of a solution of morphia; an effect which would not be produced by a fourfold quantity taken internally.

The question, however, has a practical bearing, for, as I have shown in the work referred to, it is an unphilosophical, if not an absurd practice, to use a local stimulant and a general depressant. If in any case a blister is appropriate, antimony, mercury, and venesection must be prejudicial. Something of this has been recognised by the surgeon, who, when he uses iodine, &c., externally, generally administers the iodide of potassium by the mouth.

or leg, experiences considerable difficulty in learning to use again the muscles which have been at rest for the long period required to repair the damage done to the bone and soft tissues. It will, therefore, readily be understood that if a patient is for six weeks without the power of using his limbs, when he has recovered a portion of that power the muscles would refuse to obey it. Hence, by means of friction or shampooing, and sometimes by galvanism, the physician endeavours to keep the contractility of the affected muscles as near to the normal standard as possible.

We think that the importance of a correct understanding of the use of electricity in paralysis is sufficiently great to demand a separate paragraph. Let us for one moment imagine that the nervous force (whatever that may be does not affect our illustration) required to induce a muscle to contract, resembles the muscular power to move a weight. We shall then see that, if the nervous power and the muscular energy be diminished, the same effect will follow as if the muscle had become less mobile, and the weight had been fastened to its resting place. In other words, if fever has pulled our strength down, we may in vain try to lift the weight which we could before. The same result will follow if our force remains the same, but the weight is soldered to the table. Now, galvanism to a muscle resembles a plan to prevent the weight becoming a fixture. It has no influence over the real disease, but it enables the nervous system, when it is restored, to move the muscular structures in the old fashion. As the weight will never be moved without some external force, so the muscle will never become useful to the patient until his nervous power has been recovered. Galvanism, we repeat, cannot restore this. It keeps, as it

were, the house swept and garnished, ready for the master when he returns to dwell therein ; but it can no more recall the master, than a well-aired bed will prevent its owner from drowning, by summoning him from the vasty deep.

2. When the palsy arises from muscular affections, the main point to be kept in mind is to promote, as far as possible, the warmth of the individual, and his general nutrition, and to enforce muscular contractility, if possible, by shampooing. My personal experience in these cases has induced me to avoid all active medication. Theory would lead us to the belief that strychnia would be the remedy *par excellence*, but practice tells us that it is wholly useless. I have not yet met with a single instance in which it has been of the slightest service, and I have met with some where the patient's life has been risked by the dose proving in the end too large. I am afraid that galvanism must be put in the same list. I have never found that it does good, and, as a general rule, patients consider it is too painful to be endured. In many cases of this nature, the doctor can only act like a judicious and observing nurse. But though he can really do little, he feels tolerably assured that nature, if she have a fair chance, can effect much. I cannot recall an instance, for example, in which a face paralysed by cold has not recovered itself completely when the patient has taken due care of himself or herself. A want of this attention, however, and continuous exposure to the same cause, will prolong the complaint and often make the cure impossible.

But I am not disposed to look so hopelessly upon these cases now, as I was when this essay was originally written. I have, during the past twelve months, had two patients under my care in the Liverpool Royal Infirmary, one of

whom had muscular atrophy of both forearms, whilst the other had palsy of all the muscles of the upper extremities, including the "trapezius," on both sides. After going through the usual routine with the first without any but an unsatisfactory result, I one day began to knead the portions which were left of the fleshy parts of the forearm with my fingers and thumbs, using the utmost force that I could command. The man winced, for the manipulation of the soft flabby muscles was very painful. But the house-surgeon and I persisted in the treatment, and in six weeks the flesh was firm; the shampooing was no longer a source of suffering; the muscles had increased in size, and had almost entirely regained their power. Here, hard squeezing or grasping, alternating momentarily with rest, effected what galvanism, rubefacients, and rubbing had failed in.

The second patient was treated from the first on the plan described, and was discharged at the end of three months almost as strong as ever. To be successful, I think that the hands of the operator must be at least sinewy, vigorous, and hard. It is doubtful whether an ordinary woman, or a delicate man, would suffice. To me it seemed as if I were in reality imparting on each occasion the strength of my muscles into those of my patient. The metaphor may be pardoned, for it deserves a place in the memory.

3. What to say to the third class of cases I do not know. Very many occur which fairly overcome every resource of the doctor, and in the end get well, nobody can tell how. I have known men wholly unable to move anything but the head, to expend almost all their living upon physicians, try in turn mercury, strychnine, steel, quina, wine, brandy, milk, the water-cure, and all things in vain, and yet get slowly well

after the lapse of years. I have seen such an one under the influence of strong mental emotion regain his power for a moment, only to lose it again more completely. One case to which I have before alluded, where a lad became paralytic from the waist downwards, appeared to be benefited by the use of a series of blisters to the spine; whereas, in other similar cases, vesication has done no good whatever, nor has even the actual cautery, so far as I can learn from those who have tried it. Of all the means, warmth, shampooing, good food taken hot, and hot fluid internally promise the best.

For that variety of paralysis called "shaking palsy," truth obliges me to confess that I know of no remedy whatever; in every case that has come under my care, I have been completely baffled.

One set of cases yet remains to be mentioned, viz., those which depend upon the presence in the system of some poisonous agent, *e. g.*, lead and mercury, and some would add syphilis. The indication in all these instances is to procure, if possible, the evacuation of the material. When mercury is the cause of the palsy, attention to the general health suffices, without the use of any drug; for the compound formed between quicksilver and the tissues of the body is a very unstable one, and the material passes from the body slowly, both in the perspiration and in the excreta. But experience shows us that the muscles do not always regain their tone when the metal has been removed—"the evil that men (and mercury) do, lives after them." To obviate this as far as possible, a steady course of shampooing should be resorted to; and by this I do not mean simple hard rubbing, but downright squeezing, kneading, grasping, and otherwise

working the fleshy parts, until they become firm as bread, rather than soft as hasty pudding. I have hitherto been unfortunate in my experience of iodide of potassium. I have used it in every case that has been under my care, but have not thought it worthy of the reputation which it has acquired in removing the effects of mercurial disease.

When the palsy arises from the presence of lead, a course of such medicaments as iodide of potassium or the bromide of the same base is desirable, for both of these appear to have some influence, although a very small one, in decomposing the comparatively stable compound, made between flesh and some of the many salts of lead. One of the severest forms under which what is commonly designated lead palsy appears is "wrist-drop," in which the patient loses all power over the extensor muscles of the fore-arm, and is thus unable to raise his hands to grasp anything. The flexor muscles are affected at the same time, but not to the same degree; so that, if by any contrivance a substitute can be found for the flexors, the hands can be made useful as before.

Ere we describe the plan which we have for about eighteen years past adopted, let us linger over one of the axioms in the treatment of muscular affections. A man has been known to sleep heavily with the head resting on the back of the hand, and the elbow on a table, and when he was awaked he has found his hand to be powerless, from wrist-drop, the extensor muscles being palsied from over-stretching. To enable the injured parts to recover themselves, it is necessary that the muscles shall be in, what we call, a state of relaxation, or, in other words, that they shall not be stretched in the smallest degree. In the case before us, this is best

accomplished by keeping the hand bent somewhat backwards. To accomplish this a bent splint, or some other contrivance, is required. The first plan would make the hand useless during the treatment; we must, therefore, have recourse to other management. What is necessary in this case is equally desirable in wrist-drop resulting from lead. The plan recommended, and which has now received the sanction of experience, is this:—A strong leather strap is secured above the elbow, and a firm leather glove is fitted to the hand, up to the base of the last joint of each finger, leaving the tips of these free; the back of the glove is then attached to the elbow-strap by a good piece of vulcanised India-rubber, and a broadish flap of the same material is sewn on the back of each finger of the glove, whilst it is laid flat. These elastic pieces are so adjusted that they draw the hand backwards and flex it slightly backwards. When the patient wants to use the limb he can readily do so, each forward movement merely stretching the caoutchouc.

I was led to adopt this contrivance, by observing the means with which Nature has provided animals, to enable them to support the weight of the head without fatigue. This is a long and strong elastic tie, of a yellow colour (which all acquainted with a neck of mutton will recognise as a round cord, which defies all chewing, and is not even made soft by stewing), that is attached to the back of the head and the prominent bone in the neck some distance behind. This is so arranged that while the creature is in repose, the head is kept partially raised, not quite to a level with the body, though nearly so. When the animal wants to pick grass, &c., this ligament is stretched like India-rubber; and when the feeding is over, the head rises without an effort, to that position

which is assumed by standing cows, when chewing the cud, and by sleeping horses. Since I first published this plan for wrist-drop, it has been extensively adopted, and generally with success, as a palliative and means of cure combined. Local treatment, however, such as shampooing, galvanism, and the like, should be also added. We must also do our best to encourage a flow of blood to the part. This last indication demands a few words in explanation; we give it succinctly thus: The supply of blood to a part is proportionate to the state of its nutrition, &c.; an organ which is in a softened condition has a small supply of blood; with little blood to draw from, the part will remain flabby; if an extra supply of good blood can be drawn into the spot, the tissue will have a chance of improving its condition. Now, experience has shown that a mustard plaster applied over the breast bone will frequently bring milk into the female mammæ; hence we conclude that we may, by drawing blood to the skin, give some of the supply to the parts below. Hence, in wrist-drop, we order the use of a strong rubefacient—*e.g.*, mustard, soap and water; one of the cheapest liniments we know, and at the same time the most efficient. The patient, or an attendant, is directed to use soap and water, as if washing the limb, and then to sprinkle mustard upon it, and to rub away until the skin gets red; this insures an additional supply of blood in the cutaneous vessels, and promises to do the same in the parts beneath.

Thus we see that the main points to be attended to in palsy do not materially differ from those to be regarded in many other complaints, viz., we must pay close attention to the general health, to warmth, and to such local remedies as are likely to develop any latent nutrient power.

There are other forms of the complaint under consideration, which deserve attention, viz., "hysterical" palsy, and that arising from syphilis. In the first I have no belief whatever. The words hysterical paralysis do not convey any definite meaning to my mind; nor can I discover that the writers who employ them are any better off. They seem to have some vague idea that loss of muscular power in a woman must be hysterical, unless some physical cause can be found for the phenomenon. But if they are asked what they intend by hysterical, they are wholly at fault. My critic in the *Medical Quarterly* seems to regard paralysis dependent upon mental causes, as a definition of the term in question, and infers, because I say that a certain case was cured by emotional influences, therefore the complaint was dependent upon mental causes. This is a specimen of that loose reasoning which has done so much harm to medicine.

The case that I referred to is that of a man who was brought into King's College Hospital for general paralysis. Dr. Todd, doubting the reality, ordered a moxa to be applied to the back of the neck. His clinical clerk and I used one which we made of nitrate of potash and sawdust, and it burnt furiously. As soon as the man felt the pain, he leaped from the bed to the floor so energetically as to upset the fiery mass into the bed. Nothing, however, could induce him to move again.

Surely this case cannot be properly called hysterical. If the reader will take the trouble to refer to a case given by a lady patient, and recorded in *Preservation of Health*, "On the use of a Doctor," he will see that there is sometimes a state in which, though the mind is active, the body is powerless. In that and similar cases, however, there is no palsy whatever.

Let us test the idea of there being mental causes of palsy, because powerful emotions cure, by a few cases. Dr. Budd told us in his lectures of a hemiplegic patient, who was taken to Sir H. Davy's laboratory to inhale the recently-invented nitrous oxide gas. Ere the philosopher produced his bladder full of the curious air, the patient's physician placed a thermometer under his tongue. The man exclaimed at once, I feel better already. After that he attended daily to have the instrument placed, and got quite well. On the day that the accomplished physician told us this, he called a hemiplegic patient to come from his bed into the middle of the ward, and satisfied himself and us that the man could not voluntarily move the left arm. The doctor then took my large and heavy note-book from me, and popped it over the patient's head; it fell on the floor with a loud sound, and at the instant the palsied arm was raised as high as the shoulder. In all these cases the influence of motion was conspicuous, but in none does it prove that the palsy was not the result of organic lesion. Again, on one occasion, I went to see the gentleman with whom I served my time, having been told that he had been singularly successful in curing certain serious diseases by hypnotism. I only saw one patient, however, and that was a somewhat elderly married woman, who had lost for more than six months the power of one side, apparently from cerebral hæmorrhage; yet she was cured by looking fixedly upon a watch until she dropped off into a curious form of sleep. Although this was the only case I saw, the particulars of many more were told to me; and as I hold a high opinion of my old master's medical acumen, and his stern veracity, I feel sure that the influence of hypnotism on the patients that came to consult him was very great. In women, the two

most general effects were perspiration and a return of the catamenia—even if they had not appeared before for many years, in consequence of the change of life.

Granting that the form of mesmerism referred to operates chiefly through the mind, it does not therefore follow that every case benefited suffered simply from the effects of mental emotion, and were only palsied hysterically.

I have conversed with naval surgeons and captains, who have assured me that the influence of fear and hope, upon men living for a time in unhealthy climates, is wonderful; yet none would say, if a person is cured of ague or hooping-cough, or hiccup, by a mental impression, therefore those diseases are hysterical, unreal, or dependent on the imagination.

I allow, for when a boy I had personal experience thereof, that fright will almost entirely paralyse the muscles. It has ere now deprived individuals of their senses, or their life; but when such an individual, by the influence of bright hope, is cured, would anyone call his complaint hysterical?

Once more; see yonder upon that couch a lady lies, who has been unable to move for years. To her comes an imposing man, and in a solemn tone utters the words, Rise up and walk. She does so. She has been cured by mental causes, it is said, therefore her palsy was hysterical. Let me ask any reasoning being whether there is any proof that there ever had been paralysis at all.

I have no more faith in the existence of syphilitic palsy than in hysterical. That persons who have had syphilis, and those who are said to be hysterical, do sometimes have a paralytic affection, which it is difficult to explain, I readily admit. But affections of precisely the same character, so far as we

can find, exist in individuals that have never shown signs either of one disease or the other. I am bound to say that I have heard of cases attributable to the venereal poison in which the administration of mercury has seemed to do good. But this does not prove that the cause of the palsy was syphilis. It is, I think, better to pigeon-hole certain phenomena in the "unexplained" division, and continue to investigate them, than to put them into a part where they are supposed to be settled and done for.

CHAPTER VII.

ON SLEEPLESSNESS, DELIRIUM, ETC.

Elderly lady and daughter—The case—Doctors don't laugh at queer clients—The patient—Another case—Causes of sleeplessness—Insanity—Icelanders in summer—Cause of sleep—Fever, case of—Sleeplessness, dreaming, and somnambulism, Dr. G. Johnson on—Allied to epilepsy—Attention and will during sleep, Mr. Lewes upon—Cases in point—Dreams and delirium—Bunyan on evil thoughts—Man is an animal—Experience in fevers—Famine and insanity—Food soporific—Opium and other drugs to counteract sleeplessness—Chloral hydrate—Other means—Delirium and drink—Summary.

About twenty years ago, an elderly lady and her daughter, both old friends of mine, called upon me, and the mother, after endeavouring to induce me not to laugh at her—for she evidently considered that the case she was about to lay before me had a ludicrous side—told me that she had come to ask my advice about her daughter, who could not sleep at night, nor in the day. Ere, however, I proceed to describe our interview and its results, let me say a word respecting the idea which seems to be entertained by some, that doctors are likely to show evident signs of amusement, when they are consulted about comparatively trifling, or what may seem to be very trivial, ailments. Such an idea, if acted upon, may occasionally deprive an invalid of all hope

of cure. For example, a mother may notice that her child is frequently tripping himself up, when he is running about, and that when he falls he is unable to rise as smartly as he used to do; or she may see the lad playing as lively as a kitten one moment, asleep the next, and again wide awake to pursue the interrupted sport. These and similar matters may appear to mamma to be too minute to trouble a physician about; and, from the fear that her maternal cares will be laughed at, she allows the first indications of water in the head to be unrecognised. But the doctor, knowing the value of small signs, never thinks of ridiculing a patient who comes to him for an opinion respecting any symptoms. It is, however, quite true that the doctor is sometimes sorely taxed to repress a smile, when the point to which his attention is directed is an eminently absurd one. For example, I know a medical practitioner, who was summoned, in hot haste, to see a lady living at a considerable distance from his residence. He went, anticipating some dire catastrophe, but the only thing which awaited his decision was the question, "Doctor, I am very thirsty, may I drink a glass of water?" Absurd as the query seemed, it was to my friend a matter not to be pooh-poohed, for it indicated that there was present that mild form of insanity, which goes by the name of hypochondriasis.

To return, however, to the ladies whom we mentioned above. The patient was one of the most charming women that I knew. Her features beamed with intelligence. Her manner was graceful, and full of heartiness, and her mind was active and well regulated. She was a dutiful daughter, and very highly valued by the mother. As a sick nurse—and she was often called upon to act thus, under peculiarly

distressing circumstances—she was without an equal. In fine, she seemed to be such a paragon, that I wondered at her remaining single. After duly inquiring into the question, whether there was any "rooted sorrow" in the memory, or some absorbing anxiety of the mind, and being answered in the negative, I thought that all which I had to do was to prescribe an opiate, and in a dose sufficiently large to compel sleep. On the next day, however, I found that the four grains of opium, and sixteen of extract of Indian hemp, in divided doses, had done nothing whatever which could be recognised; she had felt a little giddy, that was all. Thinking, then, that the mark had been overshot, the next night no medicine was given. Still there was no sleep. Day by day now passed, and each one saw my patient weaker. Wine was taken with soup very freely, and other nutriment, by night as well as during the day. But still the young lady's strength failed continuously, and she was unable to sit up in bed for many minutes. At length a hot bath, followed by a very stiff glass of brandy and water, and stuffing the ears with cotton-wool, broke the charm. Sleep followed, and the patient slowly came round. Three similar attacks ensued, but not so bad as the first. After a time, my patient told me that there was present, throughout the whole period of her illness, a wearing anxiety, which may be indicated by quoting the following lines from Campbell:—

> Earl March looked on his dying child,
> And, struck with grief to view her,
> The chiel, he cried, that I exiled
> Shall be restored to woo her.

My friend, however, was more fortunate than the lady com-

memorated above, and is, since she has become a wife, as exemplary as she was loving when a daughter.

Let me now record another example of sleeplessness, and of one of its causes. Two gentlemen came into my consulting room, the one with earnestness, and the other with anxiety, on his features. A few moments brought out the tale that the latter had been bitten by a dog supposed to be mad; that he had been unable to sleep or do anything requiring mental application since the event, and was already showing signs of lunacy himself. A minute sufficed to prove that the skin had never been broken, and consequently that there was no danger of hydrophobia. But though relieved in mind, the patient earnestly entreated for an opiate. "Very well, then," I said, "pay attention to my orders. Buy a brace of grouse, and eat as much of them as you can for supper, wash them down with a pint of bitter ale; smoke a cigar; take a tumblerful of whisky punch into your bedroom, and when you are in bed empty the glass, then call on me again to-morrow to report progress." "Oh, but," said the companion very gravely, "doctor, you 've omitted one very important part." "What?" "Why, you know that your patient is a solitary bachelor, and you've not provided him with a companion." "Quite true," said I, "do you then keep him company until toddy time."

To this gossiping sort of case it would be easy to add others, of far greater gravity, even terminating in a suicidal death. Enough, however, has been said to serve as a text for our discourse, which we may divide into heads, the first of which shall be the inquiry, "Upon what does sleeplessness depend?" We answer, shortly, upon fatigue or exhaustion of the brain. Of this let us take a few familiar illustrations.

We see very frequently children whose sleep is taken away by terror, an emotion which seems almost to paralyse, we might, indeed, say disorganise the brain; for just as we have instances of bone and muscle broken by excessive use, so the nerve cells and fibres may be injured by some intense emotions, sometimes to death. It is a common occurrence for boys and girls, who have been anxiously poring over a lesson, or who have been ardent in learning a new and much-admired piece of music, or who have been promised a great treat, or who have been excited by play, and not soothed by a supper, to remain sleepless for a long time after going to bed. The adult knows that fatigue of body will, very frequently, drive sleep from the eyelids. In the same way mental work will operate; and many an anxious man of business finds that the troubles of the day cluster too thickly round his bed at night, for "tired Nature's sweet restorer" to visit his pillow.* In fine, all of us more or less recognise the fact that mental troubles, no matter from what cause they spring, often wholly prevent the brain from taking repose.

Another very common, but far less manageable, source of sleeplessness is a diseased condition of the cerebrum, produced by such organic change as water in the head, or some other whose nature is, to a great extent, unknown to us, or to the presence of some poison, such as that resulting from the excessive use of alcohol. The last is chiefly known to us as delirium tremens; the first is recognised under the generic name of insanity.

It is, in my opinion, of the utmost possible consequence to pay attention to the earliest indications of insanity, and a

* A friend once informed me that, during a crisis of commercial distress, his father did not sleep once during nine consecutive days and nights.

person who has a preliminary warning ought to be as careful of using his brain as one who has spit blood should be of his lungs. Sleeplessness is certainly one of the forerunners of lunacy. Well do I remember listening, far into the night, to the recital by a medical friend of his own case. His father had been peculiar, and what we should now call an oinomaniac; the son was decidedly delicate, original, and strange. He had on two previous occasions suffered from melancholia, and a most intense desire to destroy himself. At the time of our conversation, he told me that he had not slept for the last six weeks either by day or by night, and when I urged him to take a holiday, he promised to do so if he was not better in a week or two. He kept his word, and went to live with a country surgeon for some time, and recovered. But he became subject to these fits of wakefulness, which alternated with fits of depression, in one of which he hanged himself. I have met with other cases of a similar kind.

We cannot say during the period when the brain is thus particularly active, that there is lunacy existent, or even cerebral disease. Still farther, we allow that the Icelanders very generally are sleepless during the time when the sun is above the horizon for many days and nights in succession. What we want to call attention to is, that a brain which is never rested for weeks or months is liable at any moment to become so far affected that wakefulness merges into insanity.

When we attempt to penetrate below the surface, and inquire into the state of things upon which sleeplessness in all these cases depends, we feel our utter helplessness; being unable to discover more than the fact, that the condition of the cerebrum which produces wakefulness, is associated, very commonly, with physical peculiarities in the form

of the cranium, in the shape of the ears, the state of the hairs, and the nature of the skin; yet when we pursue this clue farther, we are at a loss to understand how it is that delirium tremens is usually associated with a sweating, and mania with a dry skin. The difficulties attending a perfect comprehension of sleep arise from our ignorance of its true causes; recent observers seem to demonstrate that during perfect repose the quantity of blood in the brain is less than usual. We do not see any reason to doubt that it is so, sometimes; but we are no nearer the mark until we find the cause which, as it were, expels the superfluity. If the account referred to is true in every case, we find it difficult to understand how it is that a full meal, with which nothing stronger than water is taken, will send a person to sleep far more profoundly than a long fast. I know that almost bloodless women and children sometimes seem to sleep as if they were comatose. I have often dozed whilst waiting, hungry and tired, for my dinner. On the other hand, the same individuals sleep far more heavily after a full meal. Again, granting, as before, that in sleep the blood contained within the cranium is less than usual, it must follow that, at the end of we will say a ten hours' slumber, the quantity will be reduced still further in consequence of the general loss by transpiration, &c., a person then ought to go on sleeping at the usual time of rising, unless there was something which called up the blood to ensure wakefulness. Whatever the power may be which determines drowsiness or vigilance, we cannot believe that it is exercised by the passively moved blood. But little as we know of the agent referred to, we are disposed to believe that it is an active one, which requires for its exercise a certain amount of good blood and of vital

activity. This opinion is based upon the facts that a man replete with food and weary with toil, will, after a period of variable duration, awake spontaneously; whilst another, enervated by disease, or loss of blood beyond a certain point, will, when once asleep, remain so until death, unless he be roused by somebody. Doctors and nurses are well aware of this, and whenever the patient under their care is very weak, they will not permit him to sleep for more than a few hours.

Here let me record an account of a case which I read in some Dublin journal, which made a great impression on my mind. A lady was very ill with fever, and had been treated, as such patients then were, with nauseant medicines, and thin slop diet. She was wakeful and delirious, and on a Sunday morning was given up as a hopeless case. Her friends went to mass, leaving a sister as nurse. There was Irish stew for dinner, and its odour reached the sick room. The lady raved for some, and was allowed to feast upon it. When the other relatives returned, they were horrified at the account, and sent far and wide for a doctor. None could be found for a long time, and when the first came he saw that the patient was sleeping so peacefully that he refused to disturb her. Others were equally considerate; and when at last the lady did awake she was declared to be out of danger. In her case, clearly, fulness was better than fasting.

Another point connected with sleeplessness is important, as being the link which associates it with delirium and insanity, viz., its relationship to dreaming. Dr. George Johnson, of London, was the first to call attention to this subject, in an admirable course of lectures, delivered before the College of Physicians, upon the therapeutical value of opium. Amongst

his illustrations, the doctor gave many in which the individuals who had been subjected to powerful mental shocks—such, for example, as seeing a child run over, and killed at their side—became subject to somnambulism and hypnomalia,* they themselves being under the impression that they never slept at all; this, when not duly attended to, eventuated in epilepsy, or confirmed mental disease. To this we may join the adage, that "a dream cometh through the multitude of business;" and the well-known assertion, that a "man thoroughly determined to awake at a certain hour, will do so." This happens, in my opinion, not because he has the power of rising from profound sleep at will—which is to the full as wonderful as rising again from absolute death—but because his anxious determination prevents him giving himself up to absolute and thoughtless repose. He thus carries his will into semi-unconsciousness, but compels his somnolent mind to attend to the flight of time, as marked by clock, by light, by coldness, and the like.

Whilst on this subject, we would call attention to the fact that the mind may be trained in such a manner as to be active even during sleep. Lewes, in his *Physiology of Common Life*, has given a somewhat amusing illustration of this. He saw a waiter in a coffee-room apparently fast asleep. To test the point in question, the visitor called "Tom," "Dick," "Harry," and sundry other names, but was unheeded; the word "Waiter," however, in the same tone, called the lethargic man from his slumbers at once. In like manner, a weary mother may sleep soundly through the din of storm and tempest, yet awake at once at the cry of her infant longing for the breast. Just so a doctor

* ὕπνος sleep, ὁμιλιά a discourse, &c.

may sleep profoundly, whilst his child is screaming in the maternal arms, but rise at the moment when his night-bell rings.

In all the cases which we have named, and in other similar ones, the individual is quite conscious that the active power of the will, which exists in the mind, is never allowed to rest completely; and he feels that he never sleeps soundly, except when the mind sinks to repose careless of what may happen; when it can say truthfully—as the pilot's child did, in the story that tells of a storm, and the awaking of the young one to pray with the passengers—"I don't care; my father's at the helm."

This power of prolonging mental activity into sleep may be carried even into drunkenness, and I feel certain that it is associated with a precedent steady cultivation of the intellectual powers. A doctor or a barrister can scarcely be so far intoxicated as to be helpless, unless, indeed, drunken habits have converted him into a sot; a labouring man, on the contrary, soon becomes what is called "dead drunk." The faculty of which we speak may, moreover, be cultivated, and, by a steady daily effort of will, a young man may force himself to awaken from sleep, when circumstances arise which would, if unchecked, produce a state of things that it is desirable to avoid. Great fatigue does sometimes destroy this power temporarily; and this very fact suffices to prove that, when the power is in operation, a man's sleep is not absolutely profound.

I should not be justified in dwelling at any length upon this matter, did I not feel that an author may incidentally mention something which is quite as important as his didactics. When a youth, I was miserable, in consequence of the

occurrence of a phenomenon that is common to youth. Now that I am old, I find that such accidental discoveries have comforted many more than one. Until I talked with my insomnolent friend, the notion never entered into my mind that this could operate, even during sleep. Since then I doubt whether my repose has ever been so perfect as it was before, except when beaten down by excessive bodily fatigue. I believe that individuals may train themselves to spring up from sleep ready, and armed at all points as Minerva was when she emerged from the brain of Jupiter. They may, indeed, learn to do what is necessary without awaking completely. But I never knew anyone attain this faculty who was not intellectual, and habitually thoughtful and observant. Marryatt records, in one of his novels, the following sight :—A drunken captain leaped overboard from his boat ere it reached the ship ; he swam, however, to the ladder, climbed it, and went to bed, muttering something about having "done" those rascals who wanted to ship him in a foreign vessel as a common hand. Next morning he was oblivious of all which Marryatt saw. But he had acted, whilst drunk, as he would have done if sober.

We have dwelt longer than we should otherwise have done upon this point, in order to show that the same causes which induce "dog sleep," produce, under other circumstances, complete wakefulness ; whence we infer that what will convert "light" into lethargic sleep, may convert sleeplessness into repose.

Once more, we revert to dreams, whose connection with inadequate sleep is pretty well recognised by all, "a dreamless sleep" being commonly considered as synonymous with "perfect repose." In what, let me ask the experienced

doctor or nurse, do the phenomena of dreams differ from those of mild mental aberration? Is not delirium, indeed, giving audible utterance to ideas which pass through the mind, which, if they had occurred during dreams, would have been known only to the individual? The observant physician occasionally marks with surprise, that during a calenture an individual, whose correctness of conduct and conversation leaves nothing to be desired, will give utterance to words and sentiments which fill the bystander with horror, and that he, or too often she, will commit actions wholly repugnant to decency. Scenes like this often induce those who are privy to them to imagine that there is many an exemplary saint who is but a sinner in disguise—a sort of whited sepulchre, fair without, but full of all abominations; yet the surmise is wholly incorrect. Who is there amongst us that in dreams is not tempted to do, and indeed to carry into effect (in idea), something which, if waking, he would abhor? In such a vision I have myself cut a brother open during sleep, that I might take out his lungs and cure him of asthma ere he awoke; (it was, I may mention, he who had told me, when both were boys, of the possibility of doing such a thing,) and I have anatomised my father after his death, only to awake horrified by the words which had all the ringing sound of reality, "What are you doing, boy? I am not dead yet!"

In like manner, dreams will make us loving and quarrelsome; cruel and long-suffering; honest to the backbone, or scoundrels to the core; yet the dreamers never feel contaminated thereby; they understand fully that the visions of the night do not mirror faithfully the principles and practices of the day. This point is finely put by Bunyan, when he

recites Christian's passage through the Valley of the Shadow of Death, in which the traveller encounters many evil thoughts, which distress him, most especially because he was not always certain whether they were not his own.

We may, I think, lay it down as an incontrovertible axiom, that no one can prevent what he believes to be evil thoughts intruding into his mind. They are animal, bestial even. When they have entered, they can only be opposed by the intelligent, and therefore active, will; and if, as a result of disease, judgment is powerless for a time, the bad side of our nature comes uppermost, and savagery supersedes intellectuality. This point leads us to ask another question or two, viz., Is not man naturally an animal, and allied to the brute creation? Is he not endowed with intellectual powers which, if he cultivates them, enable him to soar above cows and sheep, tigers and dogs? Must it not, then, follow that the individual will approach the bestial, or the divine, according to his mental training? If so, does it not follow that when, by accident or disease, the mental (or spiritual, if my readers prefer the word) faculties are suspended, there will be no check left upon the animal propensities? We will not, however, pursue this topic further. It is sown as a seed, not planted like a sapling.

When we consider delirium as contra-distinguished from insanity, to which it is very closely allied, we find that the word is generally applied to a state of things dependent upon some transitory cause, such as typhus, scarlatina, small-pox, erysipelas, alcohol, opium, and the like. In the usual language of physicians, the brain is overpowered by the presence of some agent, acting in direct opposition to the force which regulates the ordinary phenomena of human life.

How the hypothetical agent operates we cannot explain; but we do know this (or, at least, we imagine that we do), that the nature and severity of delirium depends upon the relative proportions of the vital, and the poison powers, *i. e.*, a large poison dose and an average life force will have much the same result as an average poison dose and a low life force.

The importance of this consideration is recognised when any one examines closely into the results of experience. This valuable monitor, whose lessons are far too often disregarded, and not unfrequently wholly misunderstood, tells us that those cases of fevers which were treated by large and repeated venesections were always attended with frightful delirium, far more severe and fatal than any which is recognised now, when the complaint is managed on more rational principles. The same remark applies to tartarised antimony, and other drugs of a depressing character; their use was formerly, and is now, attended with increase of delirium when that symptom is present, and if it is absent, it is induced to appear.

The most striking illustration which I can adduce in support of the assertion that wakefulness, a vivaciously dreaming condition, and absolute delirium have much in common, is to be drawn from the accounts which we read, from time to time, of distressing shipwrecks, in which the survivors have suffered from hunger and thirst. In these cases it is clear that every day, as it passes, must deteriorate the vitality of the sufferers, and bring every organ of their body into an enfeebled condition, which, if not arrested in the downward tendency, will culminate in death. Such individuals, when telling the experience of those who have died,

and of their own feelings, inform us that their days and nights are sleepless, or passed in slumber wherein visions of feasts, floods of wine, water, or other beverages, are painfully common. As the famine progresses, delirium supersedes dreaming, and this again generally terminates in mania and death; and even if help arrives before the sufferer dies, he is frequently found to be permanently insane.

Having thus arrived at the conclusion that sleeplessness and delirium are associated with a deteriorated, and very often with an impoverished, condition of the brain, we might naturally infer that our treatment of one or other would be exceedingly simple. That it is so in many cases, no one can deny; that it is exceedingly difficult to cure some cases of either one or the other, every experienced physician well knows.

A patient suffering from ordinary wakefulness is readily sent to sleep by a heavy meal, a glass of toddy, a dose of opium, or hydrate of chloral; but, in direct proportion to the gravity and persistence of the symptom, we have to develop our plan by adopting every means in our power. The use of a closely printed book, with a low light placed behind the line of vision, is a great aid to somnolence; so is either the faint sound of running water, the low ticking of a distant clock, the voice of a gentleman reading in a pleasant key, a hot bath, sponging the skin with *eau de Cologne* and water, gently anointing the legs with oil, or the regulated administration of beef-tea, &c., the patient being enjoined to see that it is given. A due arrangement of the gas, so that the light is never in advance of the line of sight, is preferable to darkness; and it is better to see some gentle movement in an attendant, than to have no object of interest. The use of

successive doses of an opiate is preferable to a single large one, and in obstinate cases a solution of morphia may be injected under the skin, or chloroform be inhaled. In one distressing case, in which the patient was dying from disease of the kidney, persistent wakefulness was the symptom most complained of, and this was only successfully treated by the use of chloroform, which was administered by attendants for many hours together, and formed the only solace in the lingering illness. At that time, however, the hydrate of chloral was unknown.

Besides these, other contrivances may be used. A pillow made with hops was once very popular, though not so now. The bedroom may have its atmosphere charged with an opiate by means of a spray diffuser; the chest may be covered with a strong mixture of morphia and lard; an enema of laudanum may be administered; and the head be surrounded by a nightcap soaked in a solution of extract of opium, and covered with oiled silk to prevent evaporation. With a few, bromide of potassium produces drowsiness. In my own practice I have never seen it do so, but a personal friend has assured me that it is the best hypnotic that he has tried in his own case, In fact, the ingenuity of the doctor has to be tested to the utmost, and it sometimes fails. One such case I remember, in which everything which could be thought of was tried, and unsuccessfully, sleep being ultimately induced during a walking tour through Switzerland.*

* The preceding sentences were written ere the use of hydrate of chloral as a soporific was introduced into medicine. Now that I have had some experience of its value, I am disposed to place it before all other opiates. During the last attack of gout from which I suffered, insomnolence was a prominent symptom; and as continued sleeplessness seemed to increase the sense of debility

Respecting the treatment of delirium, the physician has not much to say, and the little that can be remarked is chiefly negative. It is not judicious to give alcohol in any form, without the closest attention, and many a tentative or experimental suspension of its use. The old doctor can recall instances in which he has ordered wine and brandy with the best intentions, and been alarmed at the gradual increase of incoherence, which another has recognised to be simply the maundering of drunkenness.

Again, after an opiate, there may be deliriousness of whose real nature the doctor is doubtful, *i. e.*, whether it is due to the disease or to the drug given for its cure. As I write, the recollection of a case arises, in which I was called in consultation to see a gentleman, who, although seeming perfectly rational and well, was perpetually talking of and to imaginary beings which peopled his room. Two other similar cases are recorded in the last number of the *North London Hospital Reports*, in which instances the patients were demented almost to lunacy ; yet the first case was due to morphia alone, used externally, and the two last to belladonna similarly employed.

As a general rule, delirium is best treated by what may be

caused by the complaint, the opportunity was taken to test the worth of soporifics. The palm was won by the drug in question. Within ten minutes of taking it, and without being conscious of any sensation except that which tells of the access of sleep, there was perfect repose. On awaking, some nine hours afterwards, I felt as if the sleep had been perfectly natural. And if, by any accident, the slumber was interrupted, there were no different feelings to those which are experienced when one is roused from ordinary slumber. The dose used was thirty grains, and I only had to increase it when suffering from excessive pain. Seventy grains was the largest quantity taken in any one night, and this sufficed to give me some hours of comparative oblivion when I had gout in the knee. I shall probably return to the subject when speaking of that disease.

called judicious nursing, on the non-interference principle, and if possible, by the abundant use of beef-tea, milk, whey, or egg flip, with bromide of potassium, and, tentatively, the hydrate of chloral, as the sole medicines.

Amongst the few external agencies which may be reckoned as remedies, the cold douche is of great service. The first time I used this was when house-surgeon to the Liverpool Infirmary. The patient, a young man, of whose history I knew nothing, was admitted during the day, but at night he began to walk about the wards, threatening to injure others and himself. When summoned to him, I could make nothing of the case, except that the youth was as wandering in his mind as he was in the body. Had he been a woman, I should have then supposed that he was hysterical; I certainly treated him as if he were so. He was taken to the bath-room, partially stripped, and there doused with buckets of water in succession over the head and neck. He seemed greatly to relish the application, and on being removed to bed he slept quietly. The nurse then assured me that the case was one of simple typhus. This she asserted that she discovered by her sense of smell; but I could find no sign whatever of that disease. The lad got well, and left us in a few days, without any return of the delirium, which I thought then, and believe now, had been brought on by semi-starvation and sea-sickness.

But—and the reservation is of importance—it is not advisable to use the douche, or indeed any other remedy, if its application involves much opposition on the part of the patient. As a rule, it is judicious to allow the patient, especially if strong, to have his own way. Thus, for example, I have known individuals in a feverish state insist on getting

out of bed, and doing so, to the attendant's great alarm. But they are soon glad to return. Of course, care must be taken, when folks are raving, that deadly weapons shall not be "handy," for delirium, like drink, often brings out latent vices, and, when no longer under the control of the Grundy family, a patient may do a deed long contemplated, but hitherto successfully avoided. We have no patience with the twaddle talked by amiable total abstainers about drunkenness being the parent of crime. On the other hand, I fully agree with the late Hannah More, who says,

> "But know too surely the first downward step,
> The treacherous path which leads to guilty deeds,
> Is to make vice familiar to the thought."

If I really loved a dark gazelle, and much admired its soft black eye, no drunken or delirious fit would make me kill it; but if I only "made believe" that it was dear to me, and I really disliked it, my brutal human nature, when it gained the upper hand, would make me try to effect that which my mentality had suggested, but had not dared to perform.

As a rule, in every case of delirium no coercion should be used, unless the attendant or nurses are sufficiently strong to carry out their determination. A delirious patient has generally wit enough to know what he can venture on; and even a child will do in a mamma's presence what he, though deprived of his senses apparently, will not attempt when papa is the watcher.

All directly depressing means have to be avoided. Delirium itself is apt to terminate fatally from exhaustion, and this tendency is materially increased if the patient is weakened by the doctor as well as by the disease.

In few words we may sum up the main principles which it is desirable to enforce; thus, in all cases of insomnolence and delirium, feed the patient—judiciously—into sleep.*

* It is difficult, in reviewing, after a long interval, an essay like the preceding, to avoid launching out into questions that may seem, to the general reader, irrelevant. Yet few observers can live long without noticing the effects of education upon the drunken, the delirious, and the diseased. Consequently, preliminary education ought to find a notice in a medical dissertation. A father, who has never exerted paternal authority over a healthy son or daughter, cannot do so over the child when it is delirious or drunk. Nor, on the other hand, can a lad who has been taught, and as he believes rightly, to respect his father, insult him when partially insane. As a rule, children too young to know Mrs. Grundy, and men and women who are drunk or mad, tell truths which are distasteful, because they cannot be denied. This fact is known to all. But the knowledge does not produce an uniform result, for one person says, "Gag the babblers;" another, "Make the faulty ones improve themselves." The philosopher would probably remark that it is a profitable thing for a philanthropic government to see human nature undressed. In the realm of shams, tests of reality ought to be sought for; and the prevalence of crimes attributed to "drink" ought to drive thinking folks not simply to teetotalism, but to a crusade in favour of a humanising education of the masses.

CHAPTER VIII.

INSANITY.

The study of insanity a special one—Value of the mind—Presumptuous laymen and lawyers—Prevention and cure—Dictum of law—Case—Ignorance of legislators about insanity—Insanity a disease of brain, not of mind—The *Medical Quarterly*—Every organ has its special use—Brain and lungs compared—Lunacy and coughing—Peculiar configuration in lunatics and consumptives—Silly peers of parliament—Hereditariness—Early stages of phthisis and insanity—Commonest cause—Exhaustion—Poverty and lunacy—Overwork—Alcohol—Oinomania and suicide—Solitary vice—Continence—Treatment of insanity—Diet—Quiet—Control—Houses of retreat—Lunatics like naughty children—Old woman doctors not to be despised—Physical and moral treatment—Advice to the friends of a lunatic—Hydrate of chloral—Bromide of potassium.

It is not often that an ordinary physician is called upon to treat lunacy. The restoration to health and society of those afflicted with this complaint, is usually relegated to men who have received a special training for the purpose, and are connected with establishments wherein are to be found all those appliances which experience has found to be necessary. Yet, though the doctor has not much to do with the management of confirmed cases of insanity, it falls to his lot to be called upon to recognise the disorder in its earlier stages, and to effect all he can towards warding off the disease.

Of all the ills that flesh is heir to, loss of intellect seems to me to be the greatest. Every one, whether peer or peasant, is aware of the awful nature of madness, by which, indeed, man, the noblest work of God, seems degenerated into a wild beast — often, we fear, more brutal than bears, bulls, or tigers. Yet of this complaint, which demands more close observation for its recognition than any other that we know, there is not an adult who does not believe that he knows as much as a skilled physician. Lawyers, with a presumption which we have greatly admired, have assumed the power of recognising lunacy, by making definitions that define nothing beyond the ignorance of the law-makers on this point; and juries are habitually invited to deride "mad doctors," whose knowledge is offensively superior to their own.* This state of things is much to be deplored; for the condition of England, who loves to think that she is highly civilised, is almost barbarous as respects the recognition and treatment of lunacy.

There is current in society the saying, that "prevention is better than cure." In law, on the contrary, the idea of prevention seems almost unknown. On one occasion, when Pickford's van was laden with barrels of new sovereigns, one of the partners applied to the police authorities in London for a guard, inasmuch as they had private information of a design to plunder it. The reply was remarkable. It ran thus: "We cannot do it; our duty is not to prevent crime, but to punish it." In like manner our legislators say, by their culpable negligence, it is not our business to interfere with

* Much in the same manner as we have heard that French Communists abused the educated classes, and howled down in their clubs all reference to Aristogiton, because it was evident from his name that he was an aristocrat.

any man until he commits a crime. It matters not, they argue, whether it is patent to all his friends that such an one is on the verge of an outbreak of mania, and is certain to murder his wife, family, or both, provided that he commits no overt act. So long as he seems to be sufficiently sane to lead a jury to believe him, he must be allowed to take his chance; and when he has murdered some one, say the magistrates, then we will arrest him, try him for his life, find him not guilty of the crime, on the ground of insanity, and shut him up till his death, whether he recovers or not. There is, probably, scarcely any single town doctor who does not know individuals that are dangerous men, from the presence of mental infirmity, but who are not sufficiently insane to be consigned, under the existing state of the law, to a lunatic asylum, or to other care than their own.

I am cognisant of a case, in which a young man, of the highest order in the intellectual nobility, became deranged in mind from excessive mental labour. He inherited insanity from a parent, and this was the first appearance of the disease in the child. I have never entertained a doubt that complete mental repose would have restored the unsettled brain to its normal condition. The gentleman thought so too. But his brain was too enfeebled to institute the necessary self-control for more than a few hours, and the animal gradually superseded the educated man. With his own consent, the necessary steps were taken to have him secluded for a time from the world. But a few days so greatly restored his power of self-command, that a fear of the law, as administered now, induced his temporary guardian to decline a farther charge. The youth, at about thirty, was then left to his own devices; relatives had no legal power to enforce

what they believed to be best; and they saw with the deepest regret one, whom everybody who knew had honoured and admired, steadily and surely ruining his health and reputation. At last the case became so bad that physicians ventured to run the risk of being persecuted in a court of justice, by illiterate (*quoad* insanity) lawyers before an equally nescient judge, and an incapable jury (I use the adjectives only with reference to knowledge respecting madness), and a sufficiently bold specialist was found to take care of the gentleman. But, unfortunately, the cerebral disease had acquired such dimensions, that a long time elapsed before a cure was effected. The state of the law prohibited the use of a nail, the shoe consequently was lost, and the horse very nearly was so too.

This condition of things depends very much upon the crass ignorance of those who have been constituted as the sole judges of the presence, or absence, of lunacy in any case, a set of men who know less probably of insanity than they do of astronomy. Common sense dictates that, in a question of seamanship, mariners shall be consulted; legal blindness dictates that, in a question of the brain's health, doctors shall have no voice! There can be little doubt that this state of things has been brought about by an utter nescience of what insanity is. There is scarcely one man in a thousand who does not regard it as a *disease of the mind*. The majority look upon a madman much as they do upon a naughty child; and they imagine that lunacy can be driven away, much in the same way as sauciness can be controlled in a schoolboy. From this premise they conclude that every individual who is said to be insane is wilfully so, and as much amenable to the law as a common felon, provided that he appears to know of there being such things as law and punishment. Such an

opinion at one time was held by physicians, and we still see, in ancient prints of "Bedlam," how the victims were treated, with a view of driving the wicked temper or evil spirit out of of them; whereas, one might as well try to cure jaundice with a whip, as insanity with a scourge to the back.

The educated minority, however, take a very different view of this question, and they recognise in the existence of lunacy the presence of *disease of the brain.** To make my meaning

* I regret to find that the critic in the *Medical Quarterly*, to whom I have frequently referred, has added the weight of his authority to those who regard lunacy as a mental disease. He remarks:—"No bodily derangement is present to make a man covetous or profane; why should it be pre-supposed necessary when he fancies himself a teapot?" In this short sentence, two questions are begged. It is assumed that vices are not hereditary, but due to the individual; and that any one, by dint of intellectual exertion, can really believe himself to be a teapot.

Leaving aside the somewhat doubtful improprieties, covetousness and profanity—for they are not necessarily immoral—*i. e.*, no one would say a horse was wicked, because he coveted corn, or that a Christian is profane, because he refuses to worship in a Jewish, heathen, and even in a heterodox temple, or church. We aver that viciousness is, to a great extent, connected with corporeal peculiarities. For example, few have ever found a pony which is not tricky; faults of a certain kind are hereditary in horses and dogs, and, in spite of all education, the offspring of the criminal classes are predisposed to crime. Males are pugnacious in almost every class of animal life; females are rarely so, except when guarding their young. It is bodily conditions that induce this peculiarity. Again, let me conduct the critic round a school, or introduce him to a large family, where all are carefully trained. He is certain to find a great variety in the individuals so treated. The strong-bodied youth is overbearing and manly; the weakly lad is too often a coward and a sneak. I allow at once that education can do much to make the bully gentle, and a liar truthful; but a bodily conformation will still influence the result.

If the writer referred to does not at once accord with this view, let me invite him to ponder over the following words, written by a man of no mean intellect:—"That which I do I allow not, for what I would I do not, but what I hate, that do I. . . I find then a law, that when I would do good, evil is present with me. . . I see another law in my members, warring against the law of my mind," &c., Rom. vii. 14—24. What meaning, let me

clear even to the lawyers, in case this should ever meet their eyes, let me enunciate a few physiological facts. Every part of the body has special duties to perform; the eye sees,

ask, can the words "law in my members" have, if it does not refer to propensities dependent upon corporeal arrangements or derangements. What, indeed, is moral insanity? Is it not an incapacity to overcome by education propensities inseparable to the individual, in the same sense as peculiar instincts are inseparable from certain animals?

To pass on to the next point, I assert that nobody, by the most diligent use of his mental power, could bring himself to believe that he was a teapot. I do, however, remember a story in Cervantes' exemplary novels, that seems to be founded on fact, in which we are told of a learned doctor of laws, who, after having been nearly killed by poison, struggled with death for more than six months, and only recovered to suffer from the strange madness that he was made of glass. From this condition, Doctor Glasscase, as he was called, on account of his failing, was cured, as Cervantes says, of his lunatic idea by a gradual restoration to good health and a sound body. But throughout the tale the poor fellow is always spoken of as the victim of a strange madness, produced by a love potion, given by a woman, with whom the doctor was too virtuous to deal.

Nothing that I have said in any of my writings can be fairly construed into a depreciation of education. What I assert is, simply, that a most careful instruction is not paramount. Once I sat for hours listening to an M. D., who was telling me of his own case, and his strong propensity to kill himself, which he was only prevented from doing by his knowledge of its impropriety. But a time came when the physical overcame the moral power, and the suicide was effected. Surely, it is right to say here, that the law in the members had warred successfully against the law of mind. And when I add that my friend could not drive away the propensity by a mental effort, and did get rid of it on more occasions than one by attention to bodily health, I am fully justified in inculcating, as I do, the importance of treating insanity as resulting from disease of the cerebrum, rather than one of the mind. The exercise of our intellect is a function of the brain, as much as contraction is a function of muscle, and seeing that of an eye; nor, when mind, contraction, and sight are disordered, can I understand how they can be themselves at fault. Of the nature of that "will," which uses brain, eye, ear, muscle, and other parts of our bodies, as its tools, I here say nothing, except to compare it to a rifleman, and the brain to his weapon; when every part of the arm, powder, &c., is perfect, the ball, if well aimed, is sure to hit; but if the barrel is bad, every shot is a failure. "Will" and skill remain the same, but the shooting or thinking tool is disordered.

the ear hears, the stomach digests, &c. When an organ is diseased, the nature of the complaint is recognised by a change in the function which the part performs—*e. g.*, a bad eye affects sight, but a bad ear does not produce blindness. Disease is then recognised by altered functions—*e. g.*, we infer that the stomach is out of condition when there is indigestion. The brain has functions to perform like other organs; it has to direct movement, to recognise sensations, to assist in the general nutrition, and to think. If a man is palsied on one side, we know that an injury has happened to the head; if there are ocular and aural delusions, we conclude that the cerebrum is unsound; and in like manner we conclude that another form of disease within the cranium will affect the intellect. A disordered mind, then, is as much a symptom of an unsettled brain, as dyspepsia is of a change in the stomach.

Having got thus far, let us compare the brain with the lungs, and imagine that both are affected to a trifling degree. As a result, there is "strangeness" and "cough." The two parts recover their usual condition, and the symptoms cease. Let us next suppose that the strangeness and the cough increase day by day, until there is undoubted insanity and confirmed consumption. Is it not clear that both patients are the victims of a diseased condition of body? But it must be remarked, that a poor phthisical patient may, for a time, control his cough; and a lunatic can, during a short period, conceal his insanity; but in neither case has this any influence for good over the disease, nor does it disprove its existence. Yet it may happen, that one who is ignorant of pulmonary affections sits for a time with the consumptive, and, not hearing a cough, disbelieves the doctor, who declares

that his lungs are "tuberculous." In like manner, a jury, who see a lunatic at a time when he is concealing his strangeness, may convince themselves of his perfect sanity.

Moreover, the observant physician notices that there is a peculiar configuration of the frame, which often precedes, and generally attends upon "decline;" and where his attention is called, for the first time, to one who suffers from cough, the presence or absence of this configuration aids him in his conclusions. The doctor, ere he uses his stethoscope to examine the lungs, casts a glance over the chest, the hair, the teeth, the skin, the hands, and even the nails of his patient. As consumption is preceded or attended with an altered condition of the body, which can be recognised by the educated eye, so is insanity attended by certain other marks equally perceptible. Yet the very physician, whose skill in discovering the existence of, or the tendency to, consumption in an early stage, by attention to the "build," is universally acknowledged and applauded, is derided, in the highest chamber of our legislature, if he should venture to recognise lunacy, at an early and curable stage, by an analogous set of observations! Our highest legal authorities, in their place in Parliament, have invited the Peers of England to ridicule a man, who asserted that a marked alteration from the normal type could be found both in the hair, in the skin, and in the ears of one who had a decided tendency to insanity, or who was a confirmed lunatic! Yet of this stuff are our lawgivers made; and Whigs and Tories are equally bad! Such men would, doubtless, ridicule artillerists for pronouncing upon gunpowder from the appearance of the grain, and naturalists for deciding upon the habits of a bird by the length of its legs and the shape of its bill, &c.

There is another bearing of this question, to which we must allude, for it is one of very considerable importance. It is well known that such diseases as consumption and insanity are hereditary; it is equally certain that, to a very great degree, the outward form of the child resembles that of one or both parents; consequently, we infer that a peculiar build and a liability to certain diseases descend together. A son has not consumption simply because he is chicken-breasted, nor has he insanity because he has a queerly-shaped head. Indeed, it is quite possible that the child may inherit the parent's configuration, but not his disease. But we are fully justified in asserting that a prolonged cough, with a consumptive configuration, has equal signification with an increasing strangeness and an abnormal cranium (of the lunatic type).

Having thus cleared our way, by showing that insanity is a symptom of a *diseased brain*, and not simply of a *disordered mind*, we can understand that it is a matter of great importance for the physician to be able to recognise its earliest stages, nay, even, if possible, to anticipate them. Here, again, we may return to our comparison between lunacy and consumption. Let us imagine, that we recognise the tendency to the latter, by the narrow chest, the pearly teeth, the lovely complexion, the clubbed fingers, and their rotund nails, we then strongly urge upon such an one, if we have a chance, long before there is a suspicion of a cough, the necessity for caution; we earnestly advise him or her to avoid excessive exertion of all kinds, sudden changes of temperature from cold to heat, and *vice versâ;* we recommend good and regular diet, abstinence from debauchery, and the like. As a result, our friend, though delicate, may never be ill,

and though liable to disease, may never be disordered. Just so it is with one who has inherited insanity ; he may show by his build that he is liable to the complaint, yet never have it; he may be strange, odd, peculiar, yet never lunatic ; his mind may be wayward, yet always under control ; he may be a great wit, yet never be afflicted with madness. Such constitute many of the world's greatest men.

But as the utmost care will not insure immunity from consumption in one who inherits it, so the utmost mental culture will not always enable a man to escape insanity. Time and chance happen to all men ; and the illness of a beloved wife, son, daughter, or other friend, or the misfortunes of trade, may develop the growth of disease, which would, under more favourable circumstances, have lain dormant. When once either consumption or insanity are fairly established in the individual, they are both very difficult of cure. Recoveries, however, do happen, and, by watching carefully the circumstances under which they have been brought about, and the nature of the causes which operated in producing the disease, we learn what to do, and what to avoid.

We will now consider the last, and inquire into the most common of the exciting causes of insanity. We might sum them all up in one single word, viz., "exhaustion," but we prefer to describe them more at length. In the first place, we would name poverty ; not simply the condition implied by the absence of wealth and luxury, but that which is attended with hard toil, mental distress, and insufficient food. Let us remember that shipwrecked mariners, who die of hunger, are generally mad before their death. While we talk over the crime of a poor parent who murders his wife and family as

a result of penury; let me invite the son of wealth to visit a cottage, in which a father, mother, and children exist without fire, table, chair, bed, or food; let him follow the father in his hopeless search after work, money, and victuals; let him accompany the wretched man home again, to pass many hours amidst the wailing cry of childhood, and this night after night, and day after day; and then let me ask my wealthy friend, perchance a magistrate, whether the murder, which some few such-like parents commit, is not more likely to be the result of insanity than of crime. Still further let me ask Society, whether we may not trace the gradual growth of insanity in England to the increasing poverty of our poor, more than to any other known cause?

But the brain may be exhausted by other means than loss of food. The debility which proceeds in a mother from over-nursing will equally produce it; and so will habitual purgation, or loss of blood. The brain may also be exhausted by over-work.* Just as excessive muscular exertion will often eventuate in paralysis of the motor organs, so undue and incessant exercise of the brain may induce a hopeless

* Since writing the above, a medical man in Yorkshire has called attention to a form of insanity which he designates nocturnal. It is probable that every one has recognised the phenomena spoken of without attributing them to insanity. In truth, they simply show that the brain of the individual is unstrung by his daily toil. There are few hard-working men—men who have to toil mentally or physically, or both—who are the same in intellectual power, temper, and religious feeling at night, as they are in the morning. When jaded, one person becomes cross, another argumentative, another cruel, another vain, cunning, &c. If the cerebral fatigue were to be carried beyond a certain point, such might be permanently insane, but sleep restores them. Without this aid lunacy would come on, and then each would show the disease by an exaggeration of the symptoms which he had previously exhibited nightly.

state of cerebral cachexy. This result is most surely brought about when headwork is undertaken on insufficient food, or a diet which is inappropriate to the end in view. The brain may equally be paralysed, so to speak, by any sudden and profound emotion, such as fear; and it has been remarked that sudden and intense joy—such, for example, as arises from a wholly unexpected piece of good fortune—will be followed by a like result. Many a poor man made unexpectedly rich, by being discovered to be the heir of some deceased millionaire, becomes insane in a short period. Advancing age is a well-recognised cause of the same disease.

One cause, very commonly assigned as operating to produce insanity, is indulgence in alcoholic liquors; we doubt the fact alleged. We allow that "drink" often precedes lunacy, but we affirm that intoxication is indulged in, because that is of itself a symptom of the existence of insanity. We can point to hundreds whose potations are, or have been, far heavier than those indulged in by the one whom drink has been said to madden, and yet none of them have had a sign of lunacy. At one period, the amount of whisky consumed in Scotland and Ireland was enormous—if my memory serves me, the amount taken in some localities annually was equal to twenty-six gallons per head for every soul in the place—yet insanity was not prevalent at the same time. To the observant physician, oinomania is as much a form of lunacy as is the propensity to suicide.

But there is yet another cause of which we know comparatively little in England, viz., solitary vice, that very frequently eventuates in insanity of a very hopeless cast. I have heard from individuals, who spoke apparently from personal knowledge, that this form of lunacy is very common in those towns

in New England where the laws against open profligacy are very stringent. It is sad to think that the suppression of vice in one form should encourage it in another, but we fear that the Old Adam is decidedly stronger than the new man. In some cases, however, an excess of manustupration is the result of an hereditary taint of insanity; an effect, rather than a cause.*

Such, then, being the main causes which produce the cerebral disease in question, it follows that a very important part of the treatment must consist in an adequate, nay, a superabundant, supply of food. It may fairly be doubted whether one single thing is more important as a curative agent. To such an extent is this recognised, that Lunacy Commissioners have, ere now, notified that those asylums are the most conspicuous for cures, whose scale of dietary is the highest. I

* I have been asked by many thoughtful men, whether a rigid continence induces in the male sex a propensity to insanity? That it should do so is an idea formed from the recurrence of a sort of animal mania, in the elephant killed a long while ago at Exeter Change, in London—an affection that came on at the rutting season. The expression, "As mad as a March hare!" adds to the plausibility of the notion, as does also the increase of ferocity, during the spring, of those entire animals whose habits we can trace. In our own class we do sometimes find that a strict celibacy seems to favour lunacy. Dr. Mason Good, in his 'study of medicine,' mentions the case of a clergyman, who, after the death of his first wife, remained continent, became insane, married again, and was cured. I have been told by a specialist friend, that he has under his care an idiot, who has a paroxysm of fury about every three months, during which he bellows night and day, until some sexual relief is given. We may also refer to the insane delusions so common amongst the celibate anchorets in the Thebaid.

But, on the other hand, the general effect of continence is to increase and improve the individual corporeally and mentally; and whilst celibacy is the rule amongst the Romish clergy, and in a great number is associated with perfect sexual purity, insanity is the exception. Consequently, though I would not deny that continence may bring on lunacy, I think that it very rarely indeed does so.

shall not soon forget a conversation with an old friend on this point. Having conveyed to his establishment a patient who was suffering from acute mania, I asked what was the plan of treatment usually adopted for such individuals? His reply ran thus:—"At one time, when first I began practice, the doctors ordered me to bleed the maniacal patients, but it never did any good; they raved and wandered, and tore about, until they stopped to die. Then the physicians adopted antimony and calomel, and the same results followed. Then opium was used in heroic doses, but still the patients shouted on, until they became quiet to die. Now, sir, we knock them down with food; beefsteaks and porter, ale and mutton chops, roast beef and plum pudding, half-and-half, pint of stout and a slice of mutton; all this every two, three, or four hours. Why, bless your soul, not any of them can stand this for more than two or three days; they fall asleep in spite of themselves," &c. He then told me that he only now feared for the life of those furious madmen who would not eat, for the stomach pump was inadequate to feed them sufficiently, and the fighting which it involved was prejudicial.

With abundant food should come mental rest, and this involves management. Look, for example, at yonder child, or at the whelp which plays beside it. You tell both to be still, yet the child fidgets, and the whelp trots about it. Perhaps you take a dog out with you into the pheasant covers, and after firing you say to the setter, "Down, charge," but the animal, wild with delight, rushes hither and thither. In such a case, what is the plan resorted to? The sportsman takes out his whip, and the fear of the lash will make child and whelp and dog obedient. Just such a master is required for a lunatic; he must feel that he is

under the influence of a force greater than his own. This he rarely can be, where the individual is the governor in his own house. Hence the frequent necessity for removal to scenes where the lunatic's will is no longer law.

As it is not my intention to discourse upon the treatment of lunacy in establishments, I shall content myself with pointing out the matters to be observed when patients remain under the care of their friends. And first, on purpose to object to it, I would notice that mistaken kindness which tries to cheer up the melancholic, and to convince the monomaniac, by reasoning. Both practices are essentially as bad as they are unphilosophical. "Bear in mind," I would say to such a friend, "that the brain of our patient is diseased; it is not like yours or mine, nor does it obey similar laws; it is 'tired,' 'exhausted,' or 'unstrung.'" "Were you never tired, so 'done up,' that you sought for a quiet spot where you could sit down and cry?" "Have you never, after a fatiguing day, in which you have been vexed, and thwarted throughout, sunk down in your arm-chair, and, like Jonah, said, 'Take my life from me, for it is better for me to die than to live?' If, now, at such times some old crony has come to you saying, 'Exert yourself;' 'Don't give way so,' 'Compose yourself,' or 'Cheer up, old fellow, things will be better to-morrow,' would you not wish that he was far away? If, on the other hand, a motherly old doctor—for some physicians are decent old women—were to see you in such a case, and bring with him a glass of milk, with a 'nip' of brandy in it, then retire until you got into bed, and return to place another such glass by your side, telling you to drink it if you could not sleep—and all this, without uttering a sentiment, or provoking an idea from you—would you not be disposed

to say, ere your senses were steeped in somnolence, 'You 're a dear good old soul, that you are ?"

Just in such a way should we treat one whose brain is unstrung; watch unobtrusively, anticipate wants, and ask no questions. The sagacious nurse may knit, sew, darn, write, paint, read, build card houses, play at "patience," dress and re-dress a doll, or herself, and a host of other things, in a patient's presence, and with marked advantage, too, where a single sentence, or even a spoken word, would do mischief. In such cases as I am describing, the mind resembles the body of a man recovering from fever. It is very much enfeebled, and can only regain strength slowly. To urge such a convalescent, who is only fit to cross a room, to ascend a high mountain would be absurd; equally foolish is it to endeavour to make a brain, only capable of entertaining one idea, discourse upon a dozen. In many respects a lunatic resembles a child; and the same judicious kindness and firmness which enable us to direct and encourage the one, assist us to manage the other.

The treatment, however, of the early stages of insanity is by no means confined to moral management; and of the efficacy of medical influence, I can give no better example than the following case, premising, as I am bound to do, that the plan was adapted from some writer, whose name remains not in my memory. A lady, who had previously been affected to such an extent that restraint, or confinement, had been necessary after about half of her "deliveries," began whilst *enceinte* to exhibit so many signs of mental aberration, that her husband determined to resort to medical advice before "the full time" arrived. It would not be judicious for me to detail the circumstances, farther than to state that

I induced the patient to carry out the plan recommended, which was the following. Each morning the lady was to have a tepid shower bath, and on each afternoon she was to have a warm bath, during which the bath woman was to keep on the head a large sponge duly cooled by repeated immersion in the coldest water procurable. A good diet was enforced, steel was administered as medicine, and, as there were reasons for it, a mild aperient was recommended, so as to prevent any solid accumulation in the rectum. The effect of this was very marked; the wakefulness, which had previously characterised the case, was superseded by natural sleep, and all the other symptoms gave way completely. The lady went to her full time, without any return of the unpleasant threatenings, and the boy born was the only one whose advent was not followed by his mother's enforced seclusion. It is doubtful whether the patient, her friends, or the doctor were the most pleased with the result of the plan of cure.

Though the preceding instance affords an illustration of the value of treatment, yet the physician must confess that it is by no means a sample of the many; such favourable results are unfortunately few and far between. One of the reasons of our want of success is the almost impossibility that exists in the carrying out of the directions which we give. As an example of this, let me imagine that a merchant, already immersed, overwhelmed indeed, with business, puts himself under my care; it requires no skilled adviser to prescribe complete rest, yet this is the very direction which cannot be obeyed, and without it all other commands or prescriptions are valueless. If, then, the attack which is threatened should come on, in spite of medical advice or treatment, the

result must not be regarded as a blot upon the physician's escutcheon.

As a conclusion, let me sum up the matter in few words, to the effect that, as insanity is a consequence of exhaustion in the brain, where it is not directly due to injury, or to hereditary predisposition, so the chief means to combat it are those which are calculated to enable the cerebrum to regain its normal condition, that is to say, good, or rather superabundant, food and mental repose. If these are afforded, "Nature," who, if permitted to have her own way, under favourable circumstances, is a far better doctor than any M. D., can find the means of "repairing damages," and we may fairly trust her to do so.

We may, I think, now fairly add to the category of our remedial agents, hydrate of chloral, whose value in mania is very great. I introduced it to the notice of a specialist friend of mine, in a case wherein I was concerned as a friend and physician, and so satisfied was he of its beneficial influence that he has adopted it. He always remarks to me, when I ask about it, "My wonder now is, how ever I got on without it." From personal knowledge, I can say that it is not only curative, but preservative, for when the patient above referred to has been threatened with a renewal of mania, it has always been staved off by the hydrate.

Coulston, in *B. and F. M. C. Review*, January, 1871, speaks highly of a mixture of bromide of potassium and Indian hemp, in half-drachm doses of each. But after having tried the two separately, and in conjunction, and found them powerless, I have seen a cure effected by the Hydrate of Chloral.

CHAPTER IX.

ON COMMON COLD, OR CATARRH.

Familiarity does not insure knowledge—Colds common—Cause of catarrh—Influenza epidemic—Theories—A typical cold—Its course—Symptoms investigated—Nose—Eyes—Throat—Windpipe—Stomach—Bowels—Progress—Cold and consumption—Catarrh not cold—Rare in the Arctic regions—Catching hot—Cold and chilblain—Treatment—Stuff a cold.

If all that is necessary to the correct understanding of a disease is to be repeatedly a sufferer from it, there would probably be no individual in our island who would not be very learned about catarrh. The playgoer has his interest often marred by the *prima donna* having a "bad cold;" the orator has his patience sorely tried during winter days by the clanging gusts of coughing which arise amongst his auditors; and he is obliged sometimes to absent himself from the admirers of his eloquence, by being unable to make himself heard, his voice being taken away by an attack of influenza. Our facetious friend *Punch* has also recalled to our attention the fact, that a bad cold in the head may do much to make a lover's "rendezvous" ludicrous, and that soft nothings cannot be whispered into a lady's ear when the speaker is hoarse, or can only talk in a falsetto key. It really would occasionally appear that catarrhs are as completely epi-

demic as are measles and whooping-cough; but if they be so, it is unfortunate that, when an individual has suffered from them once, he has no immunity from subsequent attacks.

It seems very absurd to admit that a doubt can exist about the causation of so common a thing as "cold," or "influenza"; yet the fact is, that there is great difficulty in ascertaining whether there are two forms of catarrh—one the result of some epidemic influence, which resembles that producing small-pox, measles, scarlatina, and cholera; the other the result of some accidental endemic agency, similar to that which gives rise to ague, dysentery, yellow fever, and the like. Occasionally catarrh seems to depend upon some general atmospheric change, such as transition from heat to cold, from frost to thaw, or from exposure to cold generally; and sometimes it arises from causes over which each individual has a greater or less control. Copland, in his dictionary of medicine, *s. v.* CATARRH, has an interesting paragraph about this matter, but it is not necessary to do more than refer the reader to it.

The history of outbreaks of influenza would certainly lead us to believe that there is occasionally a tide, of some sort or other, passing through the atmospheric regions from east to west, which, like pestilence, stalks through the air unseen. But, at the same time, it is to be noticed that influenza appears very commonly amongst us without there being any detected epidemic. In this respect we aver that the complaint resembles cholera, which, though general at one time over a large district, is usually sporadic everywhere, cases occurring here and there without there being evidence of contagion or infection.

In consequence of the vagueness of our knowledge, a variety of theories have been started to account for the phenomena attending a common cold. Some have even described it as an eruptive fever, not very dissimilar from measles.

There is, such a reasoner affirms, a state of incubation, in which the sufferer feels very uncomfortable without knowing why; then there is a stage of coldness, shivering, and malaise; next a period of heat, dry skin and tongue, thirst, and increased malaise, with an eruption of painful vesicles on the upper lip and upon the tongue; with all this there is an affection of certain internal parts, as there is in scarlatina and measles; this affection, moreover, runs a definite course, and then leaves the patient weak for a varying time.

Whether we accept this theory or not, there is much to be commended in it; for it enables the thoughtful physician to string together, by its means, a more distinct history of the complaint than he would otherwise accomplish. It enables him, moreover, so to arrange his facts as to carry his readers along with him to a legitimate conclusion. Without, then, expressing an opinion whether influenza results from the operation of a definite miasm, let us assume for a moment that it does, and then proceed to describe what is called catarrh, as if it resembled a disease of poison origin.

The epidemic usually manifests itself by producing, in those affected by it, a prostration of strength as sudden as it is intense. In the course of a few minutes, a vigorous man becomes as weak as if he were overcome by fever; and, unless he betakes him to bed, his body is as full of aches and pains as if he had been bruised and beaten. With this

comes more or less of cough, sore throat, coryza or running from the nose, loss of appetite, indigestion, and purgation; but the feeling of excessive debility is the most prominent of all the symptoms.

In this respect we find a parallel to influenza in those epidemics of measles and scarlatina, in which the type, as it is called, is so very low, that patients frequently succumb without evidence of the characteristic eruption, or of cholera, wherein patients die without purging, and even without effusion into the bowels.

In a typical case of catarrh, there is generally a feeling of languor, headache, and weakness in the limbs recognised before any other symptom is noticed. This is sometimes so great as to lead to the anticipation of typhus. After a short period the patient feels cold and miserable, disliking to face a November drizzle, or a December frost; and about the same time a sensation of dryness in one or both nostrils informs him that he is in for 'a cold.' As the eruption of small-pox is generally mild or severe, according to the position of, and the severity of the pain in the back,—a pain which heralds the approach of variola with great certainty,—so are the symptoms of catarrh severe or otherwise, according to the preliminary malaise, coldness, and fever. The fever in catarrh usually is very mild, so much so as to be sometimes inappreciable; but occasionally it is severe; an occurrence usually happening in delicate, and particularly in consumptive individuals. The symptom commonly subsides of itself, on the third day, whether any febrifuge medicine is administered or not, and when the fever is over, the prostration of strength in the individual is very marked.

We may now pass by the general or constitutional symp-

toms, and concentrate our attention on the local effects of the hypothetical poison. We shall find, as an ordinary rule, that the affections of the parts attacked are as transitory as the invasions of acute rheumatism in the limbs, or erysipelas in the face and head; and, we may add, as the eruption of measles, &c. The nose and the frontal sinuses connected therewith are commonly disordered first, and the whole of their mucous membrane is thickened, and its discharge increased.

The necessary consequence of this increase of bulk is, that a considerable pressure is exerted on the bones surrounding the nasal cavity; and the sensation of a bursting head, or rather face-ache, is commonly complained of. The nose itself also seems to be more protuberant, and the sufferer, saying that he is "stuffed full of cold," tries to press the bones down again. As an accompaniment of this thickening, the duct which conveys the tears from the eye to the nostril is closed, and the eye becomes tearful, and glistens accordingly.

From the nostrils the inflammation sometimes spreads to the white of the eye, and the individual then suffers from catarrhal ophthalmia. When this occurs, we can study the changes produced by the disease. We see simply inflammation, increased secretion, and thickening of the mucous membrane, that last for about two or three days, and then subside.

Occasionally the inflammation in the nose spreads along the eustachian tube into the ear; and when it does so, the case of the sufferer is to be deplored, for he feels at the same time a want, and a dread, of the operation called "blowing the nasal trumpet;" for the force required to clear the nostril

expands the diseased tympanum, and occasions considerable pain therein. From the nose, the affection passes to the throat, which becomes inflamed, sometimes ulcerated. From the inflammation affecting the muscles of the pharynx, as well as the mucous membrane, there is usually pain and difficulty in swallowing. There is, too, a secretion of dense mucus, in considerable quantity, which induces the patient to attempt to swallow far more frequently than usual.

On the third day, the inflammation has extended itself to the larynx, and there is loss or modification of the voice, some difficulty of breathing, and in very young children a croupy cough. Then follows a sensation of dryness in the windpipe, and down the throat, into the middle part of the chest, followed by a sort of asthmatic difficulty of breathing. This gives way in a short period, and there is a cough, which is more or less severe, according to the temperature in which the patient exists; and that lasts with varying intensity, and attended by a greater or lesser secretion for about ten days.

But the inflammation also passes from the throat down the gullet, into the stomach, and the patient then suffers from indigestion. This is due to the mucous membrane being thickened, and its secretion altered. As this thickening involves an increase of bulk, so the patient has the idea that something has lodged in the stomach which has to be removed. Consequently, he is repeatedly tempted to take opening medicine, under the hope that he may dislodge the intruder; but this he is unable to do, it being difficult to remove the stomach itself from an individual, even by the surgical operation of cutting the body open. With indiges-

tion there is loss of appetite, for the stomach rarely allows us to covet food when it cannot dispose of it in a satisfactory manner.

The catarrhal inflammation, which we are tracing, then spreads along the intestinal tract, giving rise to much unpleasant flatulence, and considerable purging. The ejecta are usually altered in character, in consequence of the mucus secreted by the bowel being vitiated. If the rectum suffer from inflammation, as well as the rest of the intestinal tract, as it occasionally does, there is much severe suffering, and symptoms approaching to dysentery. The calls to evacuate the bowel are urgent, but little material passes. Nevertheless, from the membrane being thickened, there is a sensation as if the parts contained something that ought to come away, and this induces a constant straining. But these phenomena soon pass away. With the symptoms to which reference has been made, there is, in addition, a changed condition of the urine. This fluid is usually scanty, and loaded with lithates, or red dust, which are deposited as the liquid cools.

But colds do not always run this career. In some persons the symptoms are confined to the air passages alone, in many to the intestinal tract, and in others to the nostrils. These cases it is unnecessary to detail.

Throughout the description which we have given above, a few things are very conspicuous; firstly, that all the organs are not disordered at once; secondly, that the affections are all, more or less, transitory; thirdly, that the tissues implicated, being only temporarily inflamed, get well of themselves; fourthly, that the patient is as certain to be debilitated as if he were in reality suffering from fever, or any other

blood disease. The feeling of lassitude and weakness, which always attends the complaint, is increased by the indisposition to eat, the difficulty of digestion, the occurrence of diarrhœa, and by the frequent exertion put forth in coughing. We assert, then, fearlessly, that "a bad cold" depreciates for a time the victim's strength. The vitality of an individual is diminished also by such affections as erysipelas, acute rheumatism, scarlatina, and measles; and experience has demonstrated that those who inherit from parents such diseases as struma, consumption, gout, &c., have the disease developed in themselves, after being prostrated by the affections which we have named. We are quite prepared, therefore, to understand that a common catarrh may degenerate into consumption. That it does so repeatedly, every physician knows; indeed, we believe that few observant laymen are ignorant of the fact. We ourselves feel so strongly about this matter, that we never hear of a friend having "a cold hanging about him which he cannot shake off," without endeavouring to persuade him to look the difficulty in the face. To this subject we shall recur presently.

We have stated that though catarrh is occasionally epidemic, it frequently arises in such a manner as to induce us to assign to it some local or accidental origin. What the cause may be, we must now endeavour to ascertain. We will mention first what does not produce catarrh. "A bad cold" is not the offspring of frost, or a low degree of temperature. It is doubtful whether a single soldier in the memorable Russian campaign with Napoleon suffered from coryza. Cossacks on the one side, and Frenchmen on the other, were equally free from "colds." Gentlemen who have travelled throughout a large part of the wild unsettled dis-

tricts of America, have told me that catarrh was unknown to them, even when they slept in the open air, in forest or in prairie, and found their couch and body clothes soaked with water when they awoke. There have been hundreds of reviews of the regular army, and of volunteers, when every man present has been soaked with wet, and starved with cold, yet very few, if any, have catarrh in consequence. I have not yet met with a single instance, or heard of one. "Bad colds" are practically unknown amongst Arctic travellers. Indeed, we do not wonder at this; for we may parenthetically observe that we have repeatedly gone out in frosty weather with our nostrils bunged up by coryza, only to find them cleared by the crisp air, as if nothing was amiss with them; yet a return to a warm room has soon closed them again.

The most common cause of catarrh is a sudden transition from a moist and cold atmosphere—such as is commonly met with in an "open" English winter—to a hot and dry room; and those people are most subject to "bad colds" who, by accident or design, undergo such transitions. For example, a lady, fresh from a ball-room, drives home a good long distance on a nasty night in winter. In spite of a comfortable carriage, she respires the cold air of December or January, and arrives at her house jaded with dancing, and chilled by the night dews. Joyfully she rushes to her comfortable boudoir, to find warmth, quiet, and a pleasant nook for chat. But she soon finds that she has "caught a cold"—it may be a fatal one—and then she and her friends lay the blame upon the chill on leaving the assembly room, rather than accord it to the comfort of the chamber of luxury. From long personal experience, I would say that no one single cause is more

frequently in operation to produce catarrh than the one referred to; and I entirely agree with the remark of an old surgeon, that it would be more sensible for individuals to say they had been "catching hot," when they felt themselves "in" for a catarrh, than to say they had "taken cold."

If we now pause to inquire what the effect of heat upon a cold tissue of the body is, we see its type in a chilblain. Children may play in frost and snow for hours, and yet suffer comparatively little from congested toes: they may have frostbite from prolonged exposure; but this is not chilblain. The latter is most constantly produced by heat being suddenly imparted to chilled extremities, such as toes, fingers, &c. When once chilblain has been induced, we see in it two stages—one of undue vascularity, or congestion, with a tendency to ulceration; the other, one of undue pallor, with ulcers that show no tendency to heal. Let us now ask the surgeon in what way he would endeavour to cure chilblain; surely, he will say, by local bleeding when there is congestion, and by local stimulation when the parts are ulcerated.

As like causes produce like effects, and as we see reason to believe that heat following frigidity gives rise to catarrh, we are justified in thinking that a "cold" has something in it akin to a chilblain. Consequently, we treat it locally, by small evacuations of blood. For example, we relieve catarrhal sore throat by two leeches over each tonsil; or, if the sore throat is more marked by pallor than redness, we use such stimulants as a port wine gargle.

Having thus indicated our opinions of the nature of catarrh, we may conclude by describing the routine treatment which we adopt. In the early, or "good-for-nothing" stage, and as long as it lasts, we order mulled port wine,

prepared according to any approved fashion; or, if people dislike alcohol, we suggest hot tea, steaming coffee, warm barley water, or any other nice diluent. Ipecacuanha lozenges, antimonial wine, and purgatives are to be uniformly avoided; sometimes they almost act as poisons. In many cases, nothing beyond spiced port wine, egged ale, or mulled claret, heated rooms, warm bed, and a week of "coddling" is required; but if the conjunctiva be very much inflamed, the internal ear be affected, the throat be very sore, &c., it is advisable to take blood locally, by means of a leech or two, as near to the spot as possible. For bad coryza, or cold in the head, the application of a very hot kerchief to the face, or holding the head over boiling water, gives temporary relief. The use of pure powdered opium for snuff is of great efficacy, but its employment is disagreeable to the patient for about half-an-hour, as the powder acts primarily as an irritant. As a gargle, port wine alone, swallowed at the end of the process, is appropriate; and the next in value to it is one composed of tincture of opium and water. For the cough, no linctus is superior to one composed of equal parts of rum, honey, and lemon juice, with or without the addition of laudanum. To relieve the indigestion, nothing answers so well as warm port wine negus; and for diarrhœa, an enema of starch and laudanum is superior to medicine given by the mouth. To palliate the discomfort of the general malaise, nothing is better, for those who can take it, than the use of opium internally, as laudanum, or the crude drug. To a man obliged to go out in all weathers, a pill containing two grains of solid opium will give relief for six hours or more. Where laudanum cannot be taken, chlorodyne will answer instead.

In fine, we may sum up our remarks by quoting a very trite old saw, viz., "Stuff a cold;" a very lame and impotent conclusion to those who have been accustomed to act as crude reason would dictate; but a boon of price to those who have been treated with antimonial or ipecacuanha wine, under the idea that they reduced fever. I know a family, some of whom have been near death's door, in consequence of having a "cold" when residing with a certain relative, who, being nothing in general, became by choice a catarrh curer in particular, using, as a panacea, solution of tartar emetic. This he recommended to his guests with such pertinacity, that they swallowed the poison to escape the imputation of disrespect, and then declined to take any more on the plea of clinging to life.

If a plan such as we here suggest be adopted, the chance that a cold will run into a galloping consumption is very small; if, on the contrary, a cold is "starved," or attacked by such drugs as blue pill, antimony, ipecacuan, colocynth, and the like, the depression produced by the disease and the treatment may eventuate in absolute "decline."

CHAPTER X.

ON SORE THROAT, ETC.

Common things oftened ignored—Varieties of sore throat—Soreness—Muscles of pharynx—Sore throat in scarlatina—Sore throat from muscular exertion—Hysterical sore throat—Effects of irritants—Value of opium—Laudanum and water as a gargle—Relaxed sore throat—Quinsey—Camphor—Beard—Scrofulous sore throat—Syphilitic sore throat—Nitrate of mercury—Enlarged tonsils—Swelled cervical glands—How to open an abscess about the neck.

As a general fact, it may be stated, that the phenomena to which we are most accustomed receive a very small share of our attention, whilst others which are more rare are investigated with philosophical precision. This certainly is the case with regard to sore throat, which has been comparatively disregarded by systematic writers, and respecting which there is a great deal of absolute ignorance. I cannot charge my memory with having ever heard a clinical lecture on the subject; or with having read anything at all approaching to an exhaustive essay upon it. Yet the matter is one well deserving consideration; for the complaint in question is always painful, sometimes dangerous, and occasionally fatal. A simple enumeration of the varieties of sore throat is, indeed, almost enough to take one's breath away. There are, for example, relaxed, follicular, myalgic, inflam-

matory, œdematous, ulcerative, suppurative, diphtheritic, destructive or malignant, apthous, erysipelatous, catarrhal, phthisical, scrofulous, and venereal sore throats. There are some in which the colour of the fauces is less than usual; others in which it is higher; and many in which it is deeper. There may be an affection in which the mucous surface alone is implicated; and others in which the disease extends through the coats of the pharynx, and into the bodies of the cervical vertebræ. The soft parts may be simply thicker than usual, in a dying condition, or progressively mordicant. I once had under my notice a man who had a syphilitic sore throat, which extended its ravages as steadily as *lupus* does when it attacks the face. At his death, the bodies of the cervical vertebræ were eaten half through their thickness.

But though the varieties are numerous, they are readily recognisable, and the doctor soon learns to divide them into specific and non-specific—those which demand special treatment, and those which require to be managed on the general principles of medicine and surgery.

Leaving for a while the first, let us inquire what the two have in common. They certainly have "soreness." The question then arises, why inflammation or ulceration of the mucous membrane of the throat should be more painful than a similar affection in the vagina, or in the nostrils. In other words, Why, under the circumstances, is the throat *sore?* If, before answering this question off-hand, we recall to our minds the phenomena presented by a sufferer, we notice that there is little pain in the part affected whilst the patient is in repose; but that every effort to swallow is very distressing. We then mentally review the accounts given of dysphagia, in which the agony of swallowing is such that patients will

almost starve rather than take food; and all this without there being any structural change apparent. Three such cases have come under my own notice; all were females, of great delicacy of constitution. We next notice that in some of the more distressing cases of cynanche, the patients at every effort of swallowing place the open hands on each side of the back of the lower jaw; or insert the forefingers into the ear, not in the direction of the passage, but as if they would reach the base of the sphenoid bone, and especially its styloid process. By pondering over the cause of these movements, we shall find that the pain in sore throat is associated with the action of the pharyngeal muscles. We then ask ourselves why such contraction should be a painful process. The answer is simple, viz., that the muscular structures are liable, like others, to inflammation, and that when they are inflamed, their contraction is attended with a great amount of suffering, almost amounting to agony.

In sore throat, then, we recognise an affection of the pharyngeal muscles, as well as of the mucous membrane alone.

We may now assert it as a fact, that an inflammatory affection of a mucous membrane may spread to the muscles beneath it. The extension, indeed, of inflammation, from its original seat to contiguous organs, is generally acknowledged. We can, then, have the glands and muscles of the neck affected by inflammation originating in the mucous membrane; and, *per contra*, we may have inflammation of the pharynx and mucous membrane from a similar affection in the cervical muscles and glands.

My thoughts were directed into this channel by having to attend one of my sons throughout an attack of scarlatina. He

had the disease much in the usual way, the throat being severely inflamed; but at length he was apparently convalescent, and was allowed to sit up in a comfortable arm-chair; being in capital spirits, he cracked his jokes with an attendant, and his laughter was heard downstairs. The nurse left him for a time, after he had been sitting up some three or four hours, and, ere she returned, my ear caught the sound of sobbing. On reaching the room, it was found that the lad was crying bitterly from pain in the sterno-mastoid muscles, and dared not move his head. He was soon placed in bed, but not to sleep; the sore throat had returned. He was unable to swallow, and, after a short period, a thick ropy mucus came from the throat, sometimes almost choking him. By perfect rest, this affection subsided in about five days; and, being warned by experience, I withdrew the permission to leave bed. With returning strength, however, came liveliness, and the nurse and patient rattled their small quips vivaciously. But every lively chat produced very painful myalgia of the muscles engaged in speech — the sterno-hyoid and thyroid, the omo-hyoid, and sometimes in the sterno-mastoid. But there was no return of the severe cynanche.

Since that period I have had a similar case under my care at the Liverpool Royal Infirmary, in which a woman, suffering from simple debility, had inflammation, first of the sterno-mastoid (from keeping the head erect too long), then of the pharyngeal muscles, and lastly of the mucous membrane of the throat. In the case first mentioned, the extension of the disease from without inwards was very rapid; in the second, it was slow.

As soon as we recognise a myalgic or myositic element in

sore throat, we are enabled readily to comprehend the real nature of dysphagia, and to see that it is essentially dependent upon subacute inflammation of the pharyngeal muscles, arising from extension from some of the cervical ones. I had a good opportunity of ascertaining this whilst attending upon a delicate young lady, who had been a patient sufferer from a most agonising complaint for many years; yet was all the time accused by doctors and friends of being "hysterical," and "fanciful." Amongst her other sufferings was severe pain in the act of swallowing, and she often passed some days without taking anything beyond a few teaspoonfuls of milk. She was a remarkably sensible, as well as sensitive lady; and when I told her my views of the nature of this dysphagia, she immediately rejoined that she believed in them; for she had very frequently noticed that the attacks were worst whilst she was in the habit of driving herself about in her pony phaeton, and ceased in a little time after she gave it up. She had in her own mind associated the two things, but had not succeeded in discovering the connecting link, viz., cervical myositis, extending to the muscles of the pharynx.

When once the reader is aware of the element referred to in cynanche, he will readily discover why, in some instances, spasmodic efforts are joined to those of ordinary deglutition; and how it happens that, in the act of swallowing, the pharynx suddenly closes, and discharges through the nostril the fluid taken. He will also understand how an irritant to the muscular structures will increase the patient's suffering, and protract his convalescence. It is, indeed, of the utmost importance to pay attention to this point; for, in the absence of such recognition, I have known lunar caustic to be

applied to the throat daily for some weeks, each application doing positive harm, from its irritating the diseased structure.*

We are now in a position to enunciate that there are two distinct indications to be observed in cynanche—the one to

*The case referred to in the text made such an impression upon my mind, and so modified the views which I then held, that I may be pardoned for noticing it more at length. My opinion was asked in consultation with the ordinary attendant, who not only had very decided views of his own, but enforced them very strongly. The patient was about ten years old, and had diphtheria, of which disease two or three brothers and sisters had died. He was very ill, and in great danger of dying from weakness; consequently, it was clearly our duty to endeavour to keep him alive. A chalybeate tonic was first used, but on our visit the next day the mother assured us that the child could not take it. Being incredulous, we administered some ourselves, and saw a portion rejected through the nose; at the same time the child dug a forefinger into each ear, not into the meatus, but as if it wanted to get below it. The distress depicted on the countenance was great, but the child forebore from crying, as if the act of doing so was known to be painful. The surgeon now applied caustic to the throat, assuring the mother that it was to deaden its sensibility. The misery that this appeared to produce "made my heart bleed," and, in my long walk home after the visit, I pondered deeply over the phenomena. But day after day passed, and I was yet unable to explain them. At last, I took up a skull, and placed a probe in the direction to which the patient's finger pointed, and his whole fist sometimes. The part was found to correspond with the cranial attachment of the pharyngeal muscles. But even then, as I had not any familiarity with myalgia, I was not much nearer the goal at which I aimed. At last, however, an insight was gained into the matter, and the opinions that are mentioned in the text were formed.

As soon as I fancied that the problem was solved, it became a matter of anxiety to test the truth of the deduction; opportunities were not long wanted, and I had in consultations many a chance of contrasting the effects upon the throat of an opiate and an astringent treatment. In my own practice, I systematically substituted anodyne applications, where I should previously have used such gargles as tincture of the sesquichloride of iron and water. As it would, in my opinion, be less interesting to the reader to read about my observations than it was to me to conduct them, I have only given the results in the text, with a few illustrative cases, to lighten the tedium of a sustained didactic strain.

soothe the inflamed muscles, and the other to cure the affection upon which that inflammatory condition depends. If in treating the one, we can simultaneously influence the other, so much the better is it for the patient.

When managing the muscular affection, we must notice not only what is to be done, but what is to be avoided; for our curative efforts may be neutralised when least we expect it. Amongst the things to be shunned, in ordinary inflammatory sore throat, in scarlatina, and diphtheria, are alcoholic compounds, the tincture of the sesquichloride of iron, caustics, and all irritating gargles. I do not assert as a fact that these are always prejudicial; but I do declare that I have seen the daily use of such medicaments produce increased suffering, which has not been suspended until the objectionable articles have been withdrawn. Some such patients I have been able to notice closely, and have seen wine, diluted and "covered" in every possible way, produce gradually severer spasms, until the dose has been expelled with force from the nostrils; whereas barley water or milk could be taken with ease. One especially, whom I repeatedly talked to about these matters, assures me that she has yet—though many years have elapsed since she had scarlatina—a vivid recollection of the horrible aggravation of her sore throat whenever she took wine or steel. I would also add, that I have had numerous opportunities of contrasting what I may call the caustic or irritant treatment of diphtheria, with that about to be described, and have hitherto found the results consonant with the views herein put forth.

As it is desirable to avoid anything likely to fret the inflamed parts, so it is useful to employ means calculated to soothe them. Amongst these are warm thick barley water,

and good rice milk, both of which act as fomentations do elsewhere. The medicine, *par excellence*, is opium, a drug whose value, in my estimation, increases perpetually. I first recommended it as a gargle for cynanche, in the case of a gentleman who had scarlatina; and where the throat was inflamed to such a degree that the patient could not speak or swallow, and dare not sleep, from the abundance of dense ropy mucus which the throat secreted. The proportion used was a drachm of laudanum to the half-ounce—*i. e.*, a teaspoonful to a tablespoonful of tepid water; and the directions given were, that the throat was to be well gargled; the fluid also was to be held often in the mouth, so as to ensure local absorption. The effect was magical; and the patient, when referring to it now, is almost as enthusiastic as he made me, when he first reported the result. He could both speak and swallow ere he put down the physic glass, and shortly afterwards went to sleep. Such a case made the physician thoughtful, and a series of observations were instituted, with a view to ascertain whether the occurrence was accidental, or whether an actual discovery had been made. Not only did the doctor himself investigate, but he endeavoured to enlist others in the cause, so that a reliable verdict might be attained.

After having satisfied myself of the great value of opiate gargles in sore throat, the question next arose, whether the drug had any value in subduing inflammatory action when locally applied, and whether it had what is called a "healing" influence upon ulcerated surfaces. By the aid of memory, books, inquiry, and observation, I found that opium has a well-marked power in subduing inflammations, when applied locally, or when given in adequate doses internally.

A frog's leg, steeped in an aqueous infusion of the drug, does not react on an irritant, like a limb not so treated, and narcotism aids in the cure of swelled testicle. Again, a series of observations on ulcers of the legs has shown me that there are few, if indeed there is one single application, which relieves pain and promotes cicatrisation so well as laudanum and water covered with gutta-percha or oil-silk.

In the preparations, therefore, of opium,—and I almost exclusively employ the tincture mixed with water alone, in strength varying from one part in three to one in eight, – we find a material which will promote cicatrisation of ulcers, abatement of inflammation of mucous membrane, &c., and relieve muscular irritability of the throat.

Having arrived at this result, it was advisable that those who were learning their profession should see the plan, here recommended, tried differentially; consequently, in my hospital practice I have used ordinary gargles; conjoined them with opium; afterwards used diluted laudanum by itself; and examined the results. As yet we have not had a sufficient number of trials to justify me in speaking strongly about venereal cases; but in all others the opiate gargle has asserted its superiority. The sedative may be applied with advantage externally, as well as by gargle; and the following case is one in which the benefit of this plan was very conspicuous. A lad, æt. about seven, and very delicate, had an attack of diphtheria, the preliminary fever running very high, and the throat being so severely affected that on the fourth day all power of swallowing was gone. As the child was unable to use a gargle, the mouth and throat were swabbed, as well as could be managed, by means of a large camel-hair brush,

with laudanum and water, and equal parts of the same materials were applied to the throat externally, and kept moist by means of impermeable tissue. The unhoped-for effect was, that in six hours thereafter the patient was able to swallow milk with ease, and in due time recovered without another unfavourable symptom. A similar result has followed in other cases; and I have repeatedly seen the use of a strong morphia ointment, or solution, applied externally, assist very materially in diminishing painful deglutition.

But valuable as is the opiate treatment of cynanche, it does not suffice for every case, or even for every variety. For example, it is wholly worthless in relaxed sore throat, where the pain depends upon a prolonged dragging of the soft palate upon its suspensory muscles. In such a case, relief is to be sought by mechanical and chemical irritants. One who is a sufferer from this form will generally find comfort from pressing the uvula and soft palate upwards, against the bone, by the nail on the back of his forefinger, or by the sharp edge of the round end of a lead pencil, or by a paper-knife. The frequent application of this will, indeed, often supersede the necessity for any other remedy: but the sensation produced is somewhat a choky one, and great nerve is required to persevere with it. When a chemical irritant is selected, lozenges of cayenne, ginger, or camphor are appropriate, and the use of such an irritant as turpentine externally to the whiskers, or to the skin when whiskers do not exist, will be of service. It is undesirable to vesicate the surface, for the benefit of such a rubefacient only lasts for a day.

In cases of erysipelatous or œdematous sore throat, where the swelling of the mucous membrane is considerable, the use of the tincture of the sesquichloride of iron is indicated,

either in a gargle, or directly applied by a camel-hair brush. This chalybeate is superior to any vegetable astringent; but where its metallic nature and its operation on the teeth are objected to, it may be replaced by a strong solution of tannin. Where a person is threatened with quinsey, and especially if such a one is subject to this affection, there is nothing equal to the local use of camphor; the directions to the patient being that a small fragment of that material shall be held in the mouth constantly. I was first informed of this by a medical friend, whose wife was a frequent sufferer from the complaint, but who had found in the drug a perfect cure. Since then I have tested the remedy, as far as my opportunities have permitted, by cross-examining those of my Infirmary patients who have tried it. Perhaps the testimony of one man may suffice for all. "I was," he said, "unable to swallow a drop of water when I came in, but the next day, after using the camphor, I could do with anything." No suppuration had taken place.

It is now the time that I should mention one of the most complete preventatives of quinsey that I know, and one which is of great value in sore throat generally, viz., the growth of the beard under the chin. The number of instances in which this very simple remedy has relieved individuals subject to cynanche is very great; its only drawback is that women, children, and certain men have no beards which will grow. Nevertheless, where this appendage to manhood exists, it should be cultivated by all who are liable to sore throats.

For scrofulous ulceration of the posterior wall of the pharynx—and this is sometimes so severe, prolonged, and extensive that it rivals that produced by syphilis,—I have

found no gargle equal to one compounded with iodine, and iodide of potassium; but in one case, where this was too irritating, the use of laudanum and water effected a cure. The first case of this nature that came under my notice was in every way remarkable. The gentleman had suffered from ulcerated sore throat for upwards of two years. On examination, the disease was found to extend upwards and downwards at the back of the pharynx, so far that both ends were out of sight. I could not myself distinguish any difference between the character of the ulcer and that in syphilis; but the man never had such disease in any form, or run a risk of infection; and I remembered that Ricord mentions a similar instance, where he mistook a scrofulous for a syphilitic affection.

My patient, however, had repeatedly been treated as if the sore throat was specific, but without any good result. He was ordered to use a gargle containing iodide of potassium, and to have the ulcer washed once daily with equal parts of tincture of iodine and water. In six weeks the affection was entirely cured.

When a patient suffers from a genuine syphilitic ulceration of the back of the fauces, and of considerable extent, the affection is one of great gravity, and occasionally it proves fatal to life. I believe that, for such forms of sore throat, and, indeed, in every case of syphilitic disease in the fauces and pharynx, there is no application equal to a gargle containing of one minim of the acid nitrate of mercury to an ounce of water. I was led to select this remedy, twenty-six years ago, under the following circumstances:—A man who had been under my notice, as house-surgeon in the infirmary, for a very bad ulcer in the pharynx, was discharged

as incurable—into the workhouse. He then came under my charge, as one of the honorary surgeons of the hospital in that establishment. Seeing that death was inevitable, unless I could hit upon some expedient yet untried, I hunted up authorities; and found in Dr. Williams's treatise on morbid poisons, the account of a case quite as bad as that under my care, which was cured by the application of the "unguentum hydrargyri nitratis." But considering that the use of ointment to the throat was a difficult matter, I requested the apothecary to dissolve mercury in nitric acid, as if he were about to make the ointment, and then to dissolve the green solution which results, with such an amount of water as he thought desirable. The proportion mentioned above was finally selected. The gargle was used with the happiest results, my patient recovered, and I then became enthusiastic about syphilitic sore throats. Since that I have tested the value of the solution differentially, and have come to the conclusion that there is not any preparation equal to it in value. I dare not assert that it never fails, for in some cases diseases will beat the doctor. Yet, so far as I have seen, it fails in fewer cases than do other popular gargles. It may be united with the use of laudanum, and its value is occasionally enhanced by moderate doses of iodide, or bromide of potassium, or chlorate of potash internally.

For scarlatina, or for malignant sore throat, it would appear that mild preparations of nitrate of silver, nitro-muriatic acid, and chlorate of potash are most appropriate. But my practice has not yet been sufficiently extensive to enable me to speak authoritatively upon the matter.

For follicular sore throat, I have sought in vain for a remedy on which dependence can be placed.

For enlarged tonsils, I know of no medical cure. I have seen caustic, and every other known chemical agent, fail in influencing them in any way. They may generally be left alone.

Scant space remains for me to say anything about glandular swellings of the neck. Nor does this much signify, inasmuch as the remarks that I have to make are very few. After a long, intimate, and close observation of them, I have come to the conclusion that all local medication is bad, that iodine is of no service, or very little, and that no medicine has a special influence on them. All active treatment, such as friction, ointments, painting with tincture of iron, or other drug, seems to do more harm than good. Pure *dry* air, as on gravelly or sandy soils, a seaside residence in warm localities, *dry* warm rooms, good food, judicious drink, and local warmth ensured by the use of good soft cloth, velvet, or cotton wool, are the best curative agents that I have hitherto found.

If, as is too often the case, the swellings suppurate, they should be opened in the most dependent part with a fine knife, through a leech bite, as soon as matter forms. By this plan, unseemly scars on the neck may be avoided. If the abscess is already large before the doctor is called in, it is well to make two punctures, each through a leech-bite, and to pass a thread from hole to hole, to act as a drain, or seton. The treatment thus recommended is possibly unpopular with parents, who prefer active medication to a passive system of restoration to health. Yet any physician, who can speak from experience of the infinite superiority of the latter over the former plan, will generally be credited, and his advice adopted. It may be that months will elapse

ere the glandular swellings abate, but that they will do so ultimately is almost certain. One such patient, whom his father committed wholly to my care, was a young man, about fifteen or sixteen years old, who had a large swelled gland at the angle of the lower jaw on one side. He was growing fast, and, though muscularly strong, was constitutionally delicate. Fearing that if I used, actively, a local remedy I might provoke inflammation, and consequent suppuration, my directions were to use iodine paint once a week. The gland remained *in statu quo* for about four years, and then subsided, until no remains of the swelling can be found. Doubtless the cure might have been effected more rapidly, by provoking the formation of an abscess; but as the young man had a hairless face, he was particularly anxious to avoid a scar. The case is recorded to prevent others being downhearted if the affection does not rapidly subside.

CHAPTER XI.

ON CROUP, TRUE AND FALSE.

Disease writing history—Croup—Author's experience of—Cases—Croup and myalgia—False croup—Anatomy of larynx and trachea—Area of air tube diminished—Consequences—Cause of mortality under old régime—Points to be attended to—Inflammation is evanescent—Inspiring power—Mobility of air in a tube—Value of hot moist air—Local sensitiveness—Spray diffuser—Quietness—Shampooing—Value of friction—Asthenia—Conclusion.

It has often appeared to me that if certain diseases could write their own history, a very amusing, interesting, and important chapter would be added to biography. Without indicating the individuals whom we should like to see taking up the morbid pen, let us endeavour to sketch the tale which one can tell. In doing so, it is clear that the biography is more that of the author than of the disease; but for this there is no help.

I well remember my first acquaintance with croup. He appeared to me forty years ago, in the person of a particularly dear brother, whose favourite horse I was, and who clung to me like the ivy to the oak. It was to me an awful moment, when we were all summoned to see him dying in his father's arms. Even now the scene is too painful a one to be reproduced. He was the second who had died within two days.

After this, croup was the bugbear of the family. The big boys were kept in-doors during biting blasts, lest they should catch cold; they had to wear great coats, which they detested; and were constantly coddled, to their infinite disgust. The younger children were confined to certain rooms; a drive in a gig or open vehicle was prohibited; and if a "fly" was used, none were allowed to stretch out of the windows. Yet, with all this care, it happened that, on the occasion of a return from a children's party, the household were alarmed at dead of night by an unusual noise; every one was in a bustle and a fright, for croup had seized the youngest child. In us, who could read well the faces of our parents, an unspeakable fear arose; and, with the curiosity of a child, I endeavoured to penetrate into the sick chamber, and take the dimensions of the danger. I can well remember the opinion which I then pronounced, to the effect that "there was no danger whatever." Nor was there, and the lad soon left the doctor's hands.

After that, I bothered mother and doctor to tell me something about the dread visitor, but learned nothing. During my apprenticeship, I sought, both by books and conversation, to know more upon the subject. It was easy to procure intelligence about its history and pathology; but as respects the rationale of the treatment adopted for the cure, there was absolutely nothing to be learned. Emetics, bleeding—general, local, or both—tartar emetic, calomel and opium, blisters, &c., were used, but no one could give a definite or valid reason why.

Whilst "walking the hospitals," &c., I still had an especial desire to make myself acquainted with croup, and listened to Dr. Budd's lectures on the subject with deep

interest. The main idea which he instilled into our minds was, that where the disease proved fatal, the victims did not die from the trachea being filled up, for it never was so, even in the worst cases.

I next became introduced to the complaint shortly after I sat behind a door-plate having "Surgeon" upon it; for I was sent for by two physicians to perform the operation of tracheotomy on a child apparently near death. Ere I began, a message from the mother summoned me to her bedroom. She was herself very unwell, and unable to be head nurse. After looking at me for a moment or two, she asked if I had "children of my own?" "Yes," was my reply. "Would you perform the operation on one of them?" "No; but I would get some one else to do so," I rejoined. "Then do it upon mine," was the sensible order. I proceeded to the task, but the hearts of the physicians failed, nothing was effected, and the child died. Ere I left the house, I saw two others moribund with the same complaint.

As time progressed, my eldest boy became affected with false croup, and, by dint of carefully observing him, I began to see daylight, after travelling through the mists of the dark ages. Once again, another son was taken ill, apparently with a very severe catarrh, and on the second day I was hastily summoned to the nursery, as the child had croup. The enemy had invaded my house, and I had to fight him. I preferred to do so unaided. In my wife's absence I became both doctor and nurse, and had the lad upon my knees all day, watching every symptom, and weighing its import with thoughtful care. Medicine I gave none, nor did I take any decided step whatever. Nevertheless, in less than six hours, the symptoms abated, the chest began to be affected, and I

then found that the croupy affection had been produced by catarrhal inflammation, spreading from the nostrils downwards to the lungs. The usual symptoms of "a severe feverish cold" followed, and the prostration of strength was very great.

Having now, to a certain degree, taken the measure of this enemy of children, a nearer view was wanted. After a time, I was requested to see a client of a friend of mine, who was absent. The messenger said the case was one of croup, and hurried my departure. On reaching the house, I found the patient at play, as if nothing was amiss; nor could I, on investigation, discover any cause for alarm. The mother, however, hoisted him up on her back, and ran round the room with him to make him laugh, cough, or cry; yet nothing came of it. Again and again I repeated my visits, yet could not discover the enemy. The lad coughed clangingly at times, but that was all. I then listened with patience to a chapter of family history. How grandmother, mother, self, and children were liable to croup. How many had died of it; and how familiar self was with the symptoms; and how much better she knew than I did that my patient really had the disease. I bowed politely, and, as I acted for a friend, continued to attend until even the mother could not find a single symptom to alarm her. Yet, during my brief notice of the case, no medicine was ordered, nor any special treatment adopted besides confinement to the warm house.

Whilst meditating over this case, I heard of another, and read of a third, in which acute inflammation of the trachea had proved fatal in less than twelve hours. In both, a very dense false membrane had been formed. In one instance, no treatment had been adopted; in the other, venesection had

been practised to an inordinate extent. In the case so treated, the false membrane was the largest, exceeding in thickness and density any which the surgeon had before seen and heard of.

For a time after this, the subject of croup was superseded in my mind by the study of muscular affections generally, which culminated at last with the publication of a treatise entitled *Myalgia*. But ere that saw the light, I was requested to attend a case of convulsions, which was already under the care of a surgeon. The patient lived some distance from town, and the doctors walked together to the house. As my friend is unequalled in the profession, so far as erudition, acumen, and sound sense can go, our journeys were productive of much mental pleasure. The case turned out to be one of false croup and general convulsions combined. The cause—a meat diet—was tolerably clear, and when our daily peregrinations ceased, croup had ceased to be a bugbear to me. A lad carrying a cross with a sheet and a turnip-lantern attached thereto may affright a village, so long as it is night; yet in the broad daylight he would not create alarm; so croup, when seen obscurely, is dreaded; when understood, it brings no terror with it.

Let us examine what it is. It is a form of severe catarrh, in which inflammation settles chiefly upon the principal air passages; and we have already seen that catarrh is attended with both local and general symptoms. The latter are feverishness and malaise, attended with considerable constitutional debility, the last being sometimes so great as to be followed by consumption, or other serious disease. The local signs are inflammation of a low type, or congestion of the mucous membrane of the eyes, nostrils, internal ear, throat,

windpipe, trachea, &c. This inflammation is commonly evanescent in the conjunctiva, but lingers about the fauces, producing sometimes ulceration, and occasionally the exudation of a very dense mucus.

Where muscles exist below the membrane, as we have said in our article on sore throat, these are affected by the inflammation, and are liable to spasm and to very painful contraction. Similar results follow when the larynx and trachea, or windpipe, are implicated.

Let us next picture to ourself the great air canals in situ, when affected by catarrhal inflammation. In the first place, we find that they are much more sensitive than usual; just as all external parts are when inflamed, inasmuch as the condition referred to exalts the sensibility of the nerves distributed throughout the part. As a result, the inhalation of air, especially if cold or dusty, produces intense irritation and cough. Again, we find that inflammation of the windpipe, which is always, here as elsewhere, attended with swelling, increases the thickness of the mucous membrane of the larynx, and, as a necessary consequence, diminishes its calibre.

We wish especially to call our readers' attention to this fact, for its bearings are of the utmost importance. If, as we must assume from the nature of things, the regular aperture of the chief air tube is the best fitted for breathing purposes; then it follows that a diminished area must materially interfere with respiration. That it does so, any one must feel convinced, who has watched those cases in which, after attempts at suicide, the larynx has become closed, and respiration goes on through a small artificial opening. I well remember standing at the bedside of such an one, and seeing

his frantic efforts to breathe. The exertion required was enormous, and it was clear that the man must soon die under it, unless some relief was given. We may convey our meaning more clearly by suggesting a simple experiment: Let a person close one nostril and the mouth, breathing through the remaining aperture alone; he will soon find himself fighting for breath, unless his nose be very unusually capacious. Or, closing both nostrils, let him first breathe through a tube of a certain calibre placed between the lips, and then, displacing this, breathe through a much smaller one, say a common stethoscope; he will then understand how certainly a diminution of area in the windpipe will force the patient to desperate efforts of breathing—a work which must be constantly kept up as long as the experiments last.

When such a diminution in the area of the canal, such as we have described, occurs, it will be evident that the air required for the lungs must pass through the larynx with greater force and speed than usual; or that a less volume will pass into the lungs. It is advisable to examine into the effects of these, *seriatim*. If the air has to pass through a diminished aperture into the lungs, in the same quantity as through the natural opening, it is clear that the inspiratory muscles will have harder work than usual to overcome the increased friction between the glottis and the air; and the current of air against the mucous membrane will be hard and strong (such as may be experienced in the single nostril when it is used as the sole breathing tube). This current, then, impinging upon the inflamed and sensitive mucous membrane, irritates it incessantly, and provokes almost constant cough. If, on the other hand, the current of air through the contracted aperture remains the same as it was through the

natural chink, it is certain that the lungs will be deprived of their normal amount of oxygen, and a slow asphyxia, with coagulation of cardiac and pulmonary blood, will follow. Hence we recognise that ample breathing power, and a full use of the same, are necessary elements for success in the cure of croup. We are the more inclined to urge upon the medical practitioner the importance of this recognition, because, in our opinion, the fatality attending the old plan of treating croup was due to the fact that the point to which we call attention was wholly ignored.

Returning once more to the inflamed mucous membrane, we notice that the *muscles* of the glottis are implicated, as well as the former. As a consequence, they have a tendency to spasm, and the effect of this is sometimes to close the chink of the windpipe so completely as to preclude all ingress of air. We have already seen how much the irritability of the inflamed parts are aggravated by the increased force of the aerial current, during the forced inspirations necessitated by a diminished canal, and now we can recognise how it is that such respiration increases both the spasm and the cough.

We are now enabled to understand all the points which have to be attended to in the treatment of inflammatory croup:—

1. The inflamed condition of the membrane, which is, like other catarrhal inflammations, evanescent. 2. The diminished calibre of the windpipe. 3. The increased rate and roughness of the aerial stream. 4. The augmented sensibility of the membrane. 5. The exaggerated irritability of the laryngeal muscles. 6. The heavy task imposed upon the respiratory apparatus. In addition to these, we must mention the

ordinary accompaniments of catarrh, debility, loss of appetite, purging, &c.

1. If the inflammation is naturally evanescent, it may fairly be let alone; but, if excessive, it may be reduced by local bleeding, as by a leech on each side of Adam's apple. Under no circumstances ought it to be increased, by the application of such irritants as turpentine, mustard, or vesicants to the skin. At the risk of being thought tedious, we will say here once again, that it is improper to use to the surface of the skin which covers an inflamed part, that which would be inapplicable to the diseased structure itself if it was within reach. I have never yet heard it proposed to cure acute scarlatina or erysipelas by the use of mustard plasters.

2. As the condition of the windpipe prevents a full stream of air from passing through it, the doctor's attention ought to be fixed, amongst other matters, upon diminishing the necessity for an increased supply. As therefore anything in the way of muscular exertion calls for more oxygen in the lungs, so all exercise whatever is to be prohibited, whilst the croupy condition remains. The use of opiates, &c., to promote sleep, greatly favours this indication, since, during result, a minimum of air is required. A child who fights for breath when awake, respires with comparative ease when asleep.

3. The mobility of air through a tube is to a great degree proportionate to its warmth. To satisfy one's self of this, let anyone take a glass funnel, and place under it a lighted spirit lamp, leaving an inch between the base of the cone and the table. It will then be seen that the lamp goes out as if an extinguisher had been put on it. The aerial column in the tube will not pass upwards, and the light dies for want of air. Let the experimenter now heat

the whole apparatus, and again apply the lamp; he will then find the air travel slowly along the chimney, and stop when the glass gets cold. Surely every observant housewife knows that a cold flue will not "draw" like a hot one.

Hence, the astute physician infers that a heated,—and we may add, without dwelling on the reason why, a *moist*,—atmosphere is more appropriate to croup than a cold, or even a cool one. Let me moreover record it, as a matter of fact, that in the case of my brothers, before referred to, the apparent cause of their fatal attack of disease was their removal, by my father, from a hot and, as he thought, a 'close' room, into one unaired, and cold as winter. The symptoms were observed immediately after the change, and the course of disease was rapid. On the other hand, we have cured some very severe, and apparently hopeless cases of croup at the Liverpool Royal Infirmary, by the simple use of moist hot air. Mr. Puzey, our then house-surgeon, deserves the whole credit of this plan; for he devised and put it into practice, under the idea that he might as well treat a case of croup, before tracheotomy, as he would do after the operation. The result was marvellous, both as to the rapidity and the completeness of the cure.

4. Whenever the physician discovers that there is increased local sensitiveness, he endeavours to diminish it, either by removing the irritant, or by making the part insensible to its action. As we have already spoken about the first, we have now to turn our attention to the second. The sensibility of a mucous membrane may be diminished by great cold, or heat, or by certain medicaments. In croup, however, it is undesirable to use cold, consequently we are driven to employ heat, drugs, or both. The former may be administered by the

inhaling of hot moist air, as we have already indicated; or by the application of a hot sponge, or other calid epithem upon the windpipe. There are, indeed, few things which give such relief in croup, especially when it is marked by spasmodic paroxysms, as the use of a sponge wrung out of hot water.

If this is insufficient, and it is advisable to resort to drugs, the sufferer may be made to inhale laudanum and water, converted into mist by Maw's or Gilbertson's spray diffuser, or other appropriate instrument. At the same time, the throat should be kept smeared externally by an ointment containing a large proportion of morphia, or belladonna. Of the *modus operandi* of this, I have already spoken, and consequently need not now refer to it.

5. The same plan which diminishes the irritability of the laryngeal membrane equally diminishes that of the local muscles; though something additional to warmth and drugging has generally to be resorted to. What that is, a few words will indicate. When a man travels by railway, and talks *in transitu* to a friend; or if, under any other circumstance, he endeavours to talk against a noise; he finds that there is a constant propensity to cough; the reader, the lecturer, the auctioneer, the orator, and others who have to use their voice continuously, are conscious that they have to contend against a propensity to "bark." A hand, moreover, placed upon the chest or larynx, recognises that the parts vibrate during speech. This vibration, although borne moderately well during health, is peculiarly irritating when the windpipe is inflamed; consequently, when croup is present, it is important that the patient should be restrained from speaking. Neither doctor, parent, nor nurse should ask a question requiring an answer, nor permit speech.

6. As the respiratory muscles have to undergo an unusual amount of labour when the tube through which they draw the air necessary for the body's needs is contracted; and as croup, being a phase of catarrh, has an absolute tendency to diminish their contractile power; it is clear that any plan of medication which shall aggravate their debility must be prejudicial, and that anything which increases their efficiency will be valuable. We now can see why it is that the ancient, and some extant, methods of "curing" croup have proved so deadly. Who, let us ask, could wield a heavy club, when he was under the influence of antimony, ipecacuanha, tobacco, calomel and opium, or venesection, better than he would when in health? Can we, then, expect that one already weakened by croup will have more breathing power after he has taken such medicaments? Clearly not. Yet such were the drugs upon which, when I was a youth, practitioners in medicine relied. At present we recognise that all such remedies must be shunned.

It now remains to be asked whether anything can be done to improve the muscular powers. For this, the only means at our disposal is shampooing; for electricity, or Faradisation, as it is called, is worthless in cases like this. The steady rubbing of the thorax and abdomen is of decided value; it not only increases the muscular tone of the intercostals, but it is a means whereby oil may be introduced into the system, and thus its strength be supported. Yet there is no necessity for such a plan in ordinary cases of croup. Where, however, the physician is called in late, and death by gradual breathlessness is threatening, nothing can be more serviceable. The patient then resembles one who has been nearly drowned, or is, from some other cause, partially

asphyxiated, and requires careful manipulation, ere the blood will flow regularly through the pulmonary and systemic capillaries. In such contingencies, no plan of treatment is superior to persevering friction; and the same is equally useful in croup. Indeed, if our profession generally were alive to the value of this remedy, they would see with surprise how much the moderns were inferior, in some points, to such an ancient doctor as Celsus.

Lastly, we must say a word about the weakness which accompanies croup, death by strengthlessness being a very common termination. Being a form of catarrh, or bronchitis, it is essentially a debilitating complaint. It is very possible that, like influenza, it may prove fatal by this influence on the constitution. Consequently we infer that a good diet is superior to slops, and a restorative treatment better than an antiphlogistic * regimen. Yet the practitioner must, as a general rule, avoid the use of such stimulants as alcohol and steel; perhaps we should add, ammonia. These, when passing down the threat, produce local irritation; and, when taken into the stomach, and circulating in the blood, give rise to a propensity to cough.

We are at length in a position to lay down a routine plan of treatment, which is likely to be of general use in the treatment of ordinary inflammatory croup. It is very simple. The patient is to be confined to bed—one which has been previously warmed; it is to be surrounded by a blanket tent, open only at the foot, and constantly supplied

* As I write this word, I feel almost bound to apologise for using one so antiquated; yet I do so as an indication that I have not forgotten old theories, although I have adopted a modern practice. There are many who would blush to use this word "antiphlogistic" in the present day. So perhaps should I, unless for a special purpose, as indicated above.

with hot, moist air. This is readily effected by an ordinary tea-kettle, and lead, tin, or 'rubber' tubing. Vulcanised India rubber is somewhat objectionable, as a current of warm moist air driven through it carries with it minute crystals of sulphur. The skin is to be oiled, to subdue fever, and the diet is to be light, and mainly fluid — such as milk, or whey. In general, nothing else will be required, for the symptoms soon abate; and the serious complications that alarmed our ancestors do not occur. After much inquiry, I have not heard of any case of croup in late years which resembles those described in ancient books, written when the old-fashioned treatment was in vogue. Nevertheless, if any severe complications should ensue, we have abundantly indicated the plan of treatment to be adopted.

It only remains for us now to say a few words upon what is called false croup — *i. e.*, a croup in which there is spasm without inflammation. As we have already, in our essay upon convulsions, generally indicated the causes upon which such attacks depend, it is unnecessary to repeat our remarks here. Suffice it to say, that cold air, catarrh, a dusty atmosphere, shouting, crying, laughing, and the like will suffice to produce false croup, if the patient is living on a diet such as is conducive to the occurrence of convulsions. No treatment is required beyond a vegetable or milk diet, warm air, warmth to the throat, and the use of some ointment containing morphia, or other anodyne. It is, however, always advisable that parents and nurses should have at hand some warm water and a sponge, so that a sudden moist hot application can be made to the throat externally. It is also useful to teach the attendant how to manage artificial respiration, so that in case of sudden and severe spasm,

ending in apparent death, no time may be lost in adopting the measures necessary for restoring suspended animation. As we have already described this method, we need not repeat the directions here.

CHAPTER XII.

ON BRONCHITIS.

A funny tailor—Absurd doctors—March of intellect and medicine—History of bronchitis—Air pipes and tunnel—Respiration and air tubes—Nauseants—Debility increases secretion—Asthma—Condition of system in bronchitis—Consequences of bronchitis—Peashooters—Sumpits and coughing—Treatment of bronchitis—Nauseants at first only—Stimulants not always good emetics—Cases—Bleeding, effect of.

How I should laugh at a tailor who, on being asked to make a pair of breeches, said, "O yes, certainly," then sent me a bundle of buttons and braid, cloth and thread, a thimble and needle, following the whole by a bill for pantaloons! Or perhaps I might be indignant, and lecture him upon his presumption in taking me for a big fool; and assure him that I should have been less offended if he had sent me a garment with two legs, one above and one below, with a waistband like the letter K, or with three, intended to fit the legs, or rather the "arms," of ancient Sicilia and modern Mona; for that might have been taken for a bit of fun, or a practical joke. In any case, I should certainly have a contemptuous idea of the tailor. Yet, many doctors have been just as absurd, when called upon by customers to prescribe a treatment for bronchitis. They have sent to their client a confused mass of antimony, ipecacuan, squill, honey, vinegar, camphor, opium, prussic acid, gum, embroca-

tions, liniments, and blisters, and have expected the individual to make the breeches — or cure his complaint — as best he could; and at the end a bill has been duly presented, for services, &c., rendered.

The march of intellect, however, has not only induced tailors to take the measure of the clients who require clothing, but has taught them that the better the fit of the garment, the more are the wearers pleased with the makers. The same intelligence is gradually reaching the medical class, and they are now striving to take the dimension of disease, and to apply to its cure the most appropriate treatment which they can devise. But as there are tailors who are not fitters, so there are doctors who are not healers. All "snips" do not use the tape in the same way, and notice the same distances from back to front, and from the waist to the heel; nor do all physicians observe the same symptoms; or, if they notice them, they appreciate them variously. The tradesman may, perhaps he is bound, in his own interest, to keep his method of "cutting" secret or peculiar to himself; the doctor, on the contrary, is bound, by the "breast-law" of his profession, to proclaim to his brethren his method of measuring and fitting, if ever he fancies that it is superior to the old style. By some he may be considered as bumptious, and boasting; and there may, after all, be nothing new in his proclamation; yet, if he believes that duty compels him to announce an improvement in his art, he must notify it to his brethren, and then leave his ideas and practice to be appreciated by their judgment.

When a modern physician examines the subject of bronchitis, he finds that there are three things requiring consideration — the state of the general system, the condition

of the lungs, and the state of the cardiac and respiratory muscles. Without going into a dissertation upon each of these, so systematically as to frighten the reader, let us inquire, in the first place, into the history of those who suffer from bronchitis. We find that the complaint is very common in the young, and the aged. It is met with most frequently in the children of consumptive parents. It is also common amongst millers and bakers, and amongst all classes whose time is spent chiefly in dusty occupations. It is more prevalent in winter than in summer; and is more severe, frequent, and fatal, in cold countries than in those that are dry and hot. It is always attended by great constitutional weakness, and is more or less persistent according to the weakness of the individual. Still farther, it is usually accompanied by sweating, more or less profuse; some difficulty of breathing, which is occasionally very great; and by the circulation of an imperfectly aerated blood. In other words, every phenomenon presented by bronchitis indicates that it is a disease of debility.

If we examine the symptoms of the complaint, we shall probably find the following sequence: The patient, after the preliminary signs of a common cold, begins to find the lungs affected; he feels as if he could not expand his chest; a cord is drawn tightly, he fancies, round something behind the breast-bone; and he raps away at the upper part of his chest as if to shake off an incubus. The air he respires seems hot, dry, and irritating; and he notices, perhaps, breathing, a sort of musical note coming from his lungs, like that made by a current of air when passing rapidly through a keyhole. He is feverish, fretful, oppressed, and seeks in vain for relief.

If we could see into the sufferer's air-passages, we should probably find them dry upon the inside, polished-looking, inflamed, and consequently thickened. The contractile tissue below their surface would certainly be irritable, and the area of the wind-way diminished in calibre, from the same cause cause as it is in croup.

To make this very important point clear, let us compare the main air-pipe to a cylindrical tunnel, whose walls are one foot thick, and the diameter of whose area is twelve feet, giving about one hundred and thirteen square feet. Now, it is clear that if the brickwork becomes doubled in thickness, and on the inside surface, the area of the tunnel will be diminished to about seventy-eight square feet. In like manner, when the mucous membrane of the wind-passage is doubled in thickness, its area is reduced to about seven-tenths of its ordinary capacity. If we now suppose that, in addition to the increased bulk of the membrane, it is coated over by a dense secretion, the same occurrence would happen as if the inner wall of the tunnel was to be covered with mud, plaster, or cement. Let us suppose that the diameter of this passage is diminished by one of these causes to nine feet; we shall then find that the available area is reduced to about sixty-three square feet—or one-half the original calibre; consequently, the usual air current passing through it must go at double the usual speed, if it is all to pass. After this illustration, we need only add that, in the human tunnels which we call *bronchi*, the thickening of the brickwork and of the cement is sometimes sufficient to close the passage entirely, and to stop the necessary traffic between blood and oxygen.

We now return to the sufferer labouring under constriction

arising from excited contractile fibres, and from an increased thickness and irritability of the bronchial membrane. Let us imagine that some good soul induces him to take a vapour-bath, to steam his head, or to deluge his stomach with warm tea, or other mild drink; or that a doctor has administered antimony, ipecacuan, or other nauseant; or, simply, that some twenty-four hours have elapsed. We now find the sense of tightness gone—respiration is free—the play of the lungs is no longer painful; but in its place there is a cough, and that cough is said to be "loose."

This change arises from the fact that the inflammatory condition has become changed; the muscles of the bronchi—such as they are—are no longer irritated; the mucous membrane, instead of being dry and rasped by the imbibed air, is moist, and protected to a certain extent by a layer of secretion. As the complaint progresses, this mucus increases in quantity; and its density is occasionally so great as to fill up the air-tubes, and give rise to partial or absolute suffocation. Sometimes, on the other hand, the secretion may be so thin, and in such large quantity, as to threaten death from sheer exhaustion. We may, indeed, compare the condition of the lungs in bronchitis to that of the skin in ague. At one time, there is heat, dryness, and distress; at another, sweating and relief. Excessive sweating is strictly analogous to excessive bronchitis. It gives relief, but has not any curative agency.

At this point, we may judiciously pause to inquire into some of the laws which govern secretion; a fuller account of which will be found in *Foundation for a New Theory and Practice of Medicine*. We may enunciate their sum thus: "Debility increases secretion." For example, in the very

act of dying cold sweats ensue, and their analogue in the wind-pipe may be recognised in the 'death rattle.' Strumous children, again, have "snotty" noses; and the offspring of diseased or poverty-stricken parents die of purging. The last days of the consumptive are rendered uncomfortable by profuse perspiration. Even the discharges from an ulcer or an abscess are increased by the bloodlessness of its surface. Poultice a sore, and its secretion is abundant; stimulate it moderately, and the 'pus' formed becomes more like butter than cream. "Clap" and "whites," are both aggravated by an enfeebled constitution; and the discharge in both is reduced by local stimulation. No one can doubt, who is familiar with the ancient accounts of the effects of mercury in producing sloughing of the mouth, that salivation from that drug is attended with an unusually bad condition of the glands and gums; nor can any one pretend, when he is sweating under the joint influence of sun and labour, that he has as great a capacity for work as he had when he started. From these considerations, we recognise that an excessive secretion from the bronchi is not an evidence of redundant health, and is a proof of existing debility, or diminished life power.

With increased secretion from the air passages, we may have asthma combined. When this is present, the distress of breathing is considerable; for not only are the bronchi more or less clogged, but there is less power than usual of forcing air through them.

'Asthma,' or 'emphysema,' as it is more learnedly called, is attended by a singular change in the physical condition of the lungs; they are not now elastic, like India-rubber; and expiration consequently requires a muscular effort. The

minute air-cells also coalesce, or otherwise increase in size; whilst at the same time the minute blood-vessels become materially reduced in the area over which they are distributed. As a result of all this, a smaller amount of air circulates in the chest, and yet a larger quantity is required by the system. With less respiratory power, there is a greatly reduced impetus in coughing. But of such complication we need not treat too minutely. I shun, intentionally, making more remarks upon what is called "asthma," for my knowledge of it is not sufficiently satisfactory to enable me to form opinions which I believe are worth enunciating. Some are growing, but they are immature. My readers will not suffer from my reticence, for Dr. H. Hyde Salter has published a work on the subject, which is every thing that an inquirer could wish.

Bronchitis, however, may arise without a preliminary feverish attack, and the patient is only conscious of having a severe cold, a considerable amount of weakness, and persistently failing strength. If the doctor should now be called upon to investigate the state of matters, he will generally discover that the lower half of both lungs are affected behind; the front and upper parts being more or less free. On asking questions, he will find, moreover, that the patient, though having lost strength, is of his usual weight, and that emaciation and expectoration of blood—the chief indicators of consumption—are absent. The heart at the same time is soft, its contractions feeble, and there is evidence of sluggish circulation through the lungs and the body generally. The muscular system is flabby, the flesh soft, and the animal spirits, as they are called, are low. If the expectoration is examined, it is found to

consist of mucus, more or less dense, usually colourless and frothy, but frequently yellow, and so heavy as to sink in water. In direct proportion to the solidity of the matters coughed up is the gravity of the complaint; for a very airless sputum shows a complete blockage of the air-ways.

With this obstruction to the entrance of oxygen into the lungs, there is an imperfect aëration of the blood; and this, in its turn, produces more or less lividity of the countenance, and a proportional urgency in the efforts to breathe. The patient would "pant" if he could; as he cannot, he simply fights for air, and none can look at him without sympathy. This comparative breathlessness reacts upon the whole blood, and renders it unusually liable to coagulate in the heart and great vessels. With all this, the muscles of respiration are progressively enfeebled; and both the act of inspiration and the effort of coughing are less effectual than usual.

To understand the value of these symptoms, let me invite my readers to recall the time of their boyhood. during which they amused themselves with "pea-shooters." If they were too correct to have used such things, I must explain that these are simple tubes of tin, about a foot long, and a quarter of an inch diameter, and the fun consists in shooting a pea through them by the force of a strong expiratory effort. Islanders in the Indian Ocean use far longer tubes, called "sumpits," through which they project small poisoned arrows, by whose means small, and sometimes large animals, are killed.

Before the tubes referred to can be used, the chest has to be inflated by means of a forced inspiration; and then, when as full as the artillerist can make it, muscular contraction is added to the elasticity of the cartilages of the ribs, and the

missile is propelled to a great or small distance, according to the force used. The breathing apparatus, indeed, forms a sort of air-gun. For either to be of use, it is clear that the aërial chamber must be well filled; an empty air-gun and a very panting man could not propel a pea.

If for the bullet and the pea we now substitute a "pellet" of mucus, it will be clear that before it can be ejected there must be a considerable force behind it. This involves the necessity of a deep in-draught, and a strong expulsion of air. One who is very much exhausted is like that poor Beatrice in the play, who said she "had not a word to throw at a dog." With such an enfeebled person coughing is but a "make believe." Yet, without the power of expectoration, it is evident that danger must increase; for the patient's lungs resemble a leaking ship, whose pumps are choked, and, as the hold gradually fills, the barque slowly sinks.

Having now, as it were, taken the measure of bronchitis, we are prepared to fit our treatment to the exigencies of the case. We can see that, in the dry stage, it is advisable to make the in-breathed air as warm and moist as possible, so as to give comfort to the dry and irritable airtubes; or, if we are very confirmed friends of the druggist, we can use such sickening medicine as antimony, ipecacuan, and squills. With the nausea they produce, the lungs, like the skin, break out into a perspiration. Such medicines have, therefore, been called "expectorants," for they have, in the early stage of bronchitis, a tendency to relax the tense condition of the pulmonary membrane. But the result will equally occur without them.

When once the cough becomes loose, the remedies mentioned are prejudicial. I do not know anything much more

senseless than the continued employment of drugs after they have effected the only good that could reasonably be expected from them. To a man enfeebled by any cause, a glass or two of wine may bring warmth, comfort, and appetite; yet, for such an one to go on drinking, at frequent intervals, would be to convert a blessing into a curse. Yet such has been the custom in ordinary medicine; and a prescription that does good at first, is frequently continued for many days or weeks, and is used in stages where it can only do harm. For example, the wife of a near relative of mine wrote to the effect that her husband had bronchitis; that he was very ill and weak; she feared, too, that he was dying, for he was constantly talking of "going home," as if he were half-delirious. Recognising the symptom, I told her that I felt certain that the doctor had ordered her husband antimony, and that she must tell him from me, who knew my relative's constitution well, that the drug acted as a poison upon his patient. Some days elapsed ere any answer came, and then the report was that the "medico" was certainly using "tartar emetic," and should continue to do so, as he felt great faith in its efficacy. My recommendation then was very terse, viz., "throw physic to the dogs." The advice was followed; the bow-wows were too clever to lap up the medicine, and the man recovered comfortably without it. This preparation of antimony is, indeed, the chief ingredient in the "backening bottles" sent to patients who are getting well too fast. Fortunate, however, it is for medical clients, that such bottles are now almost things of the past.

A moment's consideration will show that nauseants are inadmissible in bronchitis, when once the expectoration has begun. No one would encourage the consumptive skin to

perspire, neither ought any one to make a sweating lung more moist. On the other hand, the endeavours of the doctor should be directed to dry up the secreting air passages. But the indication is like a guide post, which points the way without lending other aid to the wayfarer. The question, "How can you dry the lung?" is not unlike, "How can you prevent night or day sweats in consumption?" Practically, the plan which suits phthisis suits bronchitis equally. We may shortly describe it thus: The system must be supported by every available and judicious plan. Amongst these means must be reckoned nutritious food, and the use of stimulants.

But whilst we speak warmly in favour of the use of stimulants and nutritious food in bronchitis, we must also enter a "*caveat*" against the indiscriminate use of them; nor can I point my moral better than by mentioning two cases to the point. The first occurred in the practice of a friend, who treated a bronchitic old lady first to wine, and then to brandy-and-water; but the disease got no better, and the patient became worse; feverish, or typhoid symptoms came on, the mouth got dry, the tongue brown, and the mind wandering. A consultation was called, and the united wisdom of the two discovered that the sufferer was in a state of drunkenness; hence the delirium, dry tongue, fever, thirst, &c. With less alcohol the patient soon got well. The second case occurred in my own consultation practice. The patient, a very delicate lady, about thirty-five, had the most severe attack of bronchitis I ever saw cured. Anxious to keep her strength up, we used wine, &c., as we thought, judiciously, and watched its effects closely. I cannot even now conceive of a case in which the necessity for such plan seemed greater.

But the patient got worse. At length her friends assembled round her bed, expecting the last gasp. It came not, however. From her feeble lips flowed the whisper, "I'm not dying; I want some bread and milk." Then followed the wish to have no more stimulants. Both desires were gratified, and upon the diet indicated by the patient, the restoration to health was rapid. Such a case may be called instructive; yet I have not met with another in which a milk diet has been productive of good.

The treatment by generous food, &c., may be called constitutional; it is necessary, but it is indirect. We seek, therefore, for some other means likely to operate directly upon the diseased membrane. These are the habitual inhalation of warm air, and the occasional breathing of medicated vapours, either in ordinary steam, or in a minutely divided state, such as is produced by any good spray diffuser. The drugs which I have found to be most efficacious are turpentine, used in vapour, and laudanum and water, used in spray. The first may be administered thus: Heat two table-spoons, one within the other, so as to ensure a body of heated metal, over a lamp, until they are quite too hot to be held by the naked fingers; then into the inner one pour a tea-spoonful of spirit of turpentine, and place the whole close to the nose and mouth. The scent is very fragrant, and the vapour gives great relief.

But the mucous membrane may be influenced from without, as well as from its inner surface. To enable my readers to follow me fully upon this point, I should like to refer them to a chapter on "Counter-irritants," in *Foundation for a New Theory and Practice of Medicine*, far too long to be epitomised here. Suffice it to say, that certain local stimulants,

when applied to the skin, are absorbed, pass through it quite independently of the blood-vessels, and irritate—sometimes even to positive inflammation—the parts below. That blisters occasionally produce strangury, many are aware. When, therefore, such materials as mustard, turpentine, or cantharides, are applied for any time to the skin over the chest, they permeate the walls of the thorax, and arrive at the comparatively solid parts of the lungs. As a matter of fact, I am convinced that blisters to the chest do positive good when bronchitis is chronic. But favourable results are not recognised until at least twenty-four hours have elapsed, and the irritant has had time to penetrate the pulmonary tissue. This stimulant often does so much good as to be the turning point of the complaint. Frequently, however, the advantage gained is transient; and the daily use of turpentine and oil, well rubbed in, answers better. My prejudices, when I first began the use of blisters, were strongly against them; but I may now safely say, that I very rarely ever order such an application without both the patient and myself agreeing that it has been of decided service.

Medicinally, bronchitis should be treated much in the same way as gonorrhœa, *i. e.*, drugs like copaiba, myrrh, and other balsams, which pass out of the system moderately unchanged, may be used; chlorate of potash and bromide of potassium are also frequently of service. Amongst other indications, the doctor naturally sees the desirability of checking the secretion, if possible, directly. Opium is a drug which has, more than any other, a tendency to do this; consequently, this gum resin has frequently been employed. Yet, though often useful, it is dangerous; for it sometimes promotes sleep and lulls cough, without producing a corresponding

diminution of the amount to be expectorated. It operates like somnolence would do upon a ship's crew who were pumping water out of a ship to prevent its sinking. The patient may subside into a calm repose, and just awake to die. Coughing, like pumping, may save a life which would otherwise founder.

By the means which we have thus indicated, bronchitis is generally successfully treated. Yet it must ever be borne in mind that the severity of a disease may be such, or the physician be called to advise at so very late a stage, that human aid is powerless; nevertheless, few doctors like to despair. I well remember, whilst acting as House-Physician at King's College Hospital, London, being called out of bed at an early hour to see a man just brought in, apparently dying of bronchitis; his face was livid, he could scarcely breathe, and he was wholly unable to cough. At once I ordered him an emetic of sulphate of zinc, and I saw, as I had anticipated, that in the act of vomiting, the lungs were squeezed like a sponge between two hands; a considerable mucous secretion was thus evacuated, the breathing became easier, and the power of coughing returned; but the physician whose patient he was superseded me; the treatment then in vogue—antimonials, &c.,—were used, and the promising progress, apparent for the first three days, quietly set, and for the man the sun never rose again.

To record such a case may seem vainglorious, and I will, therefore, do penance by recording another, which occurred whilst I was House-Surgeon at the Liverpool Royal Infirmary. The patient, a fine-looking young seaman, had bronchitis, with very great difficulty of breathing. This became extreme on one occasion, and, as the case seemed to me to be

very urgent, I ventured to bleed the sufferer to six ounces, without consulting his physician. The relief to the symptoms was immediate, and during the next two days everything seemed to go on well. On the third day the man began to sink, and died in spite of stimulants ; nor have I ever ceased to think that the scale-beam was turned by the venesection. After such a confession, my readers will recognise the fact that I include myself when I objurgate the style of practice adopted by doctors in days gone by.

When bronchitis has become chronic, or returns frequently in any one season, or year after year, it is advisable to treat the patient as if he or she were consumptive ; and administer such remedies as milk and rum, cod oil, steel, or other tonics. In such cases, oil-rubbing, which is described in a subsequent chapter, is of great service, and it is a matter of great importance to pay attention to the temperature in which the sufferer lives. Indeed, we may say that phthisis and bronchitis resemble each other in so many points, that what is good for the one is certain to be so for the other.

CHAPTER XIII.

ON CONSUMPTION.

Beauty—Often related to consumption—Early ideas of decline—Modern notions—Phthisis not purely a disease of the lungs—Effects of the idea that it was—Consumption a disease of the constitution—Resembles other general complaints—Signs of a phthisical constitution—Causes likely to induce consumption—Preliminary signs of the disease—Vitality impaired—Treatment—Oil—Heat—Laziness—Rubbing with oil—Drugs—Local remedies.

When a boy, like a great number of other lads, I had a very loving regard for beautiful women. One sat in the pew close beside me at church, and a large part of the service was passed, as far as I was concerned, with gazing upon her face, and admiring everything about her which I saw. At another part of the same church sat two other young ladies, one with features beaming with smiles and sweetness, and plump as a cherry; the other lovely, but grave, save when she caught our boyish glances, and lighted up her blue eyes with a smile. Acquaintanceship enabled us sometimes to sit at the feet of, or stand near, the last two; but the first we worshipped afar off. We paid her homage by culling violets, and placing them before her seat at church, and thrilled with delight, though we reddened at being caught, when she threw upon us a beaming look of thanks. When we saw her in the

distance, taking an evening walk, we used to urge our ponies to full speed, jump off and on again, as we had seen "riders" do at the circus; in fine, we worshipped beauty as our idol, and offered at its shrine such homage as lads could devise. Sometimes, when we were old enough to be admitted to the dinner table, with the wine and fruit, and were permitted to remain after the ladies departed, we heard the respective value of our goddesses discussed, and found, with mingled surprise, wonder, and distress, that there existed not very far away from us, in a retired village, two or three sisters, who were far more lovely than the ladies whom we had hitherto adored. To see them, we laid all sorts of boyish plots. We drank in every word that told of them and their welfare. At length, we heard that one was to be married, and our parents were invited to be present at the wedding feast. Yet our entreaties to accompany them were disregarded, and we dreamed on. After a time, ourselves and steeds were trusted to take long excursions, and we frequently rode near the home of our unknown idols, hoping to see one or other. Yet fortune doomed us to disappointment. We never saw more than two of the family, and they were unusually plain. There are few memories of my childhood which are much stronger than my yearnings to look upon the beauties of whom I heard so much.

After a time, however, instead of gentlemen and matrons speaking of our unseen goddesses pleasantly, their words came with bated breath; and we heard with awe that consumption was laying its hands upon them. What consumption was we knew not, and we sought to find out, hoping that we could do something to fight against it, and drive it from their lovely persons. Every conversation in which we

heard the misfortune spoken of was closely treasured up; and we at length began to frame in our young minds the idea, that consumption gave women their highest charms, and took them away.

The beauties whom we personally knew are alive yet. Those who surpassed them in loveliness were soon in their grave. Such was our first acquaintance with the disease which forms the subject of our chapter. Since that period it has never been wholly absent from our thoughts. If we hear of unusual gracefulness of form or face in women, our first thought is, are they consumptive? And some persons, possessed of remarkable elegance and features—fit subjects for Apelles, or Praxiteles, when they delineated the goddess of love and beauty—serve to us, as it were, as transparent glasses, through which we behold a weary illness, and perchance an early tomb. With our thoughts are interwoven the painful feelings which have possessed us, whilst going our daily round as house-surgeon to an hospital, or amongst private patients, and finding that all we could do for the victims of phthisis was to smooth the way to death. Amongst all the miseries of a doctor's life—and one whose mind is sensitive has many—few are more distressing than having to visit, every morning or evening, some victim of phthisis of whose recovery we are hopeless.

Yet our discomfort is not now what once it was. In our early days, when we were filling the place of apprentice, student, clinical clerk, and house physician, it was an understood thing that the complaint called phthisis was wholly incurable. It was laid down as a law, by learned pundits, that any Medico professing to cure consumption was a charlatan; and I can remember reading a novel in which

the refusal of a doctor even to try and restore to health a patient in decline was deeply satirised. There were other diseases placed in the same category; and, like others, I began my career as a medical man with the belief that my hands were partially chained.

But many things were then supposed to be impossible, simply because we did not know the means to attain our ends, or adopted a plan which opposed our purpose. Consequently, when we found that bleeding, mercury, antimony, and other drugs of like kind were used to cure consumption, we thought it possible that such practice defeated its own object. I have myself, about thirty-three years ago, held the basin, whilst a doctor, above the average ability of his class, bled a young woman for what he told me was acute phthisis. He spoke of venesection as giving the only chance of cure; and expressed neither contrition nor surprise when the patient died at the end of six weeks. Careful reading, however, especially of the works of young physicians, who were snubbed by ancient practitioners, soon indicated to me that there was hope for the consumptive, if a plan was followed by the doctor, which, whilst it was at variance with the old practice, was in harmony with common sense and true experience.

Without going into a detailed history of the gradual change of opinion, or an enquiry into the period when first it became recognised amongst the learned (which does not necessarily include the "heads") of the profession that phthisis is curable — we might almost say a very curable complaint — we will describe, as best as we may, the opinions now held respecting the nature of the complaint, and the most appropriate means of cure.

The first observation which we have to make will, to many, appear paradoxical; but we assert it as a fact, of the certainty of which we have long convinced ourselves, and endeavoured to teach others, that consumption is not a disease of the lungs, although it is generally supposed to be so. So long as phthisis was considered to be a pulmonary affection, it was treated by remedies intended to act primarily, and mainly, upon the lung substance. Blisters, setons, and rubefacients were applied to the surface of the body, corresponding to the diseased parts within. Some ingenious doctor, indeed, suggested the propriety of treating a tubercular cavity, as the surgeon would an abscess; and counselled its puncture through the skin, and the application of some stimulating lotion to its interior. But as his plan signally failed to do any good, and was certainly a painful one, it never took root.

This was all changed, as soon as it dawned upon the medical mind that phthisis is a disease of the blood, or of the constitution, rather than of the lungs alone. To make my readers understand the distinction fully, let us consider the difference between a purely local disease,—such, for example, as inflammation of the eye, arising from the irritation of a bit of sand or iron, —and a general, or constitutional disorder like gout. In the first case, the sole treatment required for the cure of the complaint is to find the appropriate remedy, and apply it to the dolent part. By such means we cure ringworm, scald-head, cataract, ulcers, and the like. In the second case, our applications to the diseased spots are of secondary importance; and our main endeavour is to modify the constitution. Who, for example, would now think of regarding *podagra* as a severe

inflammation of the great toe, to be cured by leeches, scarification, and the like? On the other hand, who does not regard gout as a complaint which involves the whole frame; or "the blood," as it is most fashionable to say; having many strange manifestations from time to time to demonstrate its existence; and at length settling in one or both feet in preference to other parts of the body; yet being likely to invade in succession feet, ankles, knees, hands, stomach, heart, and even the brain?

In like manner, phthisis is a disease of the constitution, giving from time to time, in brain, bone, or abdomen, indication of its existence, and at length selecting the higher part of one or both lungs for its especial manifestation. Yet, though this is its favourite seat, we find that the same disorder will affect other parts of the body — cerebrum, larynx, liver, stomach, bowels, peritoneum, hip joint, spinal column, &c. Nay, even as gout will sometimes be irregular, and show itself first in the stomach rather than in the feet, so phthisis will occasionally first show itself in the intestinal canal, the brain, or windpipe.

That we are justified in thus regarding consumption, a few considerations will show. Its victims may for a time be cured, yet they are as liable to a second attack as is a gouty patient to a second fit. The two diseases are alike hereditary, and may be transmitted equally from father or mother. Such complaints can never be properly regarded as otherwise than constitutional. But the most important fact connected with this subject is, that persons sometimes die of decline, although the lungs are healed. I have myself seen many such cases, one example of which will suffice to show my meaning. A young man, after being in the Liverpool

Infirmary one winter for consumption, came under my care at the Northern Hospital in the same town during the following year, and on his admission had a violent attack of spitting blood. For many weeks his expectoration — bloody, purulent, and mucous — amounted to about a pint every day, and the emaciation was extreme. By and bye, however, the quantity expelled became less and less, until the whole quantity did not exceed a teaspoonful, and at length the cough entirely ceased. The evidence of two large cavities was, however, distinct; and the process of emaciation went slowly on. After lingering for many months, the man died of "decline;" yet, on examining the body, both cavities were found to be cicatrised — *i. e.*, they were coated within by a fine membrane resembling new skin, and there was no trace of active disease anywhere.

Having thus established, as we think, our point, we are prepared to understand that there are indications of the consumptive "diathesis" long before the lungs are attacked. Amongst these we may name plumpness and ruddiness in youth, clearness of complexion, softness of skin, brilliancy of the eye, pearliness of the teeth, and a gentleness and amiability of manner which is extremely fascinating. With this, there is in youth much mental or bodily energy — what some persons call mobility — *i. e.*, a propensity to be always doing something, inasmuch as an enfeebled brain often indicates its condition by sleepless activity. Hence we find that so many who charm us by their loveliness, astonish us by the amount of work which they get through, astound us by the fertility of their invention, or attract us by their amiability, seem to die prematurely from the results of their own exertions. As I write, my memory recalls beauties,

poets, architects, athletes, mathematicians, merchants, and other conspicuous women or men, who have died prematurely from consumption — a disease which, like gout, might have been warded off, had each one had the skill to recognise the indications of the impending danger, and nerve enough to undergo the means requisite for safety.

We may enunciate as a fact that every child of a parent having consumption is, from birth to death, threatened with the same complaint; and that each can hasten on the development of the disease, just as the offspring of a gouty sire may have his first fit at an earlier age than did his father, by habitual indulgence in beer.

It remains, then, for us to investigate the means which are likely to hasten the advent of phthisis, with a view to avoiding them. What these are, we learn by contemplating the causes that bring on consumption in those wherein it is not the result of an hereditary taint. They may be shortly summed up — habitual exposure to moist cold; insufficient food and clothing; and a reckless expenditure of the powers of life. The young man of fortune, who enters upon his worldly career full of health and strength, and runs a course of riotous living, spending his substance, and himself, like "the prodigal son," finds himself, in the course of a few years, on a sick bed, dying of decline. My memory can trace many acquaintances to whom such a description applies. Without any constitutional disease entailed on them by their ancestors, they have fairly earned phthisis; just as another may attain to a gouty diathesis. Others have induced the complaint by that excessive "training" which is regarded as necessary to prepare a man for competition with his fellow, in the boxing-ring or in the "out-rigger." If men generally

knew how frequently excessive exercise brings on decline, they would speak more reasonably of gymnastics than they usually do.

But all who inherit phthisis do not have the disease, any more than all the children of a gouty father are podagrous. The indications which seem to stamp one individual as a more probable victim than another we have already pointed out. Nor is it necessary to do more here, than add, that those are most obnoxious to consumption, who were born at a time when either parent was comparatively near death from this disease; consequently, those in this condition ought to be particularly careful to avoid all risks.

Having thus remarked upon certain common symptoms that indicate general danger, it becomes our business to notice those which tell of the imminence of the disease—the avant-couriers of a fit of phthisis—for consumption has fits, as gout has. One of the most certain is expectoration of blood from the lungs. This does not always happen; but when it does, it is a symptom which demands from the patient the most serious attention. The amount of loss may be small, or, as generally happens, it is considerable; yet, unless the occurrence can be fairly traced to some other cause, hæmoptysis heralds the advent of consumption. Sometimes it is immediately followed by other symptoms; but more frequently an interval of two years elapses between the first spitting of blood and the more serious manifestation of the complaint.

The two most common forerunners of the fit usually come together; and when they are recognised, a pulmonary attack may follow at any time. These are, loss of strength, and emaciation. Without apparent cause, an individual feels so

weak that no pleasure is taken in anything. Walking, riding, working, talking, reading, and writing are all irksome. A bed, or a sofa, is the only comfortable spot; querulousness replaces mirth, and there is a constant fear of something impending. With this there is loss of flesh; and the patient sees with disgust his bones becoming daily more distinct. Very probably he has no "cold," or symptoms of influenza, so that he is much puzzled to account for the freak which his body has taken. If he have a catarrh, the symptoms are naturally attributed to it. After these symptoms have continued for some time, a cough comes on, short at first, and dry, but gradually becoming "looser;" and there is shortness of breath, with rapid pulse. When the disease is fairly established, the victim continues to get thinner and weaker, the cough is more distressing, the digestion fails, there is great sweating during sleep, often diarrhœa, and consumption at length lands the poor patient at the bottom of the hill of life. Truly the complaint deserves the name it has received, for the victim seems almost consumed away ere he draws his last breath. We beg our readers to recollect the word, for we shall refer to it again.

When we investigate the state of the system in phthisis, we recognise this prominent fact, that instead of proper tissue being formed in every organ, another product appears, which is possessed of but little life, and very soon decays. To this debased material the name of 'tubercle' is given. The new matter may be formed everywhere, but it is most common in the lungs. Phthisis, then, consists essentially of a peculiar condition of the body, in which there is a powerlessness to make healthy tissue; or, in other words, a failure in the organism to continue its normal

changes; or, in the vernacular, a loss of living power. If, then, consumption essentially depends upon diminished vitalism, it follows that, if we can recruit the patient's "force," we can prevent the spread of destructive consumption.

I may illustrate my meaning thus:—I have a tree which grows flourishingly in a warm conservatory; but from caprice I banish it to another house, where it can get no sun; or into the exposed garden, where it is certain to be cold. Within a few days, I see the thing drooping; instead of growing, it gradually fades, its leaves fall one by one, the younger shoots die, and, unless a change is made, the plant will be irrecoverably lost. Yet, if I now replace it in the warm house, and there is enough vitality left in the roots and stem, the tree recruits its life, and again becomes green and beautiful. If vitality had gone, heat and light would have been useless. The change effected has been produced by the inherent power called life. This I cannot give, nor can any man. All that we can do is to put living creatures into the best position for exercising the vital or organic forces which they possess.

We conclude, from these considerations, that the most essential part of the treatment of phthisis is to place the patient in the most favourable position for renovating, or developing, the inherent power which remains in his constitution. As we find that his system consumes the tissues too fast, we must give plenty of appropriate fuel, so that the supply may exceed the demand; feeling sure that, if the process of decay be arrested, other good results will follow. But, in following out this plan, the stomach is often against us, and refuses to digest even half the food necessary.

Consequently we have to select such diet as can be most easily digested.

As in consumption the human fat is first burned up, so it is the doctor's care to replace this in profusion. To this end, oils and adipose meat, such as bacon and the like, are recommended; but it is a curious fact that the two are rarely tolerated together. One who can digest oil can with difficulty bear fat beef; and he who can indulge largely in stall-fed flesh, redolent with suet, and enjoy "dripping" in puddings, &c., cannot endure cod or other oil. Again, all oleaginous fluids are not equally valuable as esculents. Olive and almond oils, for example, are purgative, resembling in this respect that expressed from castor and croton seeds. Other vegetable fats seem to be worthless, as animal fuel. The so-called fish-oils are pre-eminently nutritious and fattening. The Esquimaux, and inhabitants generally of Arctic regions, almost live on unctuous seal, walrus meat, or whale's blubber. Taken internally, it supports the body, and keeps it warm. It is, indeed, human fuel in the stomach, as completely as when burned in the lamp. In the first and second, it imparts heat; in the first, however, it gives no light.

Cod-oil has long been one of the most popular esculents—for it does not deserve the name of a medicine—in consumption. Nevertheless, I have greater faith in another old-fashioned diet, viz., one of milk, combined with spirit of some kind. I have known individuals live for a twelvemonth upon a quart of milk and three ounces of rum per day, and recover their health perfectly, without taking anything else, or altering their daily routine. Each year that my experience runs on, it makes me respect this diet more deeply.

Amongst poor folks, who cannot procure good milk, my recommendation, as I have elsewhere stated, is to boil blue milk with a small quantity of flour and suet, skimming any superfluity from the surface when cold. Thus we may make a fluid almost as rich as that given by a well fed cow. Cream and almonds may be used occasionally as a substitute for milk. The milk and rum should be taken warm, and it must be noticed that it is in this condition extremely useful in preventing or checking diarrhœa.

Where the stomach cannot bear oleaginous food, the skin may be well rubbed with olive oil, or other similar material. Of the value of unctuous inunction, with or without shampooing, it is difficult to speak warmly, without being too enthusiastic. I have seen, under its influence, cases otherwise hopeless, recover perfectly. But the subject is sufficiently important to demand more attention than I can now give it; and it will be more profitable to my readers if I postpone what there is to say upon it to an appendix, to appear in the next chapter.

To return to consumption. We know that, under ordinary circumstances, the body has to make its own heat. The natural warmth is kept up by an esculent fuel; and the greater the difference between the aërial temperature and the blood heat, the greater necessity is there for food, or *vice versâ*. A man living in an atmosphere of 40° requires more aliment to keep his warmth up to 96°, or blood heat, than another who lives in a temperature of 90°. And if he cannot procure, or digest, victuals, he consumes himself slowly, and loses warmth. Cold, moreover, or the absence of heat, stunts the growth of man and animals; consequently, if we wish to improve the condition of one who is drooping, ade-

quate warmth is of the utmost consequence. It is, in vital matters, what economy is in pecuniary affairs.

It is, indeed, difficult to overrate the importance of heat in the treatment of phthisis. Having already given a remarkable example of this in *Preservation of Health*, in the chapter on the value of this force, I will not repeat it here, but record another case, which was under my eye at the time that this essay was penned.

A married woman, of consumptive family, a gentleman's housekeeper, and living in comparative comfort, was, after an unusual amount of fatigue, produced by nursing a sick mother, and a walk of four miles daily in addition to her domestic care, seized with consumption, and, in spite of her master's care—for he is a physician—became so rapidly worse, that a speedy dissolution was expected. But the tide was effectually turned by the use of a fire in the bedroom, which was, by its means, kept at a warm temperature. The result has been that the morning cough has materially diminished in severity, the body is not chilled by putting on cold, or even damp clothes, and with the warmth has come a return of appetite.* I have read, somewhere, that experience in the Brompton Hospital for Consumption shows that each patient admitted is improved by the warm air of the house, long before it is possible to find any special change from the use of medicines. Indeed, it is scarcely necessary to speak of the value of heat to those who are familiar with the advantages gained by sending phthisical patients to such climates as Madeira, Malta, Egypt, the West Indies, and Australia. Yet it is well to know that attention to judicious

* The individual referred to in the text recovered perfectly, and now, two years after the account was written, remains in good health.

heat and ventilation in one's own dwelling in Great Britain will answer almost as well as a journey to distant shores ; and we believe that it ought to be a rule in nursing, that the rooms in which a consumptive patient lives should never be below 65° ; 70° is, I think, the best temperature.

Again, we must bear in mind that in consumption there is a great diminution of muscular power ; and that, even at the best of times, exhaustion follows excessive exercise ; consequently, we must discourage *all* bodily fatigue in the treatment of phthisis. I emphasise the word *all*, because it is desirable to pay close attention to the point—What, indeed, does *all* bodily fatigue include ? For the consumptive, it includes walking, talking, and even sitting in a chair. Many are the patients whose lives have been prolonged by their being sent to, and kept in, bed ; and many another case can I reckon up, in which repose has effected a cure. As the financier more carefully nurses his last shillings than his original sovereigns, so should the phthisical patients hoard up their decaying strength. Yet too often do we find such victims walking, or riding out, for exercise, and sitting up all day, as if to prove that their vigour has not wholly ebbed away. Such resemble animated water-cans, who allow themselves to run dry that they may demonstrate that they yet hold water.

Laziness—pure and unadulterated sloth—is an essential part in the treatment of "decline." The indolence thus recommended is quite compatible with abundance of pure air, which can readily be introduced into the room by Mr. Burder's contrivance. By his plan, a tin tube is brought from the outside, conducted round the fire place, and then prolonged into the chamber, opening by a whirligig near the

patient. The draught of the fire produces a current, the same heat warms the incoming stream, and the patient enjoys the luxury of pure and calid air to his lungs' content.

Such are the most important hygienic measures to be adopted in the treatment of phthisis; and we cannot indicate our opinion of their paramount value better than by saying that, without attention to these, medicine is powerless to cure; with them, no medicaments are necessary.

It is, indeed, a matter of grave doubt whether drugs, even tonics, are admissible in ordinary cases of consumption. If the stomach is out of order, as it generally is, its duty to digest is quite as much as it can perform; and to burden it farther with the coction of such sapid substances as quinine and steel is injudicious. Yet sometimes it seems necessary to administer such medicines as astringents to restrain diarrhœa, for unless this be suspended, the patient's strength rapidly wears away. But even here it is possible to check the occurrence by enemata. We have, indeed, frequently, when in consultation on cases of consumption, made use of the sentence, "Keep the stomach for food, the rectum for physic, and the skin for oil." By this contrivance, the natural business of the digestive organ is not interfered with, and the physician is thereby enabled to deserve the character of a sensible man, one which he would certainly not receive if he ordered steel, cod oil, chalk mixture, and food, all in the same day. A stomach forced to receive so many different things would most assuredly end by rejecting some, if not all.

We must not, however, close our essay without adverting to the local medication of the lungs in phthisis. As the disease in the pulmonary organs is a form of scrofulous ulcera-

tion, we should treat it much as we would a strumous sore elsewhere; modifying our practice according to circumstances. The plans which may be adopted are—1. The inhalation of the vapour of hot water, with or without mixture, creosote being the most appropriate addition. 2. The use of some spray diffuser; when this is adopted, a drachm of laudanum should be added to half-an-ounce of water, and a fourth part used at a time, the sufferer being directed to inhale the opiate mist. In one case—the first in which this plan was recommended by me—the patient found extraordinary relief from the plan, for it both checked the cough and diminished the expectoration. A number of other fluids may be substituted for laudanum, *e. g.*, eau de Cologne, or lavender water, both of which prove to be gentle stimulants. At the same time, our client may be directed to wear upon the chest some form of epithem, which imparts a sensation of heat to the skin. For example, eau de Cologne, or any other spirit, may be sprinkled upon flannel, covered with impermeable tissue, and worn next the body; or flour of mustard may be dispersed from a powder-puff over a hare-skin, and similarly borne. But if we were to enter too closely into such details, we should debar our readers from the pleasure of working them out for themselves. Where the principles of treatment are understood, a knowledge of the best practice to be followed is almost certain to follow.

CHAPTER XIV.

ON OIL-RUBBING, ETC.

Old ideas revived—Celsus—Restoration after prolonged immersion in water—Rubbing—Professional rubbers—Spinal irritation—Case—Oil rubbing—Ointment and anointing in old times—Butter in Abyssinia used as a dress—Oil in fever—Oil bearers free from plague—Value of rubbing, cases of—Not a panacea—A favourite formula.

THERE is an old saying, to the effect that what is hath already been, as nothing exists under the sun which is wholly new, for the counterpart of everything has been known in the ancient times before us. I have, indeed, heard of a book, though as yet unable to obtain a copy, entitled, *Old Inventions Re-discovered*. In many a trade, and notably amongst the artificers in glass, we hear frequent exclamations of admiration for the antique, and a sigh of regret that the art of making certain colours, or combinations, has been wholly lost. But medicine has, somehow, formed an exception to this rule, and there is not a young man that leaves the schools, who does not believe that old-fashioned ideas of doctoring must be radically bad, and that the march of science has made juvenile physicians superior to antiquated, and somewhat feminine M. D.s. Once upon a time it was otherwise, and nothing in the art and mystery of the apothecary, the surgeon, or the practitioner in medicine was permitted to

exist, unless it could be demonstrated as having been taught by Hippocrates, Galen, Avicenna, or some other far distant star. When such ideas prevailed, medicaments, like dried mummy, centipedes, powdered serpents, and the like, were found in the arcana of a doctor's shop; and to send for a graduate in medicine to a sick man was very commonly antecedent to an immediate summons to a fashionable undertaker. It is, then, by no means wonderful that a reaction against ancient medical notions should have set in, and that a clean sweep should be made of antiquated theories and practice.

But when rooms have been swept free from dust and cobwebs, we like to see them furnished; and sometimes a critical eye may find that the new chairs, tables, and carpets, which have come from the modern upholsterer, are not so serviceable as the ancient furniture that has been discarded. When this occurs, the sensible man masters the feeling of shame which creeps over him, and reinstates the once despised chattels in their place of honour. In medicine, such has really occurred, and things which were once despised as old women's remedies are gradually being adopted by thoughtful eclectics. For myself, I say it without shame, that I am indebted to an elderly lady for my knowledge of the best mixture to allay cough. After sundry attempts to make scientific compounds to relieve the sufferings of a personal friend, I had the ground completely cut from beneath me by an old woman, who sent him a mixture of honey, rum, and lemon-juice, in equal parts. This, with or without laudanum, is still my favourite prescription.

Again, I am indebted to ancient families for my introduction to the use of milk and rum as an article of medicinal

diet; and I declare that, with all my knowledge of materia medica, gained as a diligent student, an assiduous lecturer, and an attentive physician, I know no single remedy which is equal in value to this mixture. Indeed, if I were to record only a tenth part of the good which I have seen effected by it, there would be a risk of the writer being thought "hobby-horsical." Yet even then I could appeal to all my sensible contemporaries, and ask them whether each, as he grows into years, does not become more and more enamoured of those medicaments, in which he feels that he can repose the most perfect trust ?*

This preface will show that no one ought to despise a remedy simply because it is ancient, nor be ashamed at sitting below the knees of a Gamaliel nearly two thousand years old. To eulogise such a teacher as Celsus may seem strange now-a-days, yet I cannot write what I have to say without passing him a compliment. It is he amongst the ancients who recognised the value of the external use of oil, and the

* I am glad to find, from remarks made by the reviewer of this book in the *Medical Quarterly*, that I am rather too hard upon my brothers in medicine, and too laudatory of old women. That writer assures us that many of the things which I have picked up from outsiders are taught to the students of medicine by the regular lecturers; and he distinctly refers to the professors from whom he learned various homely remedies. I can only say that I have never yet heard any medical man, either in London or the provinces, refer to the use of milk and rum, and of lemon-juice, honey, and rum, either eulogistically or otherwise; and I may say still farther, that when a patient of my own, whose case is mentioned in this chapter, was recommended to see Dr. ———, of London, who would put him into the way of being strengthened by oil-rubbing, replied that he had been familiar with the remedy for years. Another letter came, requesting to know the name of the medical man who had ordered it, inasmuch as Dr. ——— believed that he was the only man in the profession who had adopted the practice.

Rubbing with cod oil was once common enough, but when this was opposed, in consequence of its nauseous smell, the practice fell into desuetude.

importance of friction in the cure of disease; and it is very probable that I should never have thought of either, if I had not been obliged to read his pages ere a "license to practise," &c., was given to me.

The re-discovery of the ancient knowledge referred to came somewhat in the following guise:—Whilst pondering deeply over the means which the doctor had at his disposal to effect an improvement in the health of his clients, or, in other words, to impart strength, or to ward off death by debility, the alimentary canal, the lungs, and the skin were reviewed. Everybody knows how the physician may cause food and physic to be introduced in certain cases into the stomach and rectum, without the patient being benefited; and how he can force lungs to take in, and give out, oxygen without aërating the blood, as in severe cases of asphyxia. Standing by the body of a strong youth, just drawn from the water and apparently drowned, the doctor may pump wine down the throat, and ammoniacal solutions into the bowel; he may galvanise the muscles of the chest and heart, and imitate the movements of respiration, without the smallest result being apparent; yet, when he sets himself and attendants to rub the body and limbs perseveringly, he slowly finds the flesh becoming firmer, and the lips rosier, until at length the suspended animation is restored.

Having seen one such phenomenon, the surgeon eagerly longs for more information, and seeks for extended experience. This has now been obtained, and it is generally understood that steadily and perseveringly rubbing the body of one seemingly drowned is of far greater efficacy than artificial breathing, or any other known plan. The naked body freshly drawn from the water, lying in a warm room,

and surrounded by earnest rubbers, has far better chance of rising once more into life than one placed in the most elaborate machine for sustaining respiratory movements. From such histories as our books record of recovery from drowning, none can draw any other conclusion than that friction of the body is of very great value. To the same end points the account which we have read of Turkish baths, in which kneading and shampooing form an important part.

Again, during my early professional days, there were some remarkable instances spoken of by the gossips, in which a professional "rubber" had cured bad cases that were said to be examples of "spinal irritation," after very many clever doctors had signally failed. Unable to explain the "reason why," I became only more determined to verify the truth of the stories. If a fact be real, it cannot be made a fiction because a doctor is unable to understand it. Of the reliability of the accounts, ample evidence convinced me; and my subsequent researches on "myalgia," with a comprehension of the real nature of the disease entitled *Spinal Irritation*, enabled me to see why the shampooing treatment was calculated to do good.

The complaint referred to was due to failure of muscular power; for the soreness and suffering in the fleshy textures followed from undue fatigue. These symptoms were misinterpreted by doctors, and treated upon a plan which made the muscles more debilitated, and the patient weaker; consequently, soreness merged into pain, and pain into agony. With the "rubber" all was changed; false medication ceased to do mischief; the aching flesh was allowed to repose during the greatest part of the day, and had its firmness promoted by persevering and strong friction; whilst the

body was at the same time nourished with good food and the inunction of oil.

A few days before writing this essay, I had another visit from the patient whose history I gave in Chapter VI. Well do I remember his legs and thighs when I first saw him; soft they were, small in bulk, and flabby, like sodden wash-leather; and, as I "worked" them in my hands, the man winced with pain. Now, on the other hand, they are large in size, hard as those of an athlete, and insensible to a hard grip; a change mainly due to persevering friction and shampooing. Other cases of a similar kind have occurred to me, but none more conspicuous than this.*

With the above histories before us, we cannot fail to acknowledge that steady friction, rubbing, or shampooing, is of great utility in other cases besides suspended animation. It has, in addition to its general value, a special effect upon the muscular structures; and I aver, after closely observing the effects of both for many years, that the remedy of which we treat is infinitely superior to the use of electricity or galvanism, or that which is now designated by the absurd epiphet of "Faradisation." I use the word *absurd*, for it is as silly to call the use of galvanism by the name of the philosophic physicist, as it would be to call shampooing "Celsusation," after the Roman physician, and the use of cod oil by the title of "Morrhuism." I have heard of "myalgia" being designated "Inman's pains," but I cannot

* As I am correcting this sheet at a great distance from England, and have not the preceding ones at hand, I am not sure whether I have given, in the chapter on Palsy, an account of two cases under my care at the Liverpool Royal Infirmary; in one, the muscles of the forearm, and in the other, the whole of both extremities, were restored to their normal bulk and strength by shampooing alone, without the use of oil or other embrocation.

conceive anybody calling indulgence in general diet, and passing beef through the bowels instead of shocks through the limbs, "Inmanisation." Unless such queer nomenclature be suppressed, we shall shortly hear of the "actual cautery" being called "Tyndalisation," after the eminent philosopher of caloric, &c.

We may now pass on to the value of oil, or oleaginous matters, when applied to the skin, without or with the addition of shampooing. Their use by orthodox practitioners may be traced, in modern times, to the period when the medical profession went wild upon the importance of cod-liver oil. No sooner was the belief attained that this stuff was good for consumption, than it became the practice to give it in every case of phthisis, and none were allowed to die without having first partaken of the nauseous fluid. But it was soon found that many could not digest the dose, even when it was made as palatable as the art of the apothecary could effect. Stomachs are sometimes imperious, and will only allow in their domains such subjects as please them. Yet the doctors resolved not to be baffled; and if they could not introduce the material in one way, they would in another; so they had it rubbed into the skin. In some instances, the results following the practice were undoubtedly good, but it was attended with very unpleasant accompaniments. The patients who submitted to it became repugnant to the nostrils of their friends, and the odour from the skin often prevented the delicate stomach of the consumptive from receiving food. With the stink of fish oil always in the nose, every article of diet seemed to taste of it, and the rubbing with such material was soon abandoned.

Yet, when the profession gave up the use of fish oil

externally, and their favourite means failed them, there were some few who investigated the subject further, and attempted to ascertain whether other materials would not equal the value of cod oil, both internally and externally. We have chiefly to to do with the latter. Scented lard, pure salad or olive oil, almond, and other oils were tried in succession, and the results duly noticed. When it became evident that advantageous results followed in very many cases of consumption from the use of "oil-rubbing," a farther question arose, viz., whether the same plan of treatment would not be of service in other diseases besides phthisis.

It then became advisable to give the plan a trial in every case where there was "debility" as a prominent symptom; and when it was found that the experiment was attended with successful results, a further development of the value of oil naturally followed. Memory soon recalled to our notice the abundant use of unguents in ancient times in Judea. The Bible tells us of kings being anointed with sacred oil; of precious ointment running down from Aaron's beard to the skirts of his clothing; of Jesus having his feet covered with a costly salve, immediately after being washed.

The reader will, probably, also remember the expression, "oil to make the face to shine," and others, which indicate that in the East it was considered a luxury to have the skin covered with an oleaginous film. Thence the memory will pass to the physiological fact, that the hide of almost every animal is furnished profusely with oil glands; that the human skin is naturally covered with unctuous material; which is particularly conspicuous in the negro, and others who inhabit hot climates.

From this it is but a step to a recollection of the expe-

rience of Mansfield Parkyns, an enterprising Abyssinian traveller, who reported that he found the best way to bear the heat of a tropical sun was to go naked, save where the waistcloth did its duty; but carrying half-a-pound of butter upon his head, which, by slowly melting, kept the skin bathed in grease—a curious garment, certainly.

Again, the memory arises of conversations we have held with travellers from hot climates, who have descanted upon the value of perspiration, as enabling them to tolerate the heat of a burning sun. We have ourselves recalled with dislike the feeling of dryness and discomfort which has followed a bath in sultry weather, and which continued until the secretions from the sweat and oil glands have again coated the skin with oil.

To these observations the travelled reader will add his remembrance of the baths found at Pompeii, in which were found, in a number of niches in the wall, boxes or pots of ointment, many still retaining upon them the name of the owner. These were habitually used after drying the flesh—sometimes by the individual, but occasionally by a male attendant, as we find from Juvenal, Sat. vi., 418, 422.

> Balnea nocte subit.....
> Calida et crista digitos impressit aliptes
> Ac summum domina femur exclamare coegit.

See also the same author, Sat. iii., 76.

From the preceding observations the conclusion is readily drawn, that the use of oil over the body is appropriate in fevers, and in all cases where the surface is unusually dry, and harsh. As these cases are common enough, it has been easy to accumulate experience, and this soon demonstrated

that the use of unguents to the skin is a comfort in that form of feverishness which is so common amongst children in cases where water in the head is threatened; also in typhus, scarlatina, and other similar affections.

Again, it has been noticed by the observant that, during the prevalence of the "plague" in the cities of the East, and elsewhere, they only escaped, whose business with oil made the skin coated with that substance. Taking this as a test worth following up, when the plague ravaged Malta, all whose profession brought them into contact with the sick and with the dead wore dresses saturated with a solution of wax in oil, leaving only the face exposed; and, singular as the precaution seemed, it was effectual, and guarded all who wore the *tela cerata* from infection.

It would fill a moderate-sized volume, were we to enumerate the instances in which we have seen a beneficial effect from oil-rubbing—a result which has been tested in every possible way; but we will content ourselves with one or two, which will serve to indicate the nature of the evidence relied upon. A. B. C., a gentleman, of almost Herculean build as regards *physique*, had long been a sufferer from that form of debility called "nervous," which might be compared to that felt by those who have to labour in a "sirocco," or which eventuates in sun-stroke. The prominent symptoms were noises in the ears and head (which were the more distressing, as the auditory nerves were both paralysed), and many other symptoms that are commonly supposed, although erroneously, to be dependent upon organic cerebral change. In this case, everything which medicine could do was tried; there is not a known tonic that was not used, nor a roborant diet which was not rigidly followed up. Yet the improvement was almost

imperceptible, from month to month. At length, resort was had to shampooing with oil, and a change for the better was soon apparent. For many weeks the practice was continued, and new life seemed to be infused into the system. Then the plan was dropped, and the patient drooped. The practice, being again adopted, was not given up until the gentleman had regained perfect health, the unfortunate deafness alone remaining. He is, indeed, a client of whom a physician may well feel proud.

The other patient was a young lady, tall, of slender build, and great activity, but having parents, both of whom, though rarely ill, were delicate, if not consumptive. After leaving school, the lady began to suffer from various pains, and her life was made almost miserable by aching limbs and tortured body. Of the reality of her sufferings none could doubt, and the most old-fashioned of physicians would have hesitated to call them "hysterical." To find relief for their daughter, the parents took her to various "capitals," to seek for the best advice; even speculum doctors were consulted, and the womb duly inspected and medicated. Yet the patient was a puzzle to all. Every organ of the body was pronounced to be healthy; and it was impossible to attribute the symptoms to disorder of brain, heart, lungs, stomach, bowels, kidney, or womb. Tonics of all kinds were prescribed; exercise on horseback, on foot, or in a carriage was enforced; the diet was of the best; yet still the lady lingered on in suffering.

At length, it was ascertained that the case was one of simple myalgia; every muscle of the body was soft, flabby, ill-nourished, and unfit for work, and, as a consequence, all were seats of pain after very trifling exertion. It became

evident that the daily exercise was the constant cause of the pain. The web, partially woven by sleep, was destroyed during the waking hours. Rest in bed, therefore, was recognised as the appropriate means of cure. But after this had been resorted to, there was little increment of strength, and perpetual imprisonment in a four-poster seemed threatened. At this juncture, shampooing the limbs with oil was adopted, and recovery shortly began. The mother, however, doubtful of the efficacy of the plan, reported that "it made the legs swell;" and so it did indeed, but only in the way a famine-stricken sailor "swells" when he reaches a land of plenty. The lady continued to increase in the way indicated until she was enabled to take leave of the doctors and the rubbing, and to become an ordinary woman—delicate, it is true—but nevertheless useful, ornamental, and comfortable.

At this point the writer may pause, to remind his readers of the statement, made elsewhere, respecting the cures of spinal irritation effected by professional "rubbers," after orthodox doctors had failed. The case referred to was precisely similar to those called in days gone by "examples of spinal irritation," save only that there was little tenderness over the spinous processes of the vertebræ; and it was cured at length, after orthodox physicians had failed, by an heretical doctor, who acted like an old woman; and condescended to be instructed by successful feminine quacks.

Oil-rubbing requires, however, some nicety in manipulation. As a general rule, it is useless for a patient to rub himself. The fatigue attending the process does away with any good it can effect. The rubbing should be carried on in a warm room, and care must be taken to suit the pressure of the hand to the comfort of the sufferer. Sometimes a patient

is too weak to endure it. Under such circumstances, an oiled pad may be placed on the chest, or elsewhere.

But, though I speak enthusiastically of oil-rubbing, my readers must not imagine that it is a panacea, or *elixir vitæ*. By no means; it is simply a valuable—very valuable—addition to the physician's armoury. We all of us know but too well that instances frequently occur in which Death lays his hand too heavily upon his victim for a doctor to remove it. We are quite aware that all medicine is powerless in certain cases, and in many diseases; yet we nevertheless fight on, hoping against hope that our advice and the remedies used may turn the scale favourably. When we see a poor husband, a loving sister, an invaluable wife, or any other victim of decline, sinking lower each month, until all chance of recovery seems hopeless, we cling with eagerness to everything that promises restoration; and if, after all other things have failed, we find a plan which restores one out of three, we hail it with delight. The following case, if it stood alone, would be quite sufficient to make any sanguine doctor enthusiastic. I was called in consultation to see a young man, whose life to his family was very valuable. There was no doubt that he had consumption, and the sole cause of my opinion being asked was, to decide whether it was better to stop in England to die, or go abroad on the chance of recovery. After many inquiries, my decision was, for a comfortable home until death arrived. The patient, who had twice wintered in Italy, took the same view. This being settled, the ordinary attendant said—"Now, doctor, is there anything which you can suggest for us to do in addition to what we are doing? Mr. —— is taking chalybeates, cod oil, which he digests easily, and as good food, &c., as he can manage. As you

perceive, he pays due attention to warmth and ventilation; come, what more can you think of?" I suggested oil-rubbing, and the observation, "It shall be attended to," was the last remark about the case which I heard for a long time. About three years after this, the family surgeon stopped me in the street, and asked me if I could remember Mr. —— 's case? Yes, was my reply, as distinctly as if it had occurred yesterday—how did it end? "Why, I met him at a ball last night, and he was the handsomest man in the room." We then, like a couple of conceited youths, recounted our "bonnes fortunes," not in love, but in medicine, and parted at length better—because more hopeful—doctors than we were before. Ah, me, how few of us range hope alongside champagne, and fear on a line with antimony.

The practice above recommended may be usefully adopted in those cases where infantile convulsions occur, or are imminent; whenever children's flesh is soft and flabby; where "water in the head" is threatened; in feverishness; and where cramps are common. It is very useful, indeed indispensible, in bronchitis, phthisis, mesenteric disease, marasmus, diabetes, and myalgia. Appropriately used, it becomes an aphrodisiac.

The plan may be varied by medicating the oil with such stimulants as turpentine or other essence, or with a narcotic, such as belladonna, opium, or morphia; but into this point we need not enter.

In conclusion, let me repeat once more my favourite formula for cases of phthisis, or general debility: "Keep the stomach for food, the rectum for physic, and the skin for oil." It is a homely saying, but not the less true on that account.

CHAPTER XV.

ON THE TREATMENT OF PNEUMONIA.

Pneumonia a battle-field—The public a better judge than professionals—Rival creeds—Doctors and knights—Good sense—Examinations in thoughtfulness—The Iron Duke used scales—Weighing disease—History of a case of inflammation of the lungs—Cause of death not the injury to the chest—Pneumonia and other diseases compared—Pneumonia an epidemic—Enquiry into the idea—Elimination—Treatment—Typical case—Chronic pneumonia—Poultices.

During more than twenty-five years, the treatment of the disease, to which the name of "inflammation of the lungs" has been given, has been the battle-field on which rival sects in medicine have contended. Occupied at first by the old school of antiphlogistic physicians, it has been contended for in turns by those whose banner was venesection, cupping, tartar emetic, calomel, chloroform, expectancy, low diet, and pseudo or true rationalism respectively. Yet, long and earnestly as the combatants have fought, and boldly as some assert their success, it is by no means settled to which of the rivals the palm of victory is really due.

This dubiety is mainly dependent upon the absence of an authoritative tribunal, to whose judgment the medical profession generally would bow. That such a decision is desirable, all will admit; but few would like to give the office of judge to anybody practising medicine. None would trust colleges of

physicians, courts of apothecaries, councils of surgical halls, and examiners in universities; for all alike consist of men having their own individual hobbies, prejudices, and favourite plans of treatment. We can scarcely expect medical magnanimity to go so far as to allow Drs. A., B., C., D., E., F., and G. to declare solemnly that they are all wrong, and Mr. R. is right. No; if a verdict is to be given on which all can rely, it must be formed by a court accustomed to deal with evidence, and to sift every matter that comes before it to the bottom.

Even the public is held by thoughtful physicians to be a better judge than a purely professional tribunal. We see this principle in the sister profession, theology. In every church, sect, or division, the verdict of the preachers is regarded as of slight moment. Every minister, who differs with his brethren upon the most appropriate method of treating a diseased soul, refuses to bow down to the opinion of his brethren, and resolutely proclaims his own, so long as he can find a following upon whose sympathy he can rely. Paganism and Christianity, Prelacy and Presbyterianism, Popery and Protestantism, Conformists and Nonconformists, have contended as strongly — if not more so — for supremacy in divinity, as have rival doctors in medicine.

What has been orthodoxy at one time, and received the support of regal and ecclesiastical power, has, by the sole verdict of the people generally, been converted, in the course of twenty or thirty years, into heterodoxy. The crushed skulls of a so-called hydra have developed new powers, until the oppressor's club has been rendered powerless. As we cannot in any way roll all humanity into one head, and then appeal to it, we must endeavour, if possible, to isolate

that mental influence which operates in all. We think that everyone, after studying the subject for a while, will agree with us, that the ultimate judge, in all things upon which an opinion can be formed, is "sound common sense." By this term we mean, that faculty of the mind which induces it to seek for the largest amount of evidence procurable on any subject, to sift it thoroughly, and to draw inferences and form a judgment thereupon.

It is not altogether inappropriate, in a medical treatise, to advert to the manner in which almost every single thing which is now acknowledged to be valuable has been opposed. Even vaccination is at the present time (July, 1871) opposed by F. W. Newman, an individual of wonderful mental power, and great independence of mind.

We are not one of those who would deprecate criticism, or hold out a hand of welcome to every person who professes to make us wiser than we were before. On the contrary, we desire to be a "free lance," like those in the days of chivalry, carrying the colours of our heart's beloved, La vérité. When a page, we were submissive; when a knight, we have never avoided the tournament, or to combat in the *meleé*, and we are always ready to meet every honourable opponent, whether he be young or old. If beaten, we rejoice that our mistress has a better champion than ourselves; if we conquer, it is only for the interest of our paragon. As a knight, we recognise the courage of every challenger, whether we are victorious or beaten; and our gorge rises at howls of derision, uttered by spectators who have no chivalry in their souls.

If every medical writer demeaned himself as did the knights of old, the cause of La vérité would triumph. But, as it is,

many a good lance and true fears to enter the lists, because he dreads the violence of the vulgar crowd, who are generally led by fuglemen, who would tear to pieces, if they could, the champion who should conquer him they backed. Every critic should emulate a model knight. When he does so, every author must respect him, even though worsted.

The young aspirants to fame deserve particular consideration. When the slim Ivanhoe entered the lists at Ashby, and struck with his pointed lance the shield of the doughtiest of the victorious champions, he met with popular sympathy; not because he was beloved, but because Bois Guilbert was disliked. But the Marshals of the Lists were impartial. Would not every novel reader censure them had they given an unfair advantage to the known Templar, or tried to commit a secret injury on the stranger? If those who aspired to be leaders of the public in various professions were worthy judges, there would not be a tithe of the grovelling discussions that there are upon disputed points.

We do not lay claim to eminence in the order of knighthood, but we do pretest strongly against the mean manner in which those who pretend to be of a noble profession persecute aspiring recruits. We have no special champion, nor any particular critic, in our mind, as we write this. We simply refer to the general run of medical judgments, which appeal to the lowest, rather than to the highest, interests of our nature.

If priests and doctors really loved orthodoxy, they would fight for it fairly, like knights, and not like jesters, who try to overwhelm an adversary with soot, flour, or mud.

I sometimes think it would be a very useful custom, if a course of instruction in common sense formed a part of the

routine education in every school, and that every examination should contain some questions to be solved solely by the exercise of this faculty.

We might, for example, put the following query to a ladies' college :—Mrs. A. finds that she has habitually to change her domestics, for they are saucy, ill-mannered, and very destructive to glass and china. Mrs. B. rarely discharges a servant, and finds very few breakages to complain of. In wealth, position, number of family, &c., the two are equal, and both are the sole housekeepers. You are requested to draw such inferences as the above information suggests, and to form a judgment thereon.

To a soldier we might put the question :—There are now close-shooting, breech-loading fire-arms, capable of being discharged twenty times in a minute. You are required to take possession of a breastwork held by an enemy, distant one thousand yards. You are permitted to advance in such a fashion as you may select, and to use such defensive armour as your men can easily carry. State your method.

To these, and such-like questions, many answers would doubtless be beside the mark. Yet we fancy that if some astute damsel were to reply to the first—" Mrs. A. frequently loses her temper, and says nasty things to her domestics, and Mrs. B. never speaks unadvisedly ;" and some thoughtful captain declared that he " would make his men advance like snakes, and use bullet-proof plates on the hat and shoulders, and only stand up and rush when he was close to the hostile camp," we should applaud them both.

When the " Iron Duke " had to command men in India, it is said that he put one into a scale, and weighed him naked.

The soldier was afterwards made to dress in light, and then heavy, marching order, and again weighed. By this means the general knew what each had to carry, and inferred how much fighting he could do, after, or on, a march. Why should not physic take example from such a commander, and appraise disease, so to speak, ere it does anything with it? It is never too late to mend; and let us hope that we shall yet attempt to learn what pneumonia is when naked, unfettered by physic, or clothed with vesicants, &c.

It is no more necessary that I should explain what inflammation of the lungs signifies, than that Wellington should have been told what a man is. Yet, when he ordered a soldier under the scale-beam, he knew that the individual was not below a certain height, was not deformed, was furnished with the usual limbs, was not emaciated, but was an ordinary man. In like manner, when I speak of pneumonia, I speak of a typical form of the disease, not that brought on by accidents, by blood-poisoning, or by tubercle.

Let us begin our process of weighing the complaint in question by a description of its course when unchecked. There are at first the usual marks of fever, with certain signs of an affection of the lungs, in which the lower parts of one or both are implicated; the whole system suffers for a time; the distress then abates; the general symptoms improve, a day or two before the pulmonary change is arrested; and at a period, varying from one to three weeks, the patient appears to be convalescent, even although a large portion of one or both lungs are still more or less useless from solidification. If the patient will die, the system never seems to rally. The symptoms which usually precede dissolution resemble those of typhus.

The characteristic symptom of the disease is a change in the physical condition of one or both lungs. The lower third of the organ becomes gorged with bright red blood; each individual air cell has its walls greatly thickened, and from every part of them exudes a dense secretion, which almost entirely fills the pores of the lung, and prevents the blood being aërated in the spot affected. When the disease is at its height, the once porous substance is as solid as the liver, and if a patient now dies, and an attempt is made to inject the blood-vessels, it is found that the material used will not run into the inflamed parts. They were then, we conclude, deprived of blood when they were in a living condition.

When a plan of treatment was adopted which very materially reduced Nature's damage-repairing powers, this bloodlessness often eventuated in the complete destruction, by mortification, of the tissue affected.

It is in this early part of the disease that fever occurs, and it would seem to be due to the efforts made by the heart to overcome the pulmonary obstruction. The febrile symptoms cease as soon as the system has accommodated itself to the new state of things.

It must be distinctly understood that the patient does not die simply from the injury done to the lungs; for he will recover, apparently perfectly, whilst his lungs continue to be as solid in their lower third as they were when the disease was at its height.

Instead of this, let us now put into the scale such a disease as erysipelas of the face and head. After the usual symptoms of fever, we find the nose, cheeks, brow, and head inflamed successively. There is much general distress. This

lasts for a time, but then dies away, the patient being convalescent from the seventh to the fifteenth day. If death ensues there is no relief of the general symptoms, and delirium usually precedes dissolution.

For erysipelas, let us substitute in turn measles, cow-pox, chicken-pox, scarlatina, small-pox, the plague, and the gout. In all we see a period of invasion, an inflammation of a particular part, and a restoration to health, the symptoms of improvement being distinguishable, and a cure ensuing, even although, as in small-pox, a large portion of the parts inflamed are irreparably injured. Gouty inflammation may leave behind it a chalk-stone, and yet the sufferer be convalescent. In case of death from any of these diseases, the general symptoms increase in severity, but delirium is not always present.

These cases we may profitably compare with one of poisoning by arsenic. There are certain preliminary symptoms, such as collapse ; then marks of inflammation of the intestinal tract in the first place ; and in the second, a similar change in the lungs, heart, kidneys, bladder, and skin. These affections last for a time, and then subside, leaving, it it may be, one part or another permanently injured. If death ensues, the symptoms increase in severity until the decease.

Now, when a man dies of arsenic or small-pox, we do not say that the cause of his death was inflammation of the skin, &c.; and if another dies of the plague, we do not say that the dissolution depended upon the characteristic bubo. Nor do we say that death in typhus is produced by a steady desiccation of the tongue. As we know that victims die from cholera, plague, scarlatina, measles, and perhaps small-pox,

without any visible characteristic sign, we conclude in other cases, where the usual symptoms are noticed, that a fatal result is due to the influence of the presumed poison on the system generally, rather than as a result of any particular effect which the poison produces.

Let us once regard pneumonia as we would one of the exanthemata, and we shall then recognise that it has a definite course, like measles and whooping-cough, and will run it much in the same way, however it is treated.

To many it may appear a new doctrine that pneumonia is an epidemic, like cholera; but the antiquity of the idea is at least respectable. Dr. Budd enunciated it to me, when I was his clinical clerk at King's College, thirty years ago; and though I have not seen the opinion expressed in print, it has been gradually assuming respectable dimensions in my mind. In the well-kept and elaborate private note books made by the doctor whilst attached to the *Dreadnought*, there was quite sufficient evidence to demonstrate the strong probability of the notion. But there is still stronger testimony to be found in cattle, amongst which pneumonia is a common epizootic. We readily allow that the existence of epizoic inflammation of the lungs in oxen is no proof that pneumonia is ever epidemic in man. In like manner, we would hold that the existence of small-pox among human beings is no proof that cows and sheep are liable to "variola." We merely use the illustration of one form of cattle murrain to show that inflammation of a pulmonary viscus may be epidemic, as well as inflammation of the skin, throat, face, kidneys, or peritoneum (as in puerperal fever).

Again, we freely allow that it is not proved that pneumonia follows similar laws to those of small-pox, diphtheria,

and scarlatina. To demonstrate this requires the attention of the medical profession generally. There was a time when scarlatina and measles were supposed to be identical; and at the present time there is doubt whether typhus, typhoid, and relapsing fever are diverse from each other. It is still a moot point whether there is an essential distinction between the autumnal cholera, epidemic in England, and that known as Asiatic cholera morbus. There are, indeed, few doctors whose life and experience are sufficient to establish incontestably any new medical theory.

When, therefore, we propound the opinion that pneumonia is an epidemic, one which follows the laws that guide other diseases of so-called poison origin, we do so tentatively; in other words, the teaching of experience induces us to draw the inference, and our judgment approves thereof. No other theory yet framed explains so well all the phenomena that we have to account for. We are fully aware that the objection may be made, that typical inflammation of the lungs may occur without our being able to demonstrate any source of infection, or any epidemic existent at the time. Yet the force of the observation is nullified by the fact that isolated examples of small-pox, measles, scarlatina, whooping-cough, varicella, erysipelas, &c., very frequently occur, whose origin cannot be traced. The corresponding objection, that pneumonia when it occurs is not "catching," meets with an analogous reply; for we find that even such complaints as plague, diphtheria, typhus, yellow fever, cholera, mumps, influenza, and ringworm do not necessarily spread to other individuals because one person is affected by them.

Without enlarging further upon the subject, I affirm that there is evidence sufficient to prove to a commonsensical

physician that pneumonia may—nay, must, if it is to be treated properly—be regarded in the same light as variola, erysipelas of the head, puerperal peritonitis, &c.

If our space permitted us, we would now like to review the theories and practice which have prevailed in such complaints as small-pox. We should wish to show how physicians have demonstrated to their own satisfaction that the hard pulse, high fever, strong local inflammation of the skin in small-pox, &c., are due to common inflammation, and are to be treated upon general principles. When first I entered the profession, Dr. John Armstrong's *Practice of Physic* was given to me as a text-book; and in that it was enunciated that the free use of venesection would convert a bad or confluent case of small-pox into a mild or "discrete" one; that the same plan would reduce a severe case of typhus to a mild "febricula;" and that in general the sting would be taken from every severely "phlogistic" complaint by a vigorous "antiphlogistic" plan of treatment.

Yet, the progress of knowledge has demonstrated that diseases like measles and mumps are better managed by judicious nursing than by energetic medication. We decline to nauseate the variolous by tartar emetic, to blanch the erysipelitic by venesection, to salivate the victim of acute rheumatism, and starve the scarlatinal or typhoid patient. As a general rule, the physician considers it better to guide disease than to coerce it.

Yet we have not wholly adopted this as a principle. There are many who encourage certain symptoms supposed to indicate * "elimination," and prescribe castor oil for

* As, in many cases of fever, the patient is relieved, and frequently apparently cured, by some perspiration or other effusion from the body, it

diarrhœa, cholera, and dysentery. Others, again, oppose the fever that occurs, in some, at the early stage of diphtheria, and generally in typhus and small-pox, by venesection, tartar emetic, and other depressing drugs. Others, moreover, and doctors must be included amongst the lot, treat gout—a complaint normally attended or followed by great weakness—with colchicum, a very debilitating medicine. Nevertheless, upon the whole, observant physicians prefer to interfere as little as possible with the progress of diseases which have a regular course.

As it is now an established fact—and it is to be regretted that medicine should have existed, as one of the sciences, for so long a time ere the knowledge was attained—that each disease of so-called poison origin has been aggravated by every 'heroic' attempt to cure it, we can readily understand that pneumonia has not been benefited by such energetic treatment as prevailed in ancient times. At one period, it was held that it was better for a person to die of the doctor than be allowed to perish from disease. At the present time, every physician most carefully eschews the possibility of being regarded as an executioner. We can now see that venesection, antimony, calomel, low diet, and the like, are as bad for pneumonia as they have before proved themselves to be in erysipelas and small-pox. Than these, the do-nothing treatment of the disciples of Hahnemann is infinitely better.

To illustrate my meaning still further, let me suppose a

has been supposed by many that these, which are called 'critical discharges,' carry away in them the material which produced the disease. Those who entertain this view endeavour to produce, by artificial means, the phenomenon referred to, and thus to effect the elimination of the morbific virus. Having discussed the question largely in *Foundation for a New Theory and Practice of Medicine*, I need not refer to it farther.

case. Dr. A., whose medical career began some fifty years ago, whose powers of observation and capacity to improve by experience are limited, but whose faith in the books read during his pupilage is still unshaken, accidentally sees a man who is in reality deeply intoxicated, and unable to give his own history. Uninstructed by others of the true state of the case, the antique Galen orders tartar emetic, venesection, opium, or other powerful remedy, and finds out next day, and subsequently, that he has a formidable case to manage—perchance his casual patient dies. Yet, if the poor drunkard had been doctored by a village homœopath with the tenth dilution of nux, nuts, or nothing, he would have been "quits" after a morning head-ache. So it is with pneumonia.

The truth of the proposition, that inflammation of the lungs is best treated upon the same principles as an intelligent nurse would manage a case of measles, is abundantly proved, in the remarkably sensible pamphlet upon the subject published by Dr. J. H. Bennett, of Edinburgh; who has therein most carefully weighed different systems of treatment according to their results; and demonstrated that judicious dietetic and general care is superior to any system of physicking; and that medication, on the whole, cannot, even when assisted by nursing, show such good results as sensible management alone.

Having come to this conclusion, we consider it perfectly useless for allopathists and other 'doctrinaires' to fight against each other as regards their rival systems of medicine. On the contrary, all should combine to discover, if possible, an improvement in the plan of nursing.

Who, but born fools, would contend about the best plan

for preventing young men from becoming old, women from getting wrinkled, and infants from being childish? Each must accept "the inevitable;" and one who fights against a certain fate will generally be found to be unknowingly its ally. It is, nevertheless, true that there are matrons and maids who try to be "beautiful for ever;" but we hope, for the honour of the medical profession, that none who call themselves doctors will pander to the desire, and promise to effect that which they ought to know is impossible to be done.

To be practical, we would say that the only treatment required in pneumonia is rest in bed, warm and somewhat moist air, silence, plenty of such diluents as tea, lemonade, soda water, or any other harmless fluid, during the invasion of the disease. Good diet, as soon as the appetite returns, with no more stimulant than an ordinarily temperate man would take at his dinner after a hard day's work, is the next necessity.

A typical case like those which I am describing came under my care at the Liverpool Northern Hospital, about fifteen years ago. A young man, æt. twenty or thereabouts, had double pneumonia, the lower third of both lungs being affected. I ordered no medicine, but the house surgeon ere I arrived had given calomel and opium. The patient was not seen by me until the fifth day of the disease; and on the seventh, something in his look induced me to ask the question, "Whether he would like a beefsteak and some porter?" His eyes sparkled, and he said "Yes" with alacrity. The diet was ordered, and the man was discharged two days afterwards, able to go to his work. At my particular request, he came occasionally to show himself, and I found

that the lungs were not restored to their normal condition until the end of six months. This case is an answer to those who allege that the danger of pneumonia depends mainly upon the physical condition of the pulmonary substance.

We do not mean to affirm that pneumonia, if let alone, will always end favourably. To do so would be as senseless as to say that measles never kills, and whooping-cough is without danger. All that we allege is, that the most appropriate method of treating the disease in question is to manage it judiciously, as if it were analogous to small-pox, erysipelas, or any other eruptive disease going through a regular course.

Into the principles upon which exceptional cases of inflammation of the lungs ought to conducted, we cannot, in essays like these, pretend to enter. Yet, for the benefit of others, we may shortly record our personal experience of pneumonia when it does not run a course such as we have described as typical. No medicine can cure it. I have had many patients under my care, in whom, at the very time when convalescence ought to have taken place, a relapse has occurred; after that, they have been under notice for months, and the doctor has done everything that experience, thought, and the advice of others could suggest, but wholly in vain. Lapsed pneumonias very commonly simulate phthisis, and the patients die. If they recover, it is "le bon Dieu" that makes them whole. In this respect, inflammation of the lungs resembles erysipelas of the face and head; from which, unless a patient recovers normally—*i. e.*, at the proper time—he is liable to suffer for an indefinite period. Such instances are examples of misfortune in the victims, not opprobria for

doctors. If physicians treat their clients upon really sound principles of common sense, they are no more responsible for unavoidable calamities and deaths than the meteorologists are for destructive thunderstorms and devastating hurricanes.

My critic in the *Quarterly M. C. Review* expresses the opinion that I undervalue the benefit given by a poultice in the treatment of inflammation of the lungs. A few words will suffice to show that I have tried to ascertain their utility. When young, I was taught to honour large thick epithems of hot linseed meal, applied over the whole of the affected parts, in cases, which were then supposed to be, examples of pleurisy, pneumonia, or the two combined. When somewhat older, there was not a patient to whom they were not recommended. But a prolonged experience induced me to discard them. Their sole value consisted in their weight. Their warmth was only to be thought of in poverty stricken districts, where coal, &c., were dear. The weight helps to keep the side to which it is applied quiet. But quiescence can be better secured by the use of strapping.

If there is real inflammation of the lungs, and the patient is fighting for breath, it is manifestly imprudent to make the chest less mobile than it is naturally, by increasing the weight which the respiratory muscles have to lift. In the days when people were pressed nearly to death's door, because they refused, on their trial before a judge, to plead not guilty, or the reverse, to the indictment which had been preferred against them—a barbarity that tarnished the practice of English law—an individual complained of the weight of a handkercief over his face. In like manner, when the chest

is oppressed, the additional weight of a poultice is sometimes unbearable.*

Practically, I assert that a thick, warm epithem is only useful when the intercostal muscles are mainly affected, and

* To the physiologist, the details of the experience referred to in the text are so interesting, and the book in which they are contained is now so difficult to be procured, that I reproduce them here, from *Select Trials*, London, 1742. At the Old Bailey, one William Spiggot refused "to plead," January, 1720. The following sentence was then pronounced:—"That the prisoner shall be sent to the Prison from whence he came, and put into a mean Room, stopp't from the Light, and shall then be laid upon the bare Ground, without any Litter, Straw, or other covering, and without any garment about him, except something to hide his Privy Members. He shall lie upon his Back, his Head shall be covered, and his Feet shall be bare. One of his Arms shall be drawn with a Cord to one Side of the Room, and the other Arm to the other Side; and his Legs shall be served in the like manner. Then there shall be laid upon his Body as much Iron or Stone as he can bear, and more. And the first Day after he shall have three Morsels of Barley Bread, without any drink; and the second Day, he shall be allowed to drink as much as he can, at Three Times, of the Water that is next the Prison Door, except running Water, without any Bread; and this shall be his diet till he dies: And he against whom this Judgment shall be given, forfeits his Goods to the King." Pp. 16, 17. At Page 22, of the same volume, we read—"The Chaplain found him lying in the Vault upon the bare Ground, with 350 Pounds Weight upon his Breast.....He sometimes lay silent under the Pressure, as if insensible of Pain, and then again would fetch his Breath very quick and short. Several times he complained, that they had lain a cruel Weight upon his Face, though it was covered with nothing but a thin Cloth, which was afterwards remov'd and laid more light and hollow, yet he still complained of the prodigious Weight upon his Face, which might be caused by the Blood's being forc'd up thither, and pressing the Veins as violently as if the Force had been externally on his Face. When he had remained half an Hour under his Load, and Fifty Pounds Weight more laid on, being in all four Hundred, he told those that attended him he would plead." "Spiggot....said that before he was taken out, he was fallen into a kind of Slumber, and had hardly any Sense of Pain left." This illustrates the facts that respiration can be carried on, when there is health, under enormous pressure, and yet that a very slight weight may appear to be painfully oppressive. Surely some of my medical readers must have seen *poitrinaires* unable to bear even the weight of a night dress when their end was approaching.

that in those instances strapping the side is both a neater and a more serviceable remedy. On the other hand, when there is pure pleurisy or pneumonia, or the two combined without any extension to the muscles of the trunk, poultices cannot be tolerated, on account of the impediment to breathing which they produce.

In the first edition of this book, therefore, I omitted the remedy spoken of advisedly; and it will be seen, by this reference to the stricture of the *Medical Quarterly*, that if I had given a reason why I discarded each popular piece of artillery from my own ordnance, the reader's patience would have been sorely tasked.

CHAPTER XVI.

ON THE TREATMENT OF PLEURISY.

Landlord and guest—Looks are deceptive—So are symptoms—Cases in point—Pleurisy without pain, and pain without pleurisy—Cause of pain in pleurisy—Pleurodyne—Strapping—True pleurisy's relatives—Its alliance with consumption—Increased secretion a sign of debility—Examples—Deductions to be drawn therefrom—Treatment—What to do, what to avoid—Value of drugs—Iodide of Potassium—Rubefacients—Blisters—Effects of counter-irritants—Mercury and absorption—Proofs of absorption after pleurisy—Erysipelatous pleurisy.

Before a landlord can tell what nature of lodging is likely the best to suit a customer, he must first form some estimation of his position and means. He would not like to put a duke into a mean garret, and a needy poet into the state bedroom. It may be that he is wrong in his estimate of the man, and imagines that a poor parson is a peer; but he endeavours to frame an opinion, nevertheless. In the same manner, before a physician thinks of treating a disease, he ought to form an idea of the new guest who has come to the human inn. But, like an hotel keeper, he may be greatly mistaken in his estimate. The first fancies that a duke must look lordly, don very good clothes, and have a retinue of servants, and he refuses to recognise a marquis who wears a shabby hat and coat. The second imagines that a disease

whose name ends in *itis*, as pleuritis or pleurisy, must be inflammatory, have certain well-defined symptoms attending it, and be as easily recognised as a bold baron. The first, seeing a proud looking man, dressed grandly, and having an air of command, may mistake a footman for a prince. The second, seeing what he has recognised as the marks of inflammation, may mistake a transient affection for a most important disease.

Such mistakes have been made frequently respecting the complaint of which we speak. Sometimes pleurisy attains very formidable dimensions without the patient being conscious of anything wrong, whilst at other times there are apparently very well-marked symptoms without any disease existing. I remember, for example, being requested by a medical man at a distance, to attend his wife during her visit to Liverpool. The only complaint made was of constipation of the bowels. Neither the patient, nor the doctor her husband, was aware of any other. Yet, on my third visit, when the nervousness consequent on seeing a stranger had worn off, I noticed that her breathing was very hurried; and something in the movement of the bust caught my eye—I suppose my readers know that women chiefly breathe with the upper part of the chest, and not with the abdomen as men do. An examination of the thorax naturally followed, and I discovered that one side was full of fluid; and concluded that there had been pleurisy at a previous period, which had given no hitherto recognised indication of its existence.

About the same time, I was in company with a family whose gaiety was considerable; but one of them had a laugh so peculiar as to draw my attention to him. On a critical examination, I noticed that his breathing was very short, and

that one side was almost immovable during respiration. As we were on intimate terms, he readily allowed me to examine his chest; and I then discovered that one side of the thorax was full of fluid; and the compressed lung wholly useless. Yet all this mischief had occurred without his being conscious of any internal change, or of having any pain, fever, or distress in breathing. Both these patients died shortly after their disease had been recognised.

On the other hand, I have been summoned to attend many a case of acute pleurisy; and have found patients writhing in agony, and almost unable to breathe, and yet have discovered that there was no affection of the pleura at all—nothing, indeed, beyond that severe muscular pain in the intercostal muscles, to which the name "pleurodyne" has been given. It is clear, then, that there may be pleurisy without pain in the side, and costal agony without inflammation of the pleura.

When we inquire into the reason of this variance, we readily see that when the serous membrane alone is inflamed, pain does not necessarily follow. Inflammation does not habitually involve suffering. There is no pain when the lungs alone are involved; and in tubercular peritonitis that symptom is usually absent. The same may be said of hepatitis, pure and simple. Agony attends inflammation only when the muscles in the vicinity of the disease are affected; or when the swelling accompanying the affection distends, considerably, its containing membrane. For example, a boil in a finger is painful, for it stretches the skin enormously; but a much larger phlegmon on the arm is, comparatively, painless, though sore. Cut the skin of the finger, and thus relieve the tension, and the suffering ceases.

When a muscle is inflamed from any cause, the pain in movement is severe; consequently, if inflammation of the pleura spreads itself to the intercostals and the diaphragm, the suffering and distress of breathing is intense. But these muscles may be affected, even with inflammation, without the affection involving the pleura; and I have known prolonged laughter, during a soirée, followed in some of the guests by all the symptoms of acute pleurisy in the morning. Running, jumping, excessive gymnastics, and even a few days' walk over a sandy soil, will produce the same results. To such an extent has intercostal myalgia, such as we describe, been formerly mistaken for pleuritis, that the mistake vitiates a large portion of ancient experience. When, for example, old authors tell a tale of acute pleurisy marked by fever, bounding pulse, intense pain in the side, and amazing distress of breathing, cured by copious venesection, it is clear that what has been treated is severe muscular pain, which would have got well of itself in the course of a day or two. Nothing can be easier than the treatment of this bastard pleurisy, or pleurodyne. The side has to be strongly and firmly strapped with three layers of plaster, one over the other, for this obliges it to be quiet.

It is not long since I was requested to see a medical friend, of very extensive experience, and at that time of the old school, who thought he had pleurisy. Unable to sleep during the night, and scarcely able to breathe from pain, in the morning he could scarcely speak three words consecutively. A glance sufficed to show the real nature of the case, and I procured a yard or two of plaster from his surgery. Cutting this into strips, and being ready to put them on, patient asked me if he was to breathe so as to

have the chest full or empty during the operation. "Please yourself," was the reply; "in any case, your chest will do as I bid it." Then, placing one end of the first strip on the spine, I brought, with all the strength of my arm, the other end to the sternum; another and another followed—the second layer creased the first; and the third creased the second; thus showing the extent to which that part of the thorax had been reduced by the strapping—at length I ceased, and my patient was able to laugh and talk as if nothing was amiss.

I have given the preceding case in detail, for every step in the process is important. If the straps are put on with weak hands they are useless. If one, or even two layers alone are used, there is too much "play" left in the ribs and thorax; and, unless the whole side from breast to spine is covered, the pain will remain. I calculate that the force I used in this case would be equivalent to that required to raise 1,700 lbs, one foot high in one minute; a little more than one-twentieth of a horse-power. I do not, of course, mean to imply that each strip was made to sit in its place with the strength referred to; but that the sum of exertion required to give what I thought was adequate support was about equal to the figure mentioned.

When we have to deal with pure pleurisy, the cure is far more difficult; indeed, I doubt whether the physician has any right to assume that he has any power for good over the disease at all. Let us, in the first place, examine into the alliances of the complaint. It is found in the same kind of subjects as have water in the head, consumption, and the like. It resembles such affections as tubercular peritonitis; peritonitis in general; inflammation of the tunica vaginalis

testis ; and chronic inflammation of the knee-joint, and of the pericardium. For these diseases we know no absolute cure. We cannot compel the serous membrane to change its diseased condition, by such local applications as we can use to the conjunctiva, or to an ulcer of the leg ; nor can we force the secreted matter to re-enter the blood vessels from whence it came. The material so effused resembles pus, and mucus, and is to a great degree excrementitious. If we have a cold in the head, we know no means by which we can force that which we receive into our pocket-handkerchiefs to go into the veins of the nose.

In the cases above described, all that we can do is to prevent the formation of more material. That we can by art effect this is certain. Regard, for example, a large suppurating sore, arising, say, from superficial gangrene. The quantity of matter which it secretes beneath a soft poultice applied to its surface equals, we will say, a pint per day. Discard, now, from use such abominations as linseed or bread puddings, cover the exposed superficies with dry lint, or carded cotton, and the secretion is diminished almost to a nonentity. Again, when the nose is "running" its hardest ; induce the patient to take a pinch of powdered opium as snuff, and the nostril soon will dry. A similar result will follow from much wine, or a full dose of laudanum, taken internally. Look, again, at an eye inflamed with struma ; the secretion of mucus is excessive ; yet, by the application of a ten-grain solution of nitrate of silver you diminish it marvellously.

Turn again to the urethra in gonorrhœa : the secretion is considerable, yet the surgeon restrains it by such excitants as cubebs, or copaiba internally, which pass out in considerable quantity, and make the urine more stimulating than

usual, by such solutions as sulphate of zinc locally, and sometimes by a cantharides blister externally.

In other words, excessive secretion is generally an evidence of debility. Consequently, when an organ is secreting excessively, we endeavour to decrease its action. When once we recognise the general law of treatment thus enunciated, it is clear that our endeavours in pleurisy must be directed to stimulate the pleura to diminished secretion.* In other words, we must so treat it as we should do if we could gain direct access to it.

Let us, ere we proceed, test the value of the conclusion at which we have arrived, by inquiring what the surgeon does for hydrocele. Experience tells us that, after removing the fluid already formed, he injects port wine and water; the effect of this is neither to cause a new inflammation, nor to form adhesions. It simply stimulates the membrane to diminish its secretion, just as *vinum opii* to the conjunctiva assists to dry it up; or wine taken internally checks catarrh, and makes the mouth and tongue dry.

Now, although we may, and often do, tap the chest to relieve the difficulty of breathing occasioned by pleurisy, with an excessive secretion of fluid—which is sometimes so great as materially to interfere with the other side of the chest, and to diminish its play—we cannot remove all the stuff secreted, unless we replace it with air, which is to make

* The sentence above is intentionally paradoxical. It is a text for a long discourse. But I cannot expand the subject fully in an essay like this. If my readers take an interest in it, they will find it amply discussed in my work, entitled *Foundation for a New Theory and Practice of Medicine*, 2nd edition, pp. 292–311; and they will understand my remarks upon the use of blisters better, if they will peruse the dissertation on Counterirritants, in the same volume. I venture to say that both chapters are of importance to the general practitioner.

a bad thing worse; nor dare we inject wine and water into the pleural cavity. We cannot swab over the surface of the costal and pulmonary covering with iodine, or other application. We are, then, driven to other plans; and the question once more arises, How can we stimulate the pleura to diminish its secretion? We certainly cannot do so by venesection, purgatives, mercury, antimony, or low diet. Starvation will not cure a clap, nor famine a strumous ophthalmia. The drugs, &c., referred to have a tendency to produce greater secretion. Weakness, as a general rule, increases every secretion; for example, the consumptive sweats more than the robust, and the discharge from an abscess augments as a patient's powers decay. All depressing agencies are, therefore, to be rigidly eschewed in the management of pleurisy.

On the other hand, all judicious stimulation is to be adopted. To be systematic, we may classify our means under three heads—dietetic, medicinal, and local, or, to coin a word, *epithematic*. In the first class, we place the use of alcohol in its various forms. We do not profess to know why these should dry up secretion; but experience tells us that too much of it dries the mouth, the nose, and, we may add, the bowels, to a very considerable extent. Brandy is a favourite astringent with many persons.

Let me here, once again, take the opportunity of protesting against the absurd fears which some people entertain about fermented liquors, to the effect that, if used medicinally, they must ever afterwards be necessary. This, in spite of what certain sensational papers, like the *Saturday Review*, whose motto ever since I have known it has been, "It is always too late to mend," and others, say to the

contrary, is pure nonsense. It would be equally childish to say that a man, who had once found the value of opium in procuring sleep, must for ever after take a narcotic at bed-time.

I would, likewise, protest against the idea that, because alcohol in certain cases is good, a person cannot have too much of it. Wine, spirits, &c., require as much judgment in their administration as quinine and strychnia.

Second in value to alcohol, we are disposed to place opium; but the evidence in its favour is not conclusive.

In a category by themselves, we must arrange those drugs which, being taken into the system, pass out again unchanged, and act during their presence therein as irritants or stimulants. Conspicuous amongst these is iodide of potassium, which, when taken, even in moderate doses, will produce inflamed eyes, nose, throat, and skin; and which, if given in large quantity, will exude to such an extent from the surface of an ulcer as to prevent its healing. There is no other preparation that is comparatively harmless which produces a like result. Arsenic will do so, but not without great risk of life. But I have seen the iodide given largely without any good effect being perceptible, and I doubt its power. It is used from theory, more than from the results of experience.

Of the local means for stimulating the pleura to diminished secretion, the use of blisters is decidedly the best, and the *emplastrum lyttæ* should be used in preference to any other form of vesicant. The physician does not simply desire to make a big bleb on the skin. His intention is to apply to its surface a material which shall permeate the cutis, and the parts below it. Consequently, a blistering plaster lying in contact

with the cuticle is more serviceable than a fluid simply painted thereupon. In my work referred to in the note (page 259 of this book), I have shown, that it has been found that blisters applied to the side have positively produced both pleurisy and local pneumonia. Consequently, there can be no doubt that the cantharidine from them is absorbed, and passes through the tissues to a considerable depth. If these blisters will, by themselves, cause inflammation, it is clear that that they ought not to be used when pleurisy is acute, *i. e.*, in its early stage.

Even in the chronic stage, it is curious that what would produce inflammation in a healthy condition should have a tendency to restore a natural state when a part is already inflamed; but so it is. The *vinum opii*, which we use to an eye affected with ophthalmia with good effect, would, if used to a healthy conjunctiva, produce temporary redness; and the blister, which will injure an acutely inflamed knee-joint, will relieve one in which the disease has become chronic.

Instead of blisters, we may employ such rubefacients as turpentine or iodine paint. Croton oil liniment and tartar emetic ointment are, I think, not only worthless, but prejudicial, as they are not simple but specific stimuli, whose tendency is to produce small, and sometimes large, abscesses externally, and probably internally as well.

Let us now imagine that, either by medication or spontaneously, the pleura has ceased to secrete an unusual quantity of fluid. We next have to inquire whether we have any means of compelling the membrane to act backwards, and absorb the secretion that it has made. I do not think we have. Physicians in vain endeavour to force the peritoneum, in cases of ascites, to "take up" the fluid which it has poured out.

They are equally powerless in water in the head, and in hydrocele. They have expended all their art in endeavouring, by drugs, to diminish the fluid in ovarian dropsies. They have equally failed in making the pleura re-absorb its secretion.

Yet, though I have never myself known an instance in which these occurrences have been brought about by medicinal coercion, Sir T. Watson relates a case or two in which the fluid of chronic hydrocephalus has been diminished apparently under the influence of mercury; and some practitioners affirm that they have seen analogous results in chronic pleurisy. I will not deny the possibility of such a thing; but in every case that I have seen, where the symptoms have been well defined, every known medical measure has been adopted without apparent beneficial result.

But experience tells us that the fluid contents of large abscesses sometimes disappear, leaving only a sort of cheesy matter behind. In King's College Museum, there is, or was, a preparation in which even the fluid parts of hydatids in the liver had become absorbed to a great degree. Every day tells us that blood effused into the muscles, skin, and even into the brain, is wholly removed in time. Experiment tells us that solutions of certain drugs thrown into the cellular tissue, the peritoneum, the pleura, and the like, become readily absorbed. Post-mortem inspections, moreover, tell us, from the frequent occurrence of adhesions between parts of the pleura and peritoneum, that fluids will disappear from these cavities, and be replaced by a new tissue.

But one of the essentials for absorption is the absence of unusual secretion; the same structure cannot, at the same

period, both throw out new matter and take in old. If, then, we aim at reduction of the fluid produced by disease, we must endeavour to re-establish health. If we succeed in this, we shall find that returning salubrity can effect that, which the doctor attempts in vain to do by drugs.

The absorption of superfluous fluids is a natural process, when the body is in a state of comparative health, and the extent of the process is limited only by circumstances. For example, a person may have a chest full of "water;" his lung being reduced in size to that of the spleen, and tied down by leathery membrane. If his general health is good, a large portion of the fluid will be "taken up;" but a large part must remain, unless the lung rises, inasmuch as the bony wall of the thorax refuses to fall in sufficiently to take its place. The reduction of which we speak is a work of time, however, and really requires no interference from the doctor.

In conclusion, we may state our conviction, that there is one form of pleurisy allied to erysipelas, and puerperal peritonitis; and that, in this, medication is useless. All that the physician can do is to relieve the symptoms as they arise, and to remove the secretion by tapping the thorax. The material effused is virulent; producing even the inflammation of the hands of those who come into contact with it. Consequently, it should not be left in contact with the membrane. Nevertheless, although sound sense dictates the adoption of tapping, both in this case and in puerperal peritonitis, the effect of the disease upon the constitution of the sufferer is such that few doctors like to resort to the remedy mentioned, for fear that the patient should die under their hands. The dread is natural, and where death seems to be imminent, it is,

we think, better to let the patient die in peace, than induce him to undergo an operation, which, at the best, can only promise the removal of an irritating product, and is powerless to prevent the formation of more.

CHAPTER XVII.

ON THE TREATMENT OF HEART DISEASE.

Editing reports of disease—Division of cases of cardiac disease—Sudden death, and death from dropsy—Cases of heart disease with illness—Death from diseased heart, yet nothing wrong seen by eye—Breathlessness, position assumed during—Breast pang—Valvular disease—Cured—Cases in point—Breast pang and myalgia—Remarks upon muscular peculiarities—Sudden death in convalescence after yellow fever, &c.—Case in point—The softness or firmness of an arm tells more than the pulse—Cramp—The heart a muscle—Repose—Fatigue kills people whose heart is weak—How the heart can be rested—What makes a heart bound—Irregular action of heart—Case of—Treatment of cardiac disease—Digitalis—Ether—Cathartics.

About twenty-seven years ago, I was elected Secretary to a Pathological Society; and, amidst my other duties, I had to write an annual report of the cases brought before the notice of the different meetings. Whilst tabulating the numerous instances of diseased hearts, I was struck with the fact that they were naturally divisible into two classes—those in which the death was sudden, and those wherein it had been preceded by severe illness, whose chief symptom was dropsy. In the examples where the disease had been unexpected, the heart frequently presented an appearance in no way distinguishable from that in which there had been a death of lingering pain. It appeared thus to be certain that the

central organ of circulation might be seriously impaired, and yet for a long time give rise to no particular phenomenon.

It then became a problem to be solved, why death should occur at all from disease of the heart; and why the nature of the symptoms preceding decease should so greatly vary as they do. That cardiac disease of a very formidable type may be concurrent with apparently good health, experience amply proves. For instance, I had on one occasion to examine a gentleman for life insurance. The amount proposed was large, and it behoved me to be unusually careful. The general appearance and habits indicated perfect soundness. The man was exceedingly active, and could run up hill or up stairs with ease. He had not known an illness for very many years, and regarded his life as unimpeachable; yet, when I placed my hand on his pulse, it was evident that he had something seriously amiss with his heart. Its pulsation may be thus described: A ? ? ? ? ? ? ? B ? ? ? ? ? ? ? C,—the letters standing for a firm beat, the notes of interrogation for a quivering of the artery in which the blood seemed to oscillate. There were about thirty firm beats in the minute. A close investigation elicited information leading me to believe that, perhaps twenty years before, there had been an accident, which probably ruptured the diaphragm, and seriously injured the pericardium, and probably also the heart. Nevertheless, the man had no other cardiac symptom than a strange pulse, and died shortly afterwards of bronchitis.

Another gentleman was positively "passed" as a perfectly healthy life, by a physician of considerable shrewdness; although he had been previously rejected by another office, in consequence of valvular disease. On being referred to me, there was no difficulty in ascertaining that the aortic

valves were affected, and that there was regurgitation through them. The gentleman—a civil engineer—was, however, unconscious of being in any way unsound.

On the other hand, a farther experience proves that in many instances, said to be examples of sudden death from disease of the heart, that organ presents no lesion discoverable by the naked eye. A young woman, much addicted to intemperance, and frequently in prison, was on one occasion laughing heartily with some of her gaol companions, when she suddenly fell backwards, dead; yet the closest inspection of the body revealed no apparent cause of death, and the heart seemed to have been perfect. A microscopical examination, however, showed that there was extensive fatty degeneration of that organ.

To complicate the question still farther, I had, after this occurrence, a lady under my charge, who had all the symptoms supposed to characterise cardiac atrophy; and as she was unusually stout, fatty degeneration was inferred. The difficulty of breathing during and after exertion was distressing; even whilst lying in bed, prolonged conversation or hearty laughter would induce a fit of dyspnœa, during which dissolution seemed imminent. On one occasion, she lay with outspread arms and legs* for three days, unable to find breath for words. Yet, this lady completely recovered; and, though still as lusty as ever, she can do as much bodily work as her neighbours.

* It is always important to notice any peculiar attitude adopted by a patient, for it often affords a clue to the actual state of things. After having in my own person, when mountaineering, been obliged to stop, and give the labouring heart some comparative repose; and having found that I instinctively lay down in the position of a spread eagle, I at once recognised in my client that the heart was for the time overworked, and required a rest.

Again, a reference to works on systematic medicine informs us that breast pang may prove fatal without being attended by any appreciable lesion of the heart; and it was long a puzzle why so formidable a complaint should leave so few, sometimes even no traces behind.

Another class of experiences — experiments that are made by nature for the benefit of those who love to probe into her secrets — tell us that there are some, we may now perhaps say "many," who came under the care of the physician with valvular disease of the heart; and who leave it apparently perfectly restored to health, although the cardiac lesion remains unchanged. One such case I remember well, as the disease occurred in a personal friend, who was under the care of a distinguished doctor. There had been in the first place acute rheumatic fever, then endocarditis, with a double bellows sound, apparently indicating regurgitation through an open mitral valve. Yet, even from that condition, the young man recovered his usual health. For months I occasionally listened to the sounds of his heart without noticing any change. At length he resided elsewhere, and nearly ten years elapsed ere I again hearkened to the chest. To my utter amazement, the sounds were perfectly normal, and the organ of the circulation was restored to absolute health.

Whilst thinking over this cardiac problem, a man came under my care at the Royal Infirmary (Liverpool), for breast pang. He was aged about 50, and was a bottom sawyer — sometimes a top one. He appeared in ordinary condition; but there was a circular arcus senilis around each cornea; and, when speaking, his sentences were few, and his breathing perceptibly hurried. A physical examination of the chest

elicited no sign of valvular or pulmonary disease. The rhythm of the heart's action was perfect; nor was there any diminution in the sound of the usual "click." After his entrance to the ward, the cardiac symptoms subsided, but the man complained of persistent abdominal pain. On seeking for the cause of this, I could come to no other conclusion than that the pain was myalgic, and produced by hard work; the abdomen being the seat of the complaint, in consequence of the peculiar nature of the man's labour. The muscular tissue was exceedingly soft, but was clearly not inflamed. Three months elapsed ere this affection left him. When discharged, the man's breathing was perfectly natural, and his muscles firm, or, as is usually said, "in good condition." This case turned my attention still more strongly than it had been before to the fleshy element in the heart. In my treatise upon myalgia, I had speculated on the subject; but had not then sufficient experience to speak with anything like a just confidence; now I can see clearly that, for a thorough insight into cardiac pathology, it is necessary to study closely the phenomena of muscular action, and the physiology of the contractile structures generally.

In speaking thus, I protest against being considered hobbihorsical; and, on the other hand, solicit the reader's attention whilst I point out the main points of muscular history. When healthy, human flesh is red in colour, of firm consistence, and not readily torn. It is capable of prolonged contraction, and increases in bulk by continual use—provided that it is within certain limits. The same muscle, when enfeebled by any cause, is soft and flabby, pale in colour, easily torn or ruptured, unable to undergo sustained contraction, or to exert itself to the normal degree; it is also

prone to cramp, and sometimes becomes transiently paralysed. Regard, for example, yon stalwart man, in the young bloom of high health, able to run, leap, lift, row, walk, or perform any other feats common among athletes; look at him again now, when, reduced by fever, he can scarcely raise his hand, and barely move a finger. In the one case, the muscles are all in first rate condition; in the last, they are enervated to the lowest degree, short of absolute death. Let us next ask ourselves, Is not the heart a muscle, and is it not liable to be exhausted by fever, like the biceps or the deltoid? Unquestionably; yet of this few take heed.

To impress the importance of this on the reader, let me relate a conversation. An army surgeon, calling upon me from some incidental cause, exhibited so much interest in hearing "the news" in medical matters, that we soon became extremely intimate—he giving me every information that I desired upon disease in foreign stations, in return for my home gossip. Whilst upon yellow fever, I asked him, "Can you tell me anything of those fearfully sudden deaths which are said to be very frequent after apparent convalescence?" "That I can," was his reply. "When we were last stationed at Jamaica, we had yellow fever in our regiment, and my sub and I had many a chat over it. The officers at first staved it off by quinine, but at length got tired of this, and ran their chance. I escaped, but my assistant was one of the first to catch it; he was also the first to recover. I remember going to see him when convalescent, and was delighted with his jokes about having escaped the land crabs. He was in tip-top spirits, and apparently full of renewed life and energy. At last I left him, but, ere I passed out of the ward, something induced

me to turn round and look at him ; I hurried to him, but he was quite dead. There, that answers your question." "Now," said I, "permit me to cross-examine you. Did you not leave your friend because something in his manner told you, unconsciously perhaps, that he was exhausted? Again, do you not think that his heart must, like all the rest of his muscles, have been weak, and too feeble to endure the continued strain of talking and laughing? Still farther, do you not think that a glass of wine, or other stimulant, would have staved off dissolution had it been given in time? And now tell me, do you not think that, in the other similar cases to which my first question pointed, a very debilitated heart, overtaxed by the work it has to do, in proportion to the strength it possesses, is the proximate cause of death?" "Upon my word," was the rejoinder, "I feel sure you're right; and if I had given the youngster a glass of brandy-and-water before I left him, he probably would be alive now."

This anecdote clearly shows that neither of the doctors referred to had an active idea that the heart may be quite as unfitted, by disease, for its work, as the flexors and extensors of the limbs.

When once the physician becomes saturated, so to speak, with this knowledge, he finds no difficulty in discovering the muscular condition of the heart in any case of disease. To such an extent do I believe this, that I rarely now examine a man's pulse. The state of his biceps and triceps tells me more than does the radial artery. I grasp with a large hand the patient's arm; and, if I find it small in bulk, soft, and flabby, as if the skin were filled with turnips boiled to a jelly, it assures me that the heart is soft, and weak; unable to endure any unusual strain; liable also to sudden

spasm, and perhaps to paralysis; in other words, it is unusually irritable, and consequently prone to intermittence, *angina pectoris*, breast pang or cramp. This irregular action may have for its limits a single rhythmical change, or a frightfully prolonged agony, and a fatal omission to contract at all.

I must now call attention to a phenomenon of muscular action, which deserves our notice. It is, that cramp, in an overworked muscle, although it generally comes on during its exertion—as in swimmers, for example—yet very often does not occur until during, or after sleep. Thus I have known a lady over-exert herself during the day, and not have cramp until she has been some hours asleep in bed. In like manner, I have seen an individual who had valvular disease of the heart, although she was apparently healthy, over-exert herself by running during working hours, and die suddenly of cramp of the heart whilst preparing for repose. The nature of these cases is not essentially different from those in which the cardiac spasm comes on in the midst of some unusual exertion of mind or body.

If my readers have followed me thus far, and I have sufficiently explained my meaning, they will see that the muscular portion of the heart demands their attention to a greater degree than the valvular arrangement. Nay, I may even go farther, and say that the existence of organic lesion is often supposed to exist, when in reality there is nothing more than abnormal contraction in the *columnæ carneæ*. My friend, Dr. Cameron, first suggested the idea to me; and I have seen ample reason to adopt it. I have known cases in which a strong double-bellows sound, apparently indicative of patency in the mitral valve, has been proved by *post-*

mortem inspection to be independent of valvular disease; and others in which the rapid subsidence of the phenomenon has demonstrated the same condition.

After we have drawn the inference, that the condition of the fleshy portion of the heart is that which modifies cardiac symptoms more than any other circumstance, we conclude that the treatment most appropriate to disease of the organ in question, is such as applies, *mutatis mutandis*, to muscular affections in general. As myalgia is a complaint arising from over-work, so its treatment may be summed up in the word "repose." If my body is sore all over, from riding, running, or any gymnastic performance, I gladly give it rest, so as to enable me to resume exertion without a recurrence of the suffering. It is true that some may endeavour to get rid of the pain which they have brought on with labour, by continuing the toil that produced it; but at the same time we are sure, that if all were to attempt to do so, muscular atrophy would occur in some, and "consumption" in others. The young may often do with impunity, that from which the old ought studiously to refrain.

To this remark the natural rejoinder will be the question—"How can you give any rest to the heart?" Moment by moment, from an early period of intra-uterine life, the organ must work; its rest can only be counted by fragments of seconds; day by day, and throughout the night as well, its round of pumping duty must be performed. Stoppage of the heart's action and death are closely allied. How, then, can we give its flesh the rest which is required for restoration to a normal condition?

In answer to this, we must remind our readers of one of the wise saws of our ancestors, viz., "a penny saved is a

penny got," and aver that, although we cannot give the heart absolute quiet, we may give it comparative repose. Ere we can do this, we have to regard with minute attention everything which in health increases cardiac toil, and to avoid it in disease. Is a person nervous, and does his heart "leap into his mouth," or beat tumultuously against his ribs, when he is under the influence of mental emotion? If it does, such emotion must be carefully avoided. Does the heart beat unusually on running, walking, going up hill, and the like, during health? If so, such must be carefully shunned in cardiac affections. Does the pump work faster when the body is erect than when it is recumbent, during health? If so, then, when the organ is enfeebled, the upright posture must be prohibited. In few words, in all cases where the human forcing pump is weak, it must be allowed to have as much repose as it is possible to give it. It must be allowed to do its work lazily.

Again, as the muscular tissues, when weak, are very irritable, it is a matter of importance that they shall not be mechanically excited. It is equally important that the heart shall not be bumped by a stomach suddenly distended by wind, or by intestines blown up with flatus. And as purgatives are more powerful in producing flatulence than in preventing it, aperients are to be carefully avoided.

Even a rude or thoughtless stethoscopical examination will affect an irritable heart. I have, in the course of my experience, as a medical referee for life insurance companies, repeatedly noticed, in spare persons, one single curious irregularity in rhythm, when I have placed the wooden instrument to the heart. One such case I particularly remember. A clerk in the office for which I do most business was desirous

that I should give him an unofficial account of the eligibility of his life. He called my attention particularly to his heart. After seating him in a low, almost sofa-like arm-chair, I placed my stethoscope over the cardiac region; the instant after, I put my ear to the other end, there was a distinct thump, and then all was as still as death. After waiting with my head down for a few seconds, I raised it to look at the man's face. His jaw was fallen, the features were relaxed, and I thought the individual was dead. In an instant the chair was gently pushed over backwards, and the person lay with his body low and his legs in the air. After a while, but very slowly, he came round; and I learned the lesson that hearts are not to be trifled with.

As an illustration of the value of rest in cardiac affections, let me sketch the case of an elderly lady, whose life was frequently endangered thereby. Without any valvular disease, the heart was prone to the most irregular action, and many a time seemed to stop beating entirely. This, and other symptoms, followed any unusual bodily fatigue or mental emotion. Every remedy which medical art could devise was tried, so as to put an end to the attacks, but without success. They recurred from time to time, gradually increasing in severity and frequency, and the relatives anticipated a speedy and sudden dissolution. Ere this consummation occurred, however, the lady was induced to change her bedroom, and sleep upon the ground floor, so as never to have to walk up-stairs. The rest given to the heart by this plan was assuredly not great, yet it sufficed for her cure, and from thenceforward all cardiac symptoms ceased. In the Liverpool Royal Infirmary, I never allow those patients of mine who have disease of the heart to go downstairs until

they leave the establishment; not that this would do harm, but because it involves the necessity of coming upstairs again, and that this exertion would undo the good which care gradually brings about.

Let us now, for a moment, turn our thoughts to a sentence in the pathological history of breast pang, viz., "the first symptom usually comes on whilst the patient is walking up an ascent, and a similar cause will produce a recurrence of the attack." In other words, a very small unusual exertion will produce great distress when the cardiac muscle is out of condition, enfeebled by age, by the ossification of the arterial conduits that supply it with blood, or by some constitutional cause.

We consider, then, that in every case of diseased heart, no matter what its nature may be, the most important part of the treatment is rest, repose as perfect as the nature of things will permit.

The next question for the physician to examine is, "Whether there is any medicine which will render the heart less irritable, and consequently less prone to irregular or spasmodic action?" I think there is; but at the same time it must be acknowledged that the influence of drugs is greatly inferior to that of "rest." With, *i. e.*, in addition to, repose, such a cardiac sedative as digitalis is sometimes said to be of service, and such a diffusible stimulus as sulphuric ether does good. But without rest such medicaments appear to be wholly worthless. I confess, however, that I have lost all the faith which once I had in foxglove; it has uniformly disappointed me, whether given alone, or in combination with one or other of the preparations of iron. I have tried, as I think, exhaustively, both digitalis and steel in the treatment

of cardiac disease, and all that I can say of them is, that if they are judiciously used they do no harm. On the other hand, my appreciation of the value of sulphuric ether increases annually. Once I looked upon it simply as a placebo; now I regard it as curative. The following case converted me. An elderly woman came under my care at the Infirmary, and, in spite of everything which I could do, became worse and worse; at length, she seemed to be dying, and I ordered for her a drachm of spirit of sulphuric ether every three hours. She began to rally almost immediately after the first dose; and at length went out of the house apparently well. As nothing else was recommended for her, different to what had been done before, it is only natural that the ether should have the credit of the cure. In the case of the lady before alluded to, ether was the only thing that ever gave relief. For a palliative, I repeatedly advise the inhalation of small doses, say twenty minims, of chloroform.

It would be proper here, if I were writing on systematic medicine, to enter into detail about the treatment most appropriate to such episodes of cardiac disease as dropsy, whether general or thoracic only, bronchitis, pulmonary apoplexy, intense dyspnœa, asthma, fainting, and the like. But in the essays such as I have set myself to write, I do not attempt to enter into matters already abundantly discussed by previous authors.

Nor do I feel that my readers lose much by my reticence. I have no faith myself in the usual remedies for cardiac dropsy; hydragogue cathartics and diuretics may sometimes relieve, but they do so usually at the expense of the patient's strength. A man may die of a disease which is aggravated,

in order that one of its symptoms may be removed. I believe that the only really sound plan of treatment in disease of the heart is to ensure as perfect a rest for the organ as is possible, and to adopt means which are likely to improve the general health. A doctor enforcing this plan may seem to his clients to be doing little, yet the fact is that he is acting infinitely more for their good than if he were ordering in succession every drug that is to be found in and out of the Pharmacopœia, in combination, singly, or successively. It is true that the practice above described cannot command success; but we do not hesitate to say that it is the only one which deserves it.

CHAPTER XVIII.

ON VOMITING.

Talking till one is sick of it—Vomiting and marriage—Puking and 'water in the head'—Violent exercise and return tickets—Swimming and rejection of food—Tipsiness and degorgement—Men and morning sickness—Fatigue and exventrification—Strange cases—Doctors and doorplates—A pedagogue surpasses physicians—Imports and exports to be compared—Banquets and belchings—Sick unto death—Love, languishing, and vomiting—Sea sickness and something else—Want of dejection produces rejection—Poison and puking—Sickness and sympathy—Deductions.

Once upon a time—and many years ago—I formed one of a trio of doctors who met in consultation respecting the case of a married lady, who was in a deplorable condition from the results of vomiting. When called in, I found her insensible, and apparently dying, and was informed by my *confrères* that she had been suffering for months from bilious sickness, which had gradually increased in severity; that she suffered also from intense headache, squinted horribly, and had recently had an epileptic fit. Nothing which was taken seemed to stay upon the stomach, and death from inanition was greatly to be feared. The treatment consisted in supporting nature by enemata, leaving the stomach alone, and under this the patient revived; but for a few days only, and then the vomiting began again.

I was punctual to all appointments; my colleagues were not; consequently, there was plenty of time to chat with the patient's sister, who also was her nurse. She assured me that her own belief was, that the complaint arose from the patient talking too much, and she soon made me share her views. All visitors were then prohibited, and the vomiting ceased. Again a friend appeared upon the scene, and some monetary affairs were gone through, without apparent mischief. Immediately after the lady's departure, however, the sickness returned, the patient became delirious, had another epileptic fit, and was insensible for nearly two days thereafter. From this time, "stupidity" in the sick room was the order of the day, and the patient steadily revived, until she became once again the elegant and handsome woman she had been before her illness. The doctors, too, discovered that mental worry may sometimes produce bilious vomiting, headache, epilepsy, and sundry allied symptoms. Doubtless, other practitioners can readily recal to mind many cases similar to the one here recorded.

About the same "once upon a time," my attention was daily—almost, indeed, hourly—taxed by the endeavour to find out some means to alleviate the distressing retching from which a very near relative suffered whilst in that condition which "ladies who love their lords" are very likely to be in occasionally; and it was abundantly clear that pregnancy is one of the causes of vomiting. I may add that in this, and other instances of a like nature, it was discovered that change from the comparatively impure air of Liverpool and the cares inseparable from a wife's home life, to the country, or sea-side, and comparative indolence, would prevent the sickness. A growing womb does not necessarily

produce vomiting; but it generally does so when it is in the body of a delicate woman.

Again, another dear relation, whose time in the world had not exceeded two summers, began to vomit, sometimes apparently because his food had disagreed, at others from no perceptible cause whatever. As the days rolled over, the lad became worse, dulness followed irascibility, drowsiness replaced vivacity; insensibility gradually stole on, and the darling died—of water in the head. It then became apparent that vomiting is induced by hydrocephalus.

Once upon a time, there was a young medical student—with the appetite of a huntsman, and the digestive powers of an ostrich—said to be built in the mould of strength, and certainly addicted to manly sports. Well, this juvenile was induced, immediately after his dinner, to race successively with three of his fellow-students, who had each, like he had, enjoyed a full, but not excessive meal. The races over, the party separated, and each retired to his apartment to study. The youth in question reached his door and rang the bell, and became urgent for admission, entered, rushed to the closet, and vomited his dinner. It was, then, an accepted fact, that excessive exertion with a recently filled stomach, is a cause of vomiting. This was the more readily credited because, on a previous occasion, a swim after breakfast had acted as an emetic.* By-and-bye this same student was one

* Since the above was written, my son, a powerful young man, returned home one evening from a canoe race, in which he had failed to win, in consequence of an attack of vomiting which occurred whilst dragging his boat round a point which had to be passed on land. This went off, and he came in second; and was subsequently able to take part in three other similar races. On the other hand, the victor was so sick on arriving at the boat house as to be unable to appear again. I have been told, but upon doubtful authority, that such affections are not uncommon after excessive labour at the oar or paddle.

of a jovial party, ostensibly met together to "take the shine" out of a big "freshman," who had largely boasted that nothing could make him drunk. It fell to his lot to pilot the unfortunate fellow safely home; and to enable him to escape from the escapades of the other convives; who persisted in ringing bells in Belgravia, and running away after rapping at aristocratic doors. The convoy was at length moored in a comfortable bed, but on the instant a cascade was belched from a full belly, and no doubt could be entertained that too much liquor is a very certain cause of vomiting.

Once upon a time, a patient came to the quondam student, and complained that he suffered from morning sickness. As it was evident that the man was not "in the family way," another cause than pregnancy had to be sought. After a long and somewhat delicate inquiry, it was ascertained that the man was an habitual drunkard, going to bed every night with more brandy than should have left the bottle. An extension of the examination showed that sickness—often spoken of as "dry vomiting"—is produced by habitual indulgence in ardent spirit.

Once upon a time, a man came to the same doctor with a similar complaint, but he was strictly temperate; he was a publican, it is true, but his stint was two glasses of bitter ale per day, and few could call this an excessive allowance. He was phthisical simply, and overworked. With comparative repose came relief, and some three weeks elapsed without vomiting; then a heavy hard day's toil, carried far into the night, was followed by morning sickness. This seemed to prove that it is not pregnancy alone which makes people "cast up their accounts" at the opening of day.

The most remarkable and instructive case of vomiting from

fatigue which I have known occurred in a gentleman, æt. sixty-six. Healthy and active all his life, having never had a worse illness than three light attacks of gout, he continued to employ himself with business of a varied kind for six hours daily. He resided in a healthy locality, and was in affluent circumstances; but he was emotional, though seemingly a man of iron, and was frequently agitated in affairs where younger men would have been calm. At length, anxiety took away his appetite; then, after a time, it made him vomit—at first his food, subsequently acid mucus, or bile. For a long time he refused to ask advice, or to follow it if offered. By-and-bye he went to the seaside to carry out his own opinion, and cure himself by pure air and exercise. This only made him worse, and the severity of the vomiting alarmed his relatives greatly. In the end, a medical brother lectured him roundly, and the sufferer consented to a consultation upon his case. The upshot was, that he promised to confine himself to his bedroom for a fortnight. The sickness, which had then troubled him for about three months, left him in three days. Yet so sensitive was he, that it returned again, apparently from the fidget produced by a gardener picking at the carriage-drive under the window of the bed-chamber, and raking the stones smooth. A word would have stopped the infliction, but his will closed the patient's lips, until they were unclosed by vomiting. After this, recovery was progressive, bright sunshine once more entered the dwelling, and comfort sat at the dinner-table. The doctor was then cast off, and work resumed. In a week every symptom returned with violence, and the patient died shortly after—convulsions ultimately carrying him off.

Once upon a time, the man, erst a student, became a house-

surgeon of a large hospital, and into its wards came an interesting-looking young woman, whose sudden attacks of vomiting had led to her discharge from a housemaid's place. No pregnancy existed; and the sole cause "blamed" for the occurrence was the habit of indulging in carbonate of soda for the cure of acidity. Her physician, who took great interest in the case, and discoursed upon it largely to the students, was unable to cure the affection, and the woman, after enduring much misery from the treatment inflicted, left as a hopeless incurable. Here was a medical puzzle!

Whilst preparing this sheet for the second edition, I had under my care at the Royal Infirmary a young woman, whose case closely resembled the preceding one. She had been vomiting every thing which she took during the ten weeks preceding her admittance. But the original cause was not satisfactorily ascertained. The head nurse of the ward, a very intelligent woman, fulfilled my directions to the letter, and the quantity given at any one time was at length reduced to a teaspoonful of milk. Even this was rejected. Having arrived at this point, nothing whatever was given by the mouth for four and twenty hours. After this, milk in small amounts at a time was tried. None came back, and day by day the patient was allowed to have more. The vomiting did not return once after the day's fasting, and the patient left the house strong and well after being under treatment about a month.

When the quondam "interne" became himself a physician, he found that a very common cause of vomiting in servants is overwork with insufficient food.

Whilst still a house-surgeon, the student referred to had his attention directed to another case, by the doctor who was

so interested in the housemaid. He was a poor man, who vomited, not what he took, but a something, the like of which it is difficult to describe. Perhaps we might call it fatty froth, and an infusion of tea leaves. All that medical ingenuity could advise was done—uselessly—and the patient went out to die. The man's friends, to reward the "interne," promised him the pleasure of an examination of the body, if he would reach the house (in a thieves' quarter) at six o'clock the next morning; and engage to carry nothing away. He went, and found—nothing. There was not in any viscus, and certainly not in the stomach, anything to which the vomiting could be assigned. This puzzle remains one still.

Once upon a time, when the young doctor sat behind his doorplate, and had just began to discover that rap, rap, rap of the knocker only meant "patients," when they came in a morning; a lady, gentleman, and young girl were shown into the drawing-room as "callers." But one proved to be a client—the child was subject to habitual vomiting, and the parents had, for a long period, been on pilgrimage to the consulting-rooms of physicians supposed to be clever. The bundle of prescriptions produced was enormous; but the doctor, following Hunter's lead, declined to look at them or add to their number. Hunter's plan* was recommended, and the party left. Subsequent inquiries showed that so sensible a device was deemed too irrational to be worth

*For those who are not familiar with this, I may say that the plan consists in steadily reducing the food given until the patient is able to take it without ejecting it; when the minimum is reached, the quantity is adhered to for some time. Then, when the habit of vomiting has gone, the patient is directed gradually to increase the amount taken until the ordinary diet of a healthy person is borne.

following, and more prescriptions for physic were sought. In vain doctors drugged, and parents perambulated medical haunts. The case was abandoned as hopeless, and the girl, about twelve years of age, sent to school. She duly vomited her supper, and asked for more; got it, and went to bed. Then she broke her fast in the usual way, and gave the meal, incontinently, a return ticket. After this, she solicited some more bread and butter, was told to wait till dinner-time. She fed with the rest, and knowing that if she gave the dinner its "mittimus" she would have to wait for tea, she judiciously retained it in its place. What physic would not effect, the judiciousness of a schoolmistress managed at once. After this, the memory served up a refreshment of Roman history, which tells of certain fashionable men and women who cultivated vomiting as a part of their education, as it enabled them to double their festive or prandial enjoyments.

Once upon a time, another child, recovering from scarlet fever, or some similar ailment, had vomiting, and gave his passport to every ambassador sent to the stomach. A consultation was called, and the ejecta examined. "Pray, nurse," said Galen, "bring me the cup from which the patient was fed. Now, fill it with water, as you before filled it with food. Turn out the nasty stuff from the basin; wash the latter, and bring it back. Please pour therein the contents of the cup. There; you see that the child has not vomited more than half what you gave it. Tell me—have you had a baby?" "Yes." "Well; did you nurse it? and did it posset?" "Yes." "Very well; tell me your opinion why it sent back your milk?" "Why, of course, because it took too much!" "Quite proper; your present

patient is only 'posseting'—you give him more than his stomach consents to digest—halve his allowance, and all will go well." The result justified the advice consequent upon the colloquy.

Once upon a time, a doctor and his wife went to a private banquet. Sitting widely apart, they did not partake of the same dishes, nor drink water or wine from the same decanters. On reaching home, the lady was violently sick, then purged, and death from cholera seemed imminent. Relief came at length, and the husband slept. In a few hours, he awoke to vomit, and retained the ejecta for analysis. His friend, the chemist whom he consulted, said:—"One day, Mr. Such-a-one came to call upon me, and vomited violently on the floor: the effervescence on the flags was wonderful. We collected some ejecta, and that like yours contained an enormous quantity of hydrochloric acid. Gorging and poison in neither case had been at work; yet of the party present at the banquet aforesaid, nearly half were ill. This is another unsolved medical puzzle.

Laennec, in his work on the stethoscope, tells an anecdote about a man who came to visit him at a time when he was dissecting a "subject." The individual, who was not a doctor, raised his handkerchief to his face, and then fell back dead. The sight of the ghastly corpse had made him vomit; politeness induced him to drive back the ejecta; they entered the lungs, and he was at once suffocated. Consequently, Laennec found, and others know, that an emotion akin to fear will induce vomiting.

Once upon a time, a physician was called in consultation to see a young lady who had a sudden and very obstinate attack of vomiting. She was not pregnant; had not hernia,

nor constipation; had taken no poison; but she was pretty, enthusiastic, and usually sprightly. The illness had followed a pic-nic, and had alarmed her friends on the way home. After much inquiry, there was reason to believe that her sweetheart had seemed false, and disappointed affection had produced the same effect as an angry sea. A ready memory, then, will call up the sayings of ancient sages. "Comfort me with apples, for I am sick of love" (Cant. ii. 5). "I charge you tell him that I am sick of love" (*Ibid.* v. 8). "Hope deferred maketh the heart sick" (Prov. xiii. 12). Opium at length seemed to cure the impressionable maiden; bnt I suspect that a repentant swain was the real physician.

Once upon a time, a lady going out to Australia sent home to her friends a copy of her diary. She was married, and had a daughter some six years old. Her husband and she were equally desirous to have a son; but none came. The first pages of the record sent were filled with descriptions of sea-sickness—an affection too well known to require a description in this essay. At length came an entry—"Oh, be joyful; the vomiting has left me." This was repeated day by day for about a month or six weeks; then came again the observation, "Oh, the horrid sea-sickness has come again; and yet the sea is quiet!" And so the world wagged on. The lady did not know for a long time what the medical reader infers at once; that a rough ocean and a pregnant womb have practically the same effects.

Once upon a time, a doctor was consulted respecting a young girl about ten, who vomited, apparently without cause. The attack was sudden, but not severe. Not long before, the same physician had stood by the bedside of a full-grown

man, who, from vomiting a little, had become worse, until a fatal issue seemed imminent. His person was examined, but there was no evidence of hernia, and impaction of fæces was deemed improbable, as the man had diarrhœa. The poor fellow, a returned Irish emigrant, accounted for his illness by saying that, being half starved by hunger, he had stolen a lot of wheat from a vessel, and eaten it; and that since then he had been sick, and had passed nothing *per anum*. He died, and we found the rectum full of wheat — about three quart measures in all: thence arose the belief that a full bowel will produce vomiting. Hence, the young lady, before mentioned, had her rectum examined; as a result of which a mass of scybala was removed mechanically, and the sickness did not recur.

Once upon a time, there was a man sick unto death; the doctors treated him, but he got no better; the illness deepened, and therewith the assiduity of his nurse — a loving wife — increased; she shook his pillow, made his gruel, and measured his physic into a glass. He died, and was buried; the widow was comforted, and married again. A second Benedict died; and then there arose a cry of "foul play" — both had been poisoned by arsenic. Such cases are too common. Men poison their wives, their sweethearts, their friends. Women give antimony or "sublimate" to rivals, husbands, or children — sometimes to themselves; and, whilst endeavouring to beautify their features by taking white arsenic, like the peasants in Styria, suffer from obstinate sickness. Knowing that such things exist, the doctor, be he humble as an assistant, or grand as a Court physician, ought never to attend a case of vomiting without having "poison" in his mind.

Finally, we must group together a number of distinct causes of vomiting into one category, so as to escape from the danger of drawing out our essay to an injudicious length, and say that habitual sickness is very frequently produced by organic disease of the stomach, liver, and bowels, amongst which we must, by a stretch of imagination, include hernia of all kinds, ligature of hæmorrhoids, gall-stones, cancer, &c.

We may now stop to breathe, and look back upon the progress we have made.

We have learned that sickness may proceed from actual change in the substance of the brain, as in hydrocephalus, and after such injury as a blow, &c.; also from such presumed alteration as is produced by certain mental emotions—by the agitation of the sea, of a swing, or a carriage in motion. We have learned that vomiting may arise from such causes as pregnancy, or disease in organs other than the stomach itself; that it may be produced by undue exertion, by fatigue, and by causes hitherto undiscovered; that it may be produced by hernia, tied piles, constipation, or obstruction; that it is common in habitual spirit drinkers; and that it may arise from organic disease, either of the stomach, liver, or other abdominal organ. We have also called attention to the fact that it may arise from the existence of a poison, either in the stomach itself, or in the blood. Arsenic and fish poison are examples of the first, uræmia of the second. Sometimes the presence of some rude article of food may cause it; for I have known very severe vomiting produced by the presence of a pea-pod, of a bit of orange-peel, or of a lump of cheese. In each case the sickness continued for two or three days; yet, notwithstanding this, the irritant was not ejected.

This last observation induces me to remark upon the fact that vomiting by no means always empties the stomach. I have repeatedly noticed that a patient suffering from retching has taken fluid food, and almost instantly ejected some acid mucus, in which none of the food could be discerned, nor has the food so retained been ejected ultimately.

When the physician sees that there are so many distinct causes of vomiting, he knows that it would be absurd to lay down any single plan of treatment. All that he can fairly do is to indicate certain general principles, and point out the fact that hygiene is as important as physic. Thus, I have repeatedly known the morning sickness of pregnancy cured by a sojourn in the country, after all other plans of cure had failed even to alleviate. I have also known a rest in bed put a stop to vomiting that had previously resisted every drug tried. I have equally known that a day's fast would prevent the return of a daily puke, and dulness in the chamber effect that which medicine failed to do. One such case rises before me now. The doctor attending imagined the case to be very serious, for vomiting had caused abdominal myalgia, and peritonitis was feared. I found the patient, æt. sixty-four, a widow of barely a month's standing. Her loss had grieved her much, and she was stopping with two sympathising sisters. She was confined to bed; and though I saw her in the morning, she looked thoroughly jaded. Physic was now put aside, conversation was all but absolutely prohibited, and stupidity was promoted. All went well for a few days, and then the vomiting returned; a niece had called, and she and her aunt had talked of the deceased. Even the recollection of the conversation made the relict weep. There was a protest made against the ingratitude showed to

"dulness;" and stupidity was reinstated. In about ten days, the physician voluntarily deposed his sceptre, for the lady had perfectly recovered.

It would be useless for me to attempt to appraise the relative value of drugs in the treatment of vomiting, for each in turn exhilarates and disappoints us. In sea-sickness, champagne is the most general favourite; yet I have known cherry brandy cure what the sparkling wine did not. Of Dr. Chapman's icebags I have no personal knowledge, but reports speak well of them. Of opium, chloroform, and creosote, I have a high opinion, and have often seen white bismuth settle the stomach at once. Hot brandy-and-water, and the coldest ice, seem to be equally efficacious; but no one can predict beforehand which will be the most appropriate in any given case.

As a routine practice, my first directions run nearly thus:—Rest in bed; don't talk, or be talked to; do anything you like that won't tire you; take thin food, almost tasteless, about every two hours; and leave physic alone. This preliminary guides the physician in his subsequent course; and he then selects opiates, stimuli, ice, epithems, or enemata of laudanum, or any other means, which his knowledge of materia medica may suggest. The only farther suggestion we would make, is not to indulge in nasty stuff; if it is nauseous when taken, it is far worse when it is expelled. When the stomach is tender, insipid food is better than that which is strongly flavoured.

CHAPTER XIX.

ON DYSPEPSIA.

A man's heart and his stomach—Poor belly—Dyspepsia overloaded by doctors—What indigestion is—Why things and persons do not do their duty—A diseased organ—Ulcer of stomach—Sensible evidences of impaired power—Stomach, like muscles, liable to fatigue—Gastric debility, transient and permanent—Doctors' powers are limited—Making patients worse easier than to make them better—Mercury, Saint Butcher and Holy Brandy—Food and physic—Purgatives, coffin nails—Management—Treatment of ulcer of the stomach.

Some author has facetiously remarked that the way to a man's heart is through his stomach; and that cooks are of more consequence than tailors. That the stomach is, in reality, the most important organ in the body few can doubt, when in descending the scale of creation they see brain, heart, liver, and even reproductive organs disappear from ken, whilst the stomach remains conspicuous through all. In man, the paunch is the entrance-hall of the constitution; through it everything must naturally pass which is ultimately to become nerve, muscle, &c. It is, therefore, of primary importance that it be kept in order.

But the difficulty of conservancy is considerable; dangers assail the organ on every side; and, as a result, few people pass through life without having some tale of woe to tell

respecting their "stomach and its difficulties." Our bookshelves teem with treatises on dyspepsia; the drugs called stomachics are infinite in number, and remedies as specifics against indigestion are without count.

As a medical student, I well remember how bewildered I felt when reading up the subject; and how greatly this feeling was increased when I heard my professional seniors attribute from time to time every known ailment to the organ in question. If there were premonitory signs of apoplexy, it was "all stomach;" if there were pains in the limbs, the trunk, the head, the heart, and elsewhere, the bread basket was said to be out of repair. If a man was irritable, it was his cookshop that made him so; and if he even cut his throat, it was often thought to have been brought about by dyspepsia.

Yet, in reality, the subject of indigestion is an extremely simple one, and the principles which should guide us in its cure are of easy attainment, if sought in the right direction. We must endeavour above all things to be precise in our ideas respecting the disease referred to; and this we never shall be until we distinguish between symptoms of purely local origin, and those arising from the stomach being an integral portion of the body, the whole of which is affected in many persons, and each of its various organs in its own special way. For example, the dyspepsia attending gastric ulcer has symptoms purely local; whereas that depending upon fever, gout, and hypochondriasis, is attended by signs which show that the paunch is affected, *mutatis mutandis*, just like every other organ is, as one of many.

This distinction is of great practical advantage in our investigation of any individual case, and will form the basis

of our remarks upon the causes of indigestion; which we will proceed with, after saying a few words upon the characteristics of the complaint.

The words "indigestion" and "dyspepsia" simply mean that the stomach does not perform its peculiar or proper functions, as it does in health. The extent and nature of the alteration vary: in some cases there may be pain, in others flatulence, in others the gastric secretion may be too acid, alkaline, or aqueous, in others there may be vomiting, in others eructations, and the like.

These show that the stomach is not in a perfect state; and as it is clear that it cannot be better, it must be in a worse condition than in health.

The question then arises, "What is it which has impaired the gastric powers?" Ere we answer, let us inquire generally into the causes which deteriorate, temporarily or otherwise, our organs elsewhere. We know that by overwork a muscle may become almost powerless; by cerebral fatigue the brain may be deranged; by too close attention to minute objects the eye becomes amaurotic; and deafness often follows the impact of too loud sounds. By prolonged cold, by injury, by loss of blood, by chemical reagents, by excessive heat, by new growths, by loss of substance, by altered circulation, and the like, portions of the body may be deteriorated. The stomach forms no exception.

It may be overworked; it may be underpowered; it may be impaired by ulcer, by new growths replacing the natural structure, by fatigue, by poisons directly or indirectly brought into contact with it, by the abuse of tobacco, by loss of blood, by excessive secretion, and the like.

This being so, the sole aim of the doctor is to raise the

power of the stomach to the healthy standard. But the attainment of this is difficult, as it is always easier to know what to do than how to do it.

The first idea which occurs to us is, that we must adjust the work to be done with the power to do it; but a second thought tells us, that the exigencies of the system require us to take in a certain amount of food, if we wish to keep ourselves up to the normal standard, and that a reduction of that quantity is not desirable. Hence the conclusion is drawn, that it is better for us to try and increase the power to digest, than to diminish the ingesta. But how is this to be done? The answer obliges us to subdivide our cases into three classes:—1. Those in which the impairment is due to physical change in the stomach. 2. Those which are due to such transient causes as prolonged fasting, grief, catarrh, &c. 3. Those which are due either to a naturally delicate organ, or to causes operating to debilitate all parts of the body alike.

1. When the occurrence of pain after every large meal, aggravated by the use of flesh meat, accompanied, possibly, with waterbrash, vomiting of blood, or such other symptoms as lead us to the inference that a gastric ulcer exists, the plan of treatment is simple. The stomach is to be kept as small as possible, that cicatrisation may not be prevented; and the food is to be so light that the gastric juice, required for it, may be too weak to digest the new flesh replacing the ulcer; and this plan is to be persevered in for six weeks at least, so as to allow sufficient time for a cicatrix to be formed. No medicine is necessary; none has yet been found which will either ensure granulation, or hasten the process of healing.

But it is clear that a diet so meagre as that which we describe is not sufficient to keep up the patient's health to its proper standard; if he go about his ordinary business, such a regimen would in itself suffice to produce ulceration. We ought not to increase the diet, we must therefore diminish the work, and enforce quiet of body, rest in bed if possible, everything in fact which will save the strength; and we may, in addition, attempt to supplement the stomach, by rubbing oil through the skin, and by using enemata of wine and beef tea.

At the end of six weeks, the diet may be cautiously increased; being first improved in quantity, then in quality.

If a persistence of the symptoms, in spite of treatment, leads us to infer the presence of malignant disease, art can do nothing to cure, though it may do much to palliate.

2. Our next class of cases are those in which there is a transient impairment of the organ from temporary causes, such as fasting, catarrh, grief, and the like. These cases are abundant in all large towns, where the exigencies of business frequently prevent food being taken for ten or twelve hours, during the whole of which period occupations of an exciting, or otherwise exhausting, nature are carried on. Ere we enter upon the therapeutics of these cases, however, let us say a few words upon digestion generally. The process is performed by means of a secretion called gastric juice; and for that secretion to be formed, a sufficiency of blood is necessary. The larger the amount of secretion required, the larger is the amount of blood wanted to form it. The quantity of the blood in the stomach must be to a great extent regulated by the absolute amount in the body generally. Now, we know that the blood is constantly

undergoing loss (except, of course, after eating and drinking); cutaneous transpiration, pulmonary exhalation, intestinal secretion, and urinary discharges diminish it in a notable manner; in fact, common every day experience enables us to see, that the blood-vessels of a fasting man are not nearly so full as those of one who has just eaten a hearty meal. If, then, after a long privation of food, there is less blood in the body than before, it is clear that, the longer the abstinence, the less is the amount of blood available for the secretion of gastric juice in the stomach. One of our first cares, therefore, should be to endeavour to increase the quantity of blood, before we load the stomach with an amount of food requiring a large amount of the digestive fluid. To fulfil this indication, many different things have been tried—beer, wine, bitters, and the like. But there is nothing upon the whole that answers better than well-made tea; which, with a slice or two of thin bread and butter, should be taken about half an hour before the heavy meal of the day is entered upon. But when the transitory exhaustion depends upon grief, or other depressing mental cause, a stimulant like wine, or even hot brandy-and-water, is preferable to anything else. If a medicinal stimulant is selected, the compound spirit of ammonia is the best, as it corrects the tendency to acidity, so commonly met with in these cases.

It is to be remembered that, in all these cases, our treatment is principally palliative, and that it is directed to obviate a temporary difficulty. But it may be said, that an accident which occurs with regularity, and requires to be met daily, deserves something more than a daily remedy. It may be so; we will not quibble about words, but will add

that when indigestion is distinctly proved to depend upon any bad habit — bad, that is, for the health — the custom must either be given up, or its effects counteracted by another. In so far then as the objectionable practice is habitual, so the remedy may be said to be constant; but in so far as the habit may at any time be given up, and no counteraction then be necessary, we style such remedies temporary.

This distinction is of value: by paying attention to it, a man may be cured, by taking food about the hour of noon; whereas he would have been made worse by simply taking two tablespoonfuls of some stomachic "three times a day." By not attending to this, the treatment of dyspepsia has been supposed to be difficult and unsatisfactory; and medicines of real value when used appropriately, have been maligned and abandoned.

3. In the preceding observations, we have supposed that the dyspepsia complained of has occurred in persons whose stomachs, under ordinary circumstances, are perfectly healthy, and fit to do their work, but which have been depressed by temporary causes. We must now inquire how far our treatment must be modified when the indigestion arises from causes more or less permanent. It cannot, I think, be doubted that all men are not equally strong, and it may be at once conceded that, in like manner, all have not the same digestive power; in other words, many have constitutional indigestion.

This shows itself in a variety of ways. Some are unable to eat meat without suffering from it; many are obliged to eschew milk; a few cannot endure eggs; slops offend a minority of mankind, and a similar proportion abhor wine;

some have repeatedly to complain of flatulence, others of pain, others of sickness, some of detestation of food, others of excessive appetites, &c.

The same state of things may be brought about by the existence of certain diseases; for example, the gouty patient, who was once able to take with impunity everything set before him, finds that he can do so no longer, and he gradually becomes as particular in his eating as a professed gourmet is.

Now, it will be recognised that no doctor can renovate a broken-down constitution, or make a weak man strong; consequently, that an absolute cure of dyspepsia from hereditary, and other allied causes, is impossible. It is as impossible, that is, to convert a weak stomach into a strong one, as it is to turn an old man into a young boy. But, though we cannot effect this, we may instruct an individual who has a delicate organ to pass through life with a minimum of discomfort. How is this to be done?

It is singularly interesting to study the ideas which are entertained by many, as to the force to be invoked when constitutional weakness exists. A few years ago, for example, I had as a patient a lady, æt. thirty-four, whose powers of body scarcely equalled those possessed by an infant of six months. The most sensitive plant is not so impressionable as she was to external circumstances. It would be difficult to meet with one more fragile. In her, the stomachic powers were equal to digest fruit alone. After an infinity of trials, everything else had to be abandoned: yet, all her friends thought that she could only expect a cure by a diet of beef-steaks and porter! and a great deal of exercise. Such thoughtless advisers practically say thus: "You are

ill, we know your delicacy; we are well, you see we are strong, we eat like ploughboys; do you but imitate us in this, and you will be like us in strength. Providence has made you fragile; you have sought for physicians to make you robust, but they have failed; as a Christian you have prayed to the Almighty, and His answer has not been propitious; appeal now to Saint Butcher, and you shall be made whole; in his steaks shall be your strength, in his chops you shall find confidence; and when once you can eat a pound of mutton, you may take up your bed and walk." Ah! thrice unhappy are the patients whose doctor is a bigoted votary of the blue aproned flesher, or an enthusiastic follower of Holy Brandy. Instead of trusting to such divinities as these, we must consult common sense; and when we apply to its oracle, the answer is far from ambiguous.

Another lady, who had for many months been gradually growing weaker, and whose appetite and digestion was at a very low ebb, was treated habitually by small doses of mercury and long daily walks. These naturally made her worse. Her recovery was due to the adoption of the opposite plan—an abandonment of the medicine and of the exercise.

The common sense which we have above referred to tells us that a weak stomach is never to be overtasked; and, least of all, when the body generally is in an exhausted condition. It informs us that those viands alone are to be used which each individual can digest. It suggests that when fatigue has increased existing exhaustion, that the food given is to be proportionally reduced in quantity and quality; and that prolonged rest of body must follow. It tells us that, if the work to be done and the power to do it cannot be adjusted

by increasing the latter, it must be so by diminishing the former.

When we consider the means at our command for increasing "the power to do," we soon find how meagre they are. They are simply "food and physic;" the capability of the first is limited by the stomach's ability to digest it, the influence of the second is small. The medicines which are available may be comprised thus:—Mineral tonics, vegetable bitters, especially quinine, local stimulants, such as mustard, pepper, and cayenne, and general stimulants like wine and brandy. The judicious use of any of these may do some good, but that little will be more than neutralised, if, at the same time, the patient continues any exhausting practice whatever.

It is noticeable, therefore, that the treatment of dyspepsia is based upon principles similar to those which guide us in other diseases. We find that certain measures are to be avoided, as well as others to be adopted. These may be summed up under the generic formula—every thing which produces debility, or which increases it, if present. The worst of all offenders is mercury. Those medicines which are called alteratives are also very pernicious. Purgatives may figuratively be called coffin nails.

We recognise, on the other hand, the same necessity for rest, as complete as the state of the case will allow, for the affected organ, in dyspepsia, as in breast pang, or in mania; we see that medicine alone is insufficient to cure, and that relief may be effectually obtained by management alone. With all this, let us draw a moral. If one of our brethren, by title, should profess to cure indigestion by infinitesimal doses of nux, and if the success of his practice

justifies his boast, let us carefully study his general plan, rather than abuse the placebo which made it palatable. Experience has taught me that more cases are to be cured without medicine, but with management, than by medicine without management; and in cases of indigestion, I have generally found the stomach impatient of any sapid drug, and that the good effects of prudence are not fully developed so long as anything with a strong taste is given. I have repeatedly seen cases, which were persistent whilst apparently well selected drugs have been given, improve directly after all medicine was abandoned, other circumstances remaining the same.

If, therefore, the exigencies of one's position, and the weaknesses of clients, compel a doctor to adopt some plan of medication,—and we know that the majority of patients think that they cannot get well without taking something which is called physic,—I say it with deliberation, that it would be better to adopt a harmless globulism, which is a sham, than a harmful druggism, which is a reality. Homœopathy has been derided — deservedly so, I think; but it is now persecuted only by such small shafts as are sent forth by the tiny bow of the *British Medical*, and other Journals, to the amusement of those who have heard of Lilliput. With all its faults it has, however, like yeast, been the means of originating in the minds of many a spirit of inquiry, which will not rest until everything capable of fermenting has been searched out by its operation.

When, however, there is reason to believe that the indigestion of any patient depends upon an ulcer of the stomach, the treatment required is special. Without going into the cause of the ulceration, we may say that it is very common

amongst women, especially the young and middle-aged ; and is readily recognised by the fact, that the indigestion resulting therefrom is daily aggravated by a full meal, and severely augmented by the use of flesh meat. The cause of these symptoms is, that when the stomach is distended, the margins of the ulcer, and the whole of the surface, is stretched, and exposed to the same gastric juice which dissolves the ingesta.

Some, doubtless, are cognizant of the fact that a dead stomach, into which animal food has been taken shortly before dissolution, will digest itself. The same would take place during life, were not the membrane constantly secreting a mucus, which prevents it coming into contact with the gastric juice, first secreted for mixture with the food. An ulcer, however, has no such protection ; and it is much in the same condition as a "raw" upon a horse's shoulder whilst it is being rubbed by the collar. Hence the pain occurring during digestion is in proportion to the distension of the stomach, and the solidity of the food. It is clear that a more elaborate and, so to speak, stronger solvent is required for pork or mutton than for beef-tea or milk, that the dissolving process will be slowest with the former, and consequently that the sore spot will be irritated for a longer time after taking flesh than after eating bread. Occasionally, but on this I will not dwell, the ulcered spot gives way ; the contents of the stomach are poured into the peritoneal cavity amongst the bowels, and the patient dies after a few hours' suffering. Sometimes it eats into an artery, and blood passes in enormous quantity into the stomach and bowel.

When these cases are recognised, and the diagnosis is very simple, treatment ought to be at once adopted, and

rigidly continued, without a day's intermission. I have repeatedly seen one day's imprudence undo the work of one or more weeks. In conducting it, the following points must be borne in mind:—

1. The stomach is to be kept very small.

2. The food must be very digestible.

3. The strength must be husbanded, supported, and increased.

1. The amount of food taken must not exceed three ounces at a time. If there is flatulence, it must be dispelled by turpentine epithems.

2. Milk with bread, warm, is both soothing and digestible, and more appropriate than any other food; where it disagrees, beef-tea may be used instead. The food should be given about every two hours. All stimulants and medicines should be avoided; mercury and purgatives are particularly bad.

3. The patient ought to be confined as much as possible to bed.

The treatment ought to be continued for six weeks at least.

The number of these cases, in my wards at the Liverpool Royal Infirmary, is such, that we have a routine practice which the nurse thoroughly knows. It runs thus: bed; no physic; bread and milk diet; a small teacupful, warm, every two or three hours: this for a month. Then a bit of egg-pudding is tried once a day, and such solids as bread, toast, &c., gradually increasing the amount for a week, during which the patient leaves bed for a short time daily; next comes an egg lightly boiled, then a piece of meat the size of a finger; the day after a trifle more, and so on, until the end

of the sixth week, when an ample dinner is allowed. Patients have hitherto been declared perfectly well, and discharged in six weeks. I have not known a single failure. Experience has shown me—1st. That no medicine, however promising in theory, does good; it usually does harm; sometimes I have fancied white bismuth was of service, but I have no faith in it as a curative. 2nd. That the treatment is of no avail if the patients will not keep to bed; for if they persist in moving about on the meagre diet allowed, their constitution is not strong enough to initiate the healing of the ulcer. 3. To begin strong food too soon has the same effect as rubbing strongly a sore just covered by a delicate skin; a wound newly healed requires to be treated tenderly. 4th. To give too much food is like opening the mouth, which has a sore crack at any part, too widely. Many a time when the lips are chapped, a hearty laugh will open a fissure which a smile would not tear. An ulcer of the stomach is equally sensitive.

CHAPTER XX.

ON JAUNDICE.

Inexperience believes itself learned—False knowledge dissipated by experience—Progress of information—What not to do—Purgatives pernicious in jaundice—Doctors have to unlearn ere they learn soundly—Cause of symptoms in jaundice—Clay-coloured stools—Hepatic disease and natural dejections—Dysentery and disease of the liver—Intelligent ignorance the parent of knowledge—Jaundice and cholagogues—Reviewers reject reason—Scepticism and philosophy—Stupidity hides beauty—Restorers reinstate their predecessors—A grand medical aphorism—Conclusions.

During the time of my apprenticeship,—a period that involved many hours spent in washing dirty bottles; pounding pill masses, and rolling them up into little pellets; carrying physic to its destination; walking long distances to see if the doctor was wanted to call again that day; one also in which novels were devoured 'on the sly,' upon occasions supposed to be devoted to some other occupation,—I was frequently seized with industrious fits, and "pegged away" at some medical subject, so that if the question was asked, "Well, Tom, what have you been reading lately?" I might be prepared with a substantial reply. Well, it so happened that my master one evening was disinclined for repose or study, and was disposed to examine me. Luckily, I had that very morning mastered the article Jaundice, in Copland's pon-

derous "Cyclopædia of Medicine," and I glibly answered that I thought myself well "posted up" in that complaint. "Very well," was the rejoinder; "stand at the end of that table; imagine yourself a lecturer, and me a pupil, who is wholly ignorant of the subject; and tell me everything you know. Such a task," he added, "will prove your skill in composition and arrangement, as well as your memory." Feeling disposed to show off my "parts," and the certainty of my becoming, at some future day, a medical Demosthenes, I began with a definition of the word Jaundice; then explained the pathological conditions upon which it depended; the causes which operated to bring those changes about; the varieties of the complaint met with; the curiosities occasionally noticed in its course; the common career of the disease if left unchecked; and I finished off by describing the plans of cure supposed to be the most appropriate. My oration was pronounced to be a success; and I was assured that I need not fear any examination on the subject at the Apothecaries' Hall, unless I forgot my Copland.

After this I felt quite proud of my knowledge, and eager to test it by practising upon the body of some poor patient, whose skin was as yellow as the doctor's coveted guinea.

The experience came at length in the person of a valued relative, to whom I was both doctor and nurse, sharing my responsibilities with a distinguished physician on the one hand, and a very observant "sister" on the other. The disease had existed for many weeks ere I had an opportunity of watching it; and though it had been treated upon the old-fashioned orthodox plan, with mercurial preparations and cholagogues, the patient had steadily become worse. I was, indeed, summoned from a continental tour, as death was

supposed not only to be certain, but imminent. After a few days' observation, I began to entertain strong suspicions that the supposed philosophical measures adopted for the cure of the malady were, in reality, prejudicial; consequently, that they only appeared to be rational from being built upon false premises. But when the doctor distrusts the tools which he has been taught to work with, it is neither easy nor convenient to employ others whose value is untried.

In the particular case in question, however, there was one certain indication, viz., that the patient was to be kept alive if possible. To carry this idea into effect, the quantity of "opening" medicine hitherto prescribed was diminished, the amount of wine previously ordered was increased, and the diet generally was improved. With this change came an immediate amelioration; the plan was therefore persevered in, and the lady recovered perfectly. After this, I began to distrust my "Copland," and to resemble Demosthenes more in his fears than in his force.

The duration of my doubting mood was long; and the more I reflected over the matter, the more obscure it became. Whilst in the height of my uncertainty, a poor woman applied for admission into the Liverpool Royal Infirmary with jaundice. She was withered, wizened, old, and yellow as virgin gold, which has a greenish hue. Considering her case incurable, my first impulse was to reject her; but, on second thoughts, I admitted her, telling the pupils that I did so because I was desirous, if possible, of gaining some pathological knowledge. Of her recovery, there seemed not to be the smallest hope. Although anticipating her death, yet I felt determined that no treatment of mine should accelerate its advent. My orders were: keep the poor body in bed;

feed her as well as her stomach will allow; give no aperients in any form, and for medicine let her have half a teaspoonful of spirit of sal volatile in a wineglassful of milk four times a day. All this was done; and, to my utter surprise, the patient went out perfectly well in about two months' time.

This case, coupled with the one first recited, taught me "what not to do;" and this knowledge became confirmed by a subsequent case. A young woman, otherwise comely, came into the same Infirmary with jaundice, and, as she was vain of her good looks, she was very anxious to be cured. My plan was the same as in the last case; but the patient was discontented. She had a notion very like that held by doctors, that if the back door is frequently opened, the yellow colour of the skin will walk out that way. Consequently, when I steadily refused to sanction the use of aperients, she determined to take one herself, and surprise me by its results. One day I said to her, "What on earth have you been doing with yourself? After getting steadily better you have become as bad as ever." "Ah," said she, "I must confess to having purged myself, and I won't do it again." After this, jaundice became for me a pleasant study; every case that presented itself at the hospital was taken in—to be cured, rather than to die. As a result, I have learned what to avoid; whether I have discovered anything more I cannot tell.

It is melancholy for a physician, after years of patient labour, to find that he has had to unlearn everything, and to abandon the old ways ere new ones are made; yet, though the task is a painful one, the fulfilment of it is useful. Let us imagine, for example, a traveller on a moorland hoping to reach a house; he has had directions given to him, but they

lead him into a bog; if he follows advice given he is certain to be mired; if, not finding the real way, he casts aside all the orders which he has tried to follow out, and determines only to avoid the sloughs, it is probable that he will reach the house, which certainly is not likely to be built in a quagmire. To unlearn is often the first step towards discovery.

If we try now to understand what jaundice is, we shall find that, beyond our description of the symptoms, we know nothing. After a rigid examination of every case that I can lay my hands upon, my own conclusion is, that I am unable to form any reliable judgment. For example, in jaundice, there are clay-coloured stools: this indicates a diseased condition of the colon, not of the liver, for it is in the large bowel that the brown colour, usually supposed to be dependent upon bile, occurs. But there are clay-coloured stools in those living on milk diet, and such have no jaundice. Again, jaundice will come on suddenly from mental emotion; and that which will in one person turn the hair white, will tinge the skin of another deeply yellow. Jaundice will attend cancer of the liver; yet many a cancer of that viscus exists without the skin being tinged. It is a common thing to see cirrhosis, or a withering of the liver, attended with the secretion of a very poor bile; and, on the other hand, to see an enormous hypertrophy of the same organ, without there being any jaundice. Jaundice will arise from ulcer of the stomach; yet I have known such an ulcer eat its way into the liver, the only symptoms during life being an unusually white complexion. I have seen large hepatic abscesses unattended with a yellow skin; and, *per contra*, I have seen severe jaundice in which there has been no evidence whatever of disease of the liver.

Moreover, we know the influence of the colon over the liver; how, in dysentery, hepatic affections are common. Anyone, indeed, who loves paradox, might make out as good a case to prove that jaundice depends upon some affection of the large bowel as that it is caused by hepatic disease. I would not myself argue on either side, but would prefer the assertion of my belief, that we do not really know upon what the phenomenon depends. A reader may now say to me, "Surely you must allow that it depends upon a redundancy of bile in the blood!" "By no means," is my rejoinder; "I allow nothing of the sort." Let me, in return, ask you, my friend, whether you have ever heard of persons who have what are called bilious attacks?" In them there is apparently a gradual accumulation of bile until a crisis occurs, and then one, perhaps two, gallons are discharged in the course of twenty-four hours. Yet in these cases there is no jaundice. Again, a newly-born infant, or a man who has suffered an accident or undergone an operation, may become jaundiced in a few hours thereafter, and surely in these cases no accumulation of bile can exist.

To an ordinary observer, it might seem a silly thing for a physician to insist upon his own ignorance in certain cases, and to try and persuade others that they are equally in the dark. But further consideration will lead such an one to change his opinion. He will see that the theory of jaundice being an hepatic disease involves the belief that it can be influenced by such drugs as are believed to act upon the liver. Mercury, podophyllin, and aloes have the character of being medicines that do, in some way, influence the viscus in question, and consequently have been ever used in the treatment of jaundice. If, now, we cut away from such

reasoners the belief that jaundice has a purely hepatic origin, we equally blast their faith in cholagogues; and then the routine practitioner is bound to prove that the medicines which he uses are more serviceable than any other. This he cannot do, until he has suspended their employment.

There is yet another consideration which demands the close attention of the routine doctor, and one to which we repeatedly refer, as it bears upon so many points. If jaundice depends upon an insufficient secretion of bile by the liver, it is clear that, if the secretion of that viscus is diminished by any medicine, the yellow tinge will certainly not be weakened. Now, experiment and physiology alike tell us that the influence of mercurial and all other purgatives is to diminish the formation, secretion, and separation of bile from the liver. According, then, to their own showing, the practice of ordinary doctors belies their theory, and opposes their belief.

Hence, we conclude that, supposing the current notions of jaundice to be true, the common means for curing the disease are as unsound in theory as they are prejudicial in practice.

As in towns wherein moderns desire to utilise and adapt an ancient to an existing state of things, a destruction of old tenements precedes a construction of more useful and substantial buildings; so in medicine, the rejection of old theories, old prejudices, false facts, and illogical deductions precede the formation of sound principles.* Sometimes,

* I do not remember ever experiencing a more painful astonishment than when reading the following sentence in the *Medical Quarterly*, in its review of the first edition of this book. "We feel bound to raise our voice against all medical scepticism, not only because it is unphilosophical, but because there is a special temptation to it in the present generation." Shade of Lord Bacon; we want you amongst us yet!

Is it really possible that a member of an enlightened profession, and one

even in architecture, workmen employed to destroy, find that their labours bring to light the knowledge that what is wanted already exists; although it has been so marred by ignorant men, that the good has been rendered worthless.

who assumes to have the power to wield a critic's pen, proclaims his fondness for the irrational faith of the darkest ages? Doubtless the author of the sentiment referred to will repudiate it, when he sees it thus stripped of its false jewellery. What, let us ask, enabled men to emerge from their ignorance, but that desire to amend, which is the true and almost necessary handmaid of scepticism? And where can the *Medical Quarterly* find room for a sneer at the special temptation to scepticism now existent, except in the fact that never at any time was education more extended than it is now? What has raised Bacon, Newton, Harvey, Lyell, Faraday, Huxley, Tyndall, to their eminence, except a discontent with the past and present, and a desire to fix science on a surer basis than it had before their time?

But for a critic to call scepticism unphilosophical, is the worst mistake a literary professor can make; for what is philosophy but scepticism. This will be seen at a glance by a reference to the derivation of the word.

σκεπτέον—"One must reflect or consider."

σκεπτικός—"Thoughtful, reflective."

σκέπτομαι—"I look about, look carefully, spy, look to, examine, consider, think on, premeditate, excogitate, prepare."

So far from scepticism being unphilosophical, it is that stolidity and imbecility of mind which induces individuals to decry inquiry that deserves to be called unreasonable. How is it possible for any Christian man to abuse scepticism and admire Jesus? The greatest sceptic yet known to history, one whose doctrines have had, and still possess, greater influence than any other man's, is Sakya Muni or Buddha; and second to him in time, and parallel to him in every essential point which the unprejudiced inquirer can discover, stands the Prophet of Nazareth. In more modern times, we respect the mental character of such men as Wickliff, Luther, Erasmus and Melancthon, all of whom were sceptics, or, as some said, devils in their day. Satan is, we are told (John viii. 44), the father of lies—not of doubts. But moderns call scepticism his child, when it demonstrates that they are holding fast to that which is not true, and to which nevertheless they determine to cling.

"Scepticism is unphilosophical." If this remains the motto of the *British and Foreign Medico Chirurgical Review*, it will sink like lead in the mighty waters of knowledge. As an author, I make no claim; as a medical graduate, I call upon all connected with the publication to repudiate the sentiment.

In the restoration of many an ecclesiastical edifice, abundant evidence is found that the original beauty of its tracery has been obliterated by fanatics, who imagained that "elegance" and "election" were incompatible. In like manner, when the medical iconoclast clears away the lath and plaster which have supplanted, or rather have covered up, more firm matter, he finds, to his delight,—for in the real, earnest seeking after truth, all enquirers endeavour to sink their own individuality,—that others before him have laboured in his own style.

This is signally the case in the subject which we have in hand. With ruthless hand we have torn down the rubbish that has been builded up around sound sense for centuries, and find, in a part long unheeded, the aphorism "*primum est, ut non nocere*," *i.e.*, the first or most important duty of the physician is to see that the patient is not the worse for the doctor's treatment. And when I proclaim that my sole direction to those who have to cure jaundice is, "Keep your patient's *health* up by judicious means, and do nothing to make him fall lower than he is already," it will be seen that I am not saying anything either new, wonderful or profound. Nothing can be more useful or more simple than such a plan; and nothing more in accordance with the principles of Hippocrates and Sydenham.

But, simple though the order is, there are different ways in which it may be interpreted. "Keep your patient up" will be read by some, as if I encouraged the unlimited use of alcoholic, or medicinal stimulants, or both combined; by others, as "feed him indefinitely;" to others, it will be seen to indicate a visitation of theatres, balls, an unusual amount of excitement, air, and exercise. Yet all would be wrong.

My own interpretation of the order is, "Reduce all mental and bodily exertion to a minimum, adjust the food to the digestive power, using stimulants as an adjunct, and seeking the happy medium between too little and too much, and eschew aperients."

After a fair differential trial, and prolonged observation of the old and the new plan, I have no hesitation in recommending the latter as infinitely superior to the former, both as regards the comfort of the patient and the rapidity of his cure. The conclusion, though it may seem lame and impotent, is, in reality, sound.

I owe to the critic in the *Medical Quarterly* the expression of a sense of my obligation to him for his observations upon the preceding chapter. In consequence thereof, I have revised the sheets with care. But there is not much that is altered. It was and is my wish to show that there are many causes of jaundice that are not yet understood. Certainly it never entered into my mind to doubt that there are a great many cases in which the nature of the disease is only too evident.

The remarks in the essay are directed to those common cases of the complaint which are essentially curable; and to point out what appear to me to be prejudicial, or restorative, as regards medicine. When Heberden selects ether as a good drug, and I adopt compound spirit of ammonia, we need not contend which is best. Nor have I anything to say against *aqua marina* when I recommend *aqua pura*.

Had the choice been given to me, I should have solicited criticism upon the view herein enunciated, respecting the

influence of purgatives on the liver. In case some other reviewer should bestow a thought on me, let me refer him to Frerich's *Essay on Jaundice* (New Sydenham Society's ed.), in which, although there is much begging of the question, assumption of fancies for facts, and false reasoning thereupon, there is also much sterling stuff.

On page 138, vol. i., he will find three paragraphs which have, in my own copy, been underlined for more than ten years; and which show that both green and brown stools do not depend upon bile, but upon the mucous membrane of the large intestine. Were I writing a treatise upon Jaundice, the matters referred to would be discussed at length; and my scepticism justified. As it is, the building must stand as it can without its scaffolding.

CHAPTER XXI.

ON CONSTIPATION.

Things for which doctors are not consulted — Mischances — Madame Rachel and druggists—Pill taking—Habits of dosing—Study of nature—Many men, many bodies—Phenomena not diseases—Personal peculiarities—Excess—Costiveness and cleansing—History of food swallowed—Interference with natural processes—By hunger—By sitting and tea drinking—By gin and opium—By other causes—Therapeutics — Regularity — Diet — Tobacco—Medicine—Enemata—Plan suggested—Details—Drugs—Solid and fluid aperients—Epsom salts—Dr. Jephson's formula—Chalybeates—Castor oil.

THERE are certain affections to which frail humanity is liable, for which very few folks think of consulting a physician in the outset. For example, a lady rarely comes to a doctor hoping to be cured of freckles; nor does her mamma consult one for grey hair and baldness; both relegate themselves to the hairdresser, or other professor of cosmetics, and do not think of a "qualified practitioner" until some mischief has ensued.

It is not often that the doctor is summoned to repair damages arising from beautifying mischances; yet, I know of one instance in which a young man suffered severely, from the use of tartar emetic ointment to his cheeks and chin. This preparation he was assured by some waggish

companion was the true and infallible "whisker seed," if only it was well rubbed in. It had a thorough trial, and brought out an abundant crop of pimples and pustules. In another case, a gentleman was somewhat proud of his hirsute face, and used oil freely to his beard. On one occasion, however, he found that his face was swelled unusually; and, being fearful of erysipelas, he consulted his family physician. After much patient investigation, it was discovered that the Macassar which he used was for the nonce replaced by some croton-oil liniment, that had been ordered for his wife.

In the same way as Madame Rachel has been consulted by ladies ambitious to be blooming, pharmaceutists are resorted to by those whose bowels are confined, and pills or draughts are taken solely on the advice of druggists. Nor are we surprised at this; the complaint, "My body is costive," seems too trivial to bother a learned M.D. about. An inferior Esculapius will do for hearing that grief, just as doctors' and parsons' wives are consulted about matters supposed to be scarcely momentous enough to be brought before their husbands. We are, moreover, bound to confess that the apothecary generally seems to do what is expected of him. He has an abundant supply of stuff, which, being swallowed, acts like a key, and unlocks the bowels, and loosens the bonds of those suffering from confinement.

For one who has not made his daily journey to Cloacina, nothing seems easier than to bolt down his throat, like an owl gorges a mouse, or a lump of meat, a little round sphere, in perfect trust that it will create a deliverance. But when the pillman has begun to notice himself closely, and finds that the swallowing of one dose begets the necessity for another, and that pills have become for him a 'necessary' as

great as his tea or coffee, he begins to think it time that such a state of things should be put a stop to.

Some there are, indeed, who seem to accept the difficulty as a matter of course, and increase the amount of the pills which they take, until their custom helps to make the fortune of such men as Holloway, Frampton, and many more of that ilk. Others, more sensible, or, perhaps we should say, less silly, endeavour to make some sort of a compromise, and only take physic when absolutely obliged; both trusting and fearing their favourite box. Some few consult a regular doctor, and hear what he has to say before deciding upon their line of action.

When a physician sets himself to express an opinion upon the best method of cure in any given disorder, his first care is to study its nature, and to ascertain the causes which are in operation to bring the complaint about. He notices that all men are not alike; that some have abundance of curly locks; whilst others have "no hair at the top of their head, in the place where the wool ought to grow." Others, again, have a dry skin, which looks more like parchment than leather; some have feet habitually perspiring; whilst many have "understandings" as dry as dust; some are tearful; others never cry; some are "leaky" to an extreme degree, others "pump ship" only once daily; in some, the nostrils are never dry; in others, there is no need for a "mouchoir."

But no one would call baldness a disease, or a moist skin a disorder. Consequently, when the doctor sees that with some the bowels are habitually loose, and that they are regularly costive in others, he does not regard constipation as something necessarily bad. Perhaps he is a close observer of other animals than man; and has compared the urine of

the serpent with that of the pig; and the fæces of the dog with those of the cow. In one case, the discharge is nearly solid; in the other, fluid; yet all have equally good health. He then, perhaps, argues thus:—It is true that a sweating skin is natural to some, yet experience tells us that perspiration may be so abundant as to characterise disease; loose "motions" may be natural to a cow, yet, if they are too loose and too abundant, disorder is present, and the creature may die of diarrhœa. In like manner, constipation may be quite habitual to a man; but there may be such an *excess* of it as to constitute it a disease.

When next the doctor begins to inquire into the meaning of the word "excess," and endeavours to find a standard by which to measure it, he discovers that there are two—one which has relation to personal comfort, the other to actual health. For example, A. B. may be habitually costive, and, as a result, he feels so deeply the exertions which he makes every time he goes to relieve the bowel that he wishes to become more regular; not because his health is bad, but because, in one respect, it is apparently too good. C. D., on the other hand, never thought much about the trouble of defecation; scarcely indeed turned his attention to it at all; until the accumulation in the bowel produced the symptoms of obstruction, vomiting, and the like; perchance convulsions or other disorders.

The physician, having arrived at this point, endeavours to discover the natural history, so to speak, of "cleansing," with a view to understand its aberrations. He finds that, when food and drink are taken, they are duly dissolved by the juices of the stomach; mingled with the secretions of the liver and pancreas; and then passed along bowels which

absorb most of the new material; and replace it with a secretion of their own; those ingesta only being left behind, which have not been dissolved in the gastric laboratory. In health, the bowel closely embraces its contents; and by its worm-like movements sends them forward to the colon. As soon as they enter this — the large gut — the material undergoes a change, receiving a peculiar odour, and becoming usually of a dark colour. And here let me say, in passing, that if the colour of the fæces is due to bile alone, it ought to be the deepest where the matters are nearest to the liver, and not when they enter the ilio-cœcal valve, nearly twenty-five feet from that organ.* When the secretions become thus changed, they are still firmly grasped by the bowel, and are passed on to the chamber made for them, wherein they accumulate until a sufficient amount has been collected to distend the rectum uncomfortably, and to induce it to desire to contract and evacuate its contents.

This being the natural process, it may be interfered with by there being a great diminution of ingesta; by the food being wholly digested, and the amount of intestinal secretion being small; by the bowel being weak and flabby; by the natural desire to evacuate being checked, and the rectum being thus forced to put up with an unusual distension; or by some mechanical impediment.

As examples of these, let us notice that starvation induces constipation. If I recollect rightly, Captain Bligh, in an account of his open-boat voyage after the mutiny of the Bounty, says that he and his men had no movement of the

* It is necessary to explain to any non-medical reader that the bowels are not straight tubes, passing in the shortest line from the front to the back door, but that they are convoluted like twine, when sold in a ball, and are in all about thirty feet long.

bowels for more than a month; not, indeed, until they were rescued. Dr. Copland, in his marvellous *Cyclopædia of Medicine*, gives many instances in which women, who had been living upon tea and very little else, were constipated for months. A medical friend of my own told me of a case which he had attended, wherein there was a similar state of things for two years; the patient, a woman, subsisting almost entirely upon gin, opium, and water. What is yet more strange is, that the gut was found after death to be empty.

Again, we see repeatedly, that girls of perspiring skin, small bones, and soft flesh, are constipated; the bowel freely allowing itself to be over distended. Women suffer more from this than men do; but the latter are occasionally victims.

Perhaps the most common cause of constipation, however, is the neglect of nature's call. This may be necessitated by circumstances. For example, a man, usually regular as clockwork, finds himself obliged at his proper hour to take a journey, or to sit in council; or being in some other way obliged to do his business, he suffers therefrom, and from being "regular" becomes "confined." Similar results often follow from a sense of shame, or shyness, in women who are prevented from paying a necessary visit, lest they should be seen on their way thither. In all these instances, and in many others which we might name, *e. g.*, during storms at sea, or a long sitting in an open boat, &c., the constipation is not so much a disease as the result of a bad habit or accident.

Again, constipation may arise from mechanical obstructions, either within or on the outside of the bowel—a subject to which we shall recur shortly.

After we have thus arrayed the causes of the complaint in

question, we are able to see that the treatment which we should adopt for its cure ought to be dietetic, &c., rather than medicinal. I assert this the more strongly, as I have repeatedly known the use of aperients keep the individual employing them in poor health for years. As I have already referred at large to this, in a chapter on purgatives in *Preservation of Health*, I will not dwell upon it now. It is true that physic is sometimes necessary; but as a rule it should be avoided.

1. The individual liable to constipation should make a regular daily visit, whether he has a call or not.

2. He should use dietetically such materials as oatmeal, brown bread, Zante currants, raisins, figs, plums, peas, or other fruit. The skins of these not being dissolved during digestion act as mechanical irritants, and not only "relax," but sometimes even "purge." Spirits and the dark wines should be, as a rule, avoided. The white Rhenish wines are generally found to be aperient. A copious draught of cold water on rising from bed is greatly to be commended; and with some a matutinal cigar or pipe is a sure remedy. If these fail—and that they occasionally do so is unquestionable—it is far better for the sufferer to have recourse to enemata than to medicine.

To recognise the value of this recommendation, it is well to compare the action of the two. The last provokes an evacuation, by irritating more or less the mucous membrane of the whole intestinal canal. This again involves a diminished secretion from the liver, whose quality and quantity so many doctors profess to set great store by; and, what is very important, a resultant debility. Just as too great a dose of champagne, wine, or whisky produces in the debauchee a

head-, perhaps a stomach- or heart-ache the next day, so does an indulgence in colocynth or aloes induce a bowel-ache, gripes, or flatulence. As the tippler often feels it necessary to overcome the effects of yesterday's libation by a large potation to-day, so does a lover of pills follow a banquet thereupon by recourse to potion, bolus, or draught. On the other hand, he who has an eye merely to the removal of an accumulation, does so without involving any after consequences; he endeavours to influence one part of the bowel alone, and that part is the end of the track rather than the beginning.

Let us for a while examine into the *modus operandi* of an enema such as we here describe. Ere it is used, the rectum is full of hard, and, comparatively, dry scybala, or fæcal lumps. Like a bunch of grapes, these were originally separate, but have at length been pressed together, and more or less amalgamated. The bulk is, perhaps, more than an inch in diameter, and six, probably eight inches in length, and this mass has, in the first place, to force open, and then to pass through, an aperture which is almost too small for it. But what can scarcely pass in bulk, when dry, can slip through readily in detail, when well moistened upon the surface; and one who would strain severely in the passage of a large dry evacuation, can discharge the same readily when lubricated. The effect of an enema is both to soften the scybala, and to disintegrate their mass. It is a matter of doubt whether there is any better measure of relief for constipation than the plan now recommended. Nevertheless, many fear it, and few understand it. We will, therefore, indicate what we believe to be the best form of instrument and management.

Those who habitually suffer from constipation ought, we

believe, to order a shelf to be placed in their "cabinet" two feet and a half above the level of the seat, and about six inches from the cap of the shoulder. On this a vessel capable of holding a quart or two of water, of a temperature of about 100° Fahrenheit, should be placed. The individual should then provide himself with an instrument having an elastic bottle for the pump, a long brass cylinder for the feed pipe, and a vulcanised india-rubber tube about four feet long, and ending in an appropriate nozzle for the delivery pipe. After having made himself comfortable, and arranged the light (for such matters should be managed just before bed-time, as they usually require a *séance* of twenty minutes or more), the water vessel, &c., the pump should be used to fill the tube. This being done, the nozzle is directed to the anus; and, after flooding it with water externally, is introduced withinside. After this, very little pumping is required, the weight of the column of water sufficing to fill the rectum. After a time, the propensity to evacuate the bowel is strong, but this, in the first place, should be resisted. After a cessation of active measures, the propensity referred to passes off, and the rest of the water may be injected. The result is a complete clearance of the lower bowel in the course of about twenty minutes.

We cannot speak too highly of this very simple remedy. The material used should be pure water, the temperature should not be below 96°, the normal temperature of the body, or above 104°, for water at such an heat acts as an excitant; the quantity used should be about a quart; the frequency of administration should be about once in every two days, and the nozzle should always be directed backwards. We have known this means to have been in use for more than twenty

years, without in the smallest degree losing its efficacy, or injuring the natural process. Indeed, whenever circumstances allow nature to take its course, the syringe is deposed, and the healthy regularity returns. We have heard many decry the habitual use of enemata, but the objection is as senseless as that which would objurgate tea to-day, because we should want some more to-morrow, or neglect shoe-blacking on a muddy day, because our boots are certain to be dirty again directly.

Nevertheless, we have, in the course of our experience, met with some who would not, on any account, use an enema, and a few in whom it has not had the desired effect. These, when consulting the doctor, imperatively demand, and really require, medicinal aperients. When this is the case, the physician seeks for the mildest remedies which will suffice. In selection, his experience enables him to divide purgatives into two classes—solid and liquid. The first operate like soap does upon the eye; they irritate the bowel, and make it secrete a more copious and watery secretion than usual. The material thus poured forth is generally acrid, and acts upon the gut like wine retained in the mouth does upon the tongue and cheeks. Griping accompanies its progress; and when the nasty stuff nears the anus, the call for defecation is urgent. Sometimes the produced irritation persists, and a diarrhœa, which is more distressing than copious, follows. When the influence of the purge is over, the bowels remain enfeebled, and generally are flatulent for three days. One aperient, as we have already remarked, too often requires to be followed by a second.

As a rule, fluid aperients do not provoke an increased secretion from the surface of the gut, to anything like the

same extent that solid cathartics do. So far as I can judge, they seem to be disagreeable to the absorbents, and so pass on without being materially changed. Of liquid purgatives, the apothecary has a host. Amongst them, a few may be selected for particular purposes. Infusion of East Indian senna, for example, is peculiarly commendable for children; inasmuch as it may be given in coffee, or infusion of tea, with the usual complement of sugar and cream, without the most fastidious child knowing there is physic in the cup. Epsom saline, again, is valuable from its cheapness, and Rochelle salt from its freedom from taste. As a rule, when these purges are given, they should not be thick with the drug, but be very strong of the pump. In cases where nothing but a simple evacuant is required, I generally direct my patient to mix a small teaspoonful of Epsom salts, a teaspoonful of orange marmalade, and three drops of essence of ginger, with a breakfastcupful of water, and take the whole on rising from bed. As soon as this operates regularly, the water is to be increased and the salt diminished, until the sole physic is some pleasant water.

Where more decided measures are required, I have not found any medicine so efficacious as the following prescription, which was given me by the late Dr. Rigby, and to him by the late Dr. Jephson, of Leamington, viz.—

℞ Magnes. sulph. ℥i.
Acid dil. sulph. ʒi.
Ferri sulph. ℈i.
Aquæ ad ℥viij ♏

of this, which may appropriately be called "chalybeate

aperient," an ounce every morning, taken fasting, suffices. It may be used for a twelvemonth without prejudicial effects; and I have known it regulate the bowels when every other known means had failed, and this so effectually, that in about a month no medication of any kind was required.

We set our face so strenuously against all medicines stronger than those which we have indicated, that we shall not describe those called cathartics. Not that they are never necessary; only that their employment is so exceptional, that to enter into any account *when* they are indicated, would be to write a treatise rather than a sketch. Yet we must not wholly close this part of our essay without a word about castor oil. I detest it, for I have had to swallow it thrice a week when recovering from fever. In our hatred of it, we have essayed to give it the "go-by," and tried "no end" of other drugs in its place. Yet, with all our dislike to it, we feel bound to praise it as the best, mildest, and most manageable aperient known. Nasty without a doubt it is; but even this difficulty may be mitigated. Let any one who has to swallow the nauseous dose first float it on weak brandy and water, or other sapid fluid, then eat a bit of oatmeal, gingerbread, or anchovy sandwich, then make a wide mouth, gulp all down, and shut the mouth until he has regained his temper.

We have now to make a few remarks upon the management of obstruction of the bowels.

CHAPTER XXII.

ON OBSTRUCTION OF THE BOWELS.

Definition of terms—Causes of obstruction—Impaction, what—Duration of constipation—Hernia—Treating symptoms—Surgical interference—Intussusception and purging—Spontaneous cures—How effected—Danger of perforation—Effects of purgation—Therapeutics—Opium, tobacco, Wood's syringe—Loss of blood.

In the above term we include all those cases which are marked by vomiting, or other signs commonly attending strangulated hernia, and those where there is such prolonged constipation as to endanger life by gradual accumulation of fæcal matter, and ultimate rupture of some part of the intestinal canal.

The causes of obstruction are numerous. Internal hernia, or mechanical restraint upon the movements of the bowel by adventitious growths, bands of adhesion, twisting of intestines, supplemental spleen or kidney, cancerous strictures, or intussusception. Sometimes we meet with accumulations of scybala in the rectum, occasionally a quantity of peas or wheat which have been imperfectly masticated and digested, and sometimes the bowel plugs itself up, by one part passing into another. Whatever may be the cause of the obstruction, the most prominent symptom is the absence of the usual evacuation, and the next is the presence of vomiting.

The first of these symptoms demands our attention strongly.

If we endeavour to find its real value, we must make extended inquiry. We shall find that in health there is great variety in individuals as to the action of the bowels; some pay a daily "visit," some two in the same time; others only have to go every two days, some at longer intervals, and with some a week elapses between one "action" and the next. Fasting is almost always attended by prolonged constipation, and after certain surgical operations about the rectum the bowels are kept "locked" by opium for ten days or more. In sedentary females a longer period than this occasionally passes without a motion; and obstetric practice introduces to our notice many a case in which the rectum is so crammed with scybala that manual interference is required for their removal ere delivery can be effected.

Without going farther into cases in which the duration of constipation is almost fabulous, we may enunciate that the simple fact of the bowels being confined is not necessarily a mark of disease, or of some physical obstruction.

Experience has also enabled me to say, that the colon may be moderately filled with scybala, consequent upon prolonged constipation, without any uncomfortable symptom resulting.

The absence of an action of the bowels, then, has comparatively little importance, unless it is attended by such other symptoms as show that the phenomenon depends upon, or is attended with, some serious change.

The proofs of hernia, and of internal obstruction, are so familiar that I need not recapitulate them.

When these signs appear, we conclude that the patient is suffering from some cause, *one* of the *effects* of which is constipation. If constipation be the *effect* of a disease which

produces the other symptoms present, we see that the cure is not to be sought by attacking the former by opening medicines.

I readily acknowledge that impaction of the rectum may give rise to the general symptoms, and thus constipation be both "cause and effect;" but as an examination of the lower bowel with the finger will at once reveal the existence of this state of things, I purposely omit this from the general consideration of the subject, confining attention entirely to those cases in which there is direct evidence of the absence of simple "impaction."

In all cases of doubtful origin, it has long been held a safe maxim to treat symptoms; and, in following out this idea, the practitioner has very naturally come to treat obstruction of the bowels by opening medicines. Of these, every variety has had a trial; the milder ones are first adminstered, then the strong, and lastly the strongest of all; and, as a rule, no other plan is adopted until purgatives have been fully and vainly tried. I have never yet met with an instance in which this treatment has been of service; nor have I met with one in which the aperients did not do positive harm.

We can easily understand why the fact should be so, if we consider what we want to effect. From some cause the bowel refuses to allow the fæces to pass along it. Whatever may be the fault, we generally have reason to fear that, unless we interfere surgically, nothing but Nature can be trusted to set right what accident has put wrong. If there is something mechanically closing the tube from the outside, it is clear that the gut will have a smaller hope of escape if it be distended with flatus and fæces than if it be firmly contracted on itself and empty. If there be internal constric-

tion, it is certain that there will be a better chance of material passing through it when it is open, than when it is closed by the action of an acrid purgative and "scalding" mucus in contact with it. If there be a twist in the bowels, it is evident that there is far more ample scope for them to untwist when the gut is empty and the abdomen lank, than where the intestines are blown up with wind, and the belly is largely tympanitic. If there be intussusception, a state of things commonly brought on by "purging," it is not likely that we shall do anything to obviate it by administering drastic aperients to purge still farther.

In those cases of this disease, where recovery has taken place, we find that nature has effected the cure by producing, first, agglutination between healthy parts of the bowel, then absorption of their contiguous walls, and finally a casting off the diseased portion as mortified. To this end *time* is required, and a condition of bowel as closely allied to health as the circumstances will permit. It is clear that excessive movement, inordinate flatulence, abundant or irritating fæces, will do much to prevent this consummation.

Again, if the obstruction be caused by old adhesions, diverticula of intestines, or other freaks of nature, recovery may ensue by the bowel returning through the road it went; by enlarging that aperture and breaking down the adhesion; or by a supplemental aperture being effected between unaffected portions of the gut, as happens in intussusception. Before any of these results can follow, the bowels must be quiet, and free from any irritant beyond the one already existent. If the obstruction arise from some malignant disease, where no cure can be effected, it is still clear that an absence of all excitation is more likely to conduce to

comfort, and to check the progress of the complaint, than the presence of such drastics as croton oil or gamboge.

Still farther, experience tells us that one of the events attending obstruction is perforation of the bowel; and a moment's consideration informs us that the danger from this occurrence must be increased whenever the gut is thinned by distension, weakened by the inflammation produced by cathartics, and stretched by strong peristaltic movements; but *per contra*, that the risk is diminished by the bowel remaining empty, thick, and free from irritation.

Let us still farther inquire into the effects of purgation during health. There are few who cannot tell from personal experience that there is first a griping pain in the abdomen, of greater or less severity according to the drug taken; secondly, that there are active movements in the bowels, and much "borborygmus;" that there is an increased quantity of fæces; that these are irritating to the lower bowel, producing in the rectum severe pain, and in the anus inflammation, sometimes even excoriation. Such mucus, I have known to produce, not only inflammation of the whole rectum, but of the bladder too. For one, two, or three days after the purgative, there is atony of the intestines, a large amount of "flatus" and active movements of wind.

For the cure, then, of the obstruction, we require rest from motions, an empty bowel, a freedom from flatulent distension, and an absence of irritation. The use of an aperient thwarts every one of these requirements; it increases movements, fills the gut with fæces and wind, and ensures the constant presence of a powerful excitant. To treat, then, the symptom constipation by a cathartic, in cases of obstruction, is radically bad, and far more likely to increase an existing evil than to mitigate it.

If, then, the most obvious plan is so prejudicial, can we replace it by another, and one more consonant with sound philosophy? What is it we seek? We wish to give nature a fair chance for setting things right. What she requires we have already pointed out. Can we help her? Decidedly. We can reduce the movement of the gut to a minimum by opium: the same drug will lessen or suspend the secretion from the mucous membrane; it will allay spasm, if present; and, by its effect on the local circulation, will diminish the tendency to inflammation; it will relieve sickness, if that exists; and, if it do no more, it will make suffering more bearable. The form of the drug to be selected, the dose, the frequency of administration, must be left to the judgment of the practitioner. To allay vomiting and thirst as special symptoms, ice is preferable to any other thing; and for the relief of pain, Wood's syringe, with an injection of morphia under the skin; and heat are the best.

The question of food is one which should remain in abeyance. While the signs of obstruction exist, it is clear that the less food taken the better. 1. Because the stomach refuses to digest it. 2. Because food promotes the formation of fæces.

There are few local applications desirable. We have heard favourable reports of tobacco epithems, but they have been successful only in a few cases, and where strong cathartics had been used in the early part of the disease, and suspended when the epithem was adopted. In some few instances, venesection has proved itself to be a valuable remedy. How it operates, I am unable to say; but I have heard from friends so many instances in which obstruction has been removed almost instantaneously by loss of blood from the

arm, that the connection between cause and effect is undoubted. In some cases the desire to evacuate comes on while the blood is flowing, and the arm has to be bound up, that the patient may retire to the closet to relieve himself.

After medical aid has become hopeless, recourse may be had to surgical measures; but of these we need not speak at length.

CHAPTER XXIII.

ON PERITONITIS.

Different forms of peritonitis—Enumeration—Cause of death—Puerperal state—Erysipelas—Symptoms—Pain, inquiry into its value as a sign—Cases in point—Peritonitis from extension of abdominal myositis—Hysterical peritonitis referred to—Inman's pains—Myalgia after parturition mistaken for peritonitis—Inquiries thereupon—Homœopathy and old medicine compared—Belly-ache—Supposed characteristics of hysterical peritonitis—Muddlement—Methods of cure—Rest—Opium—Warmth—What to avoid—Effects of irritants—Purgatives—Opening the bowels—Chloral hydrate.

THERE are few diseases which have been more dreaded than peritonitis. This has arisen partly from the circumstances which produce the complaint, and partly from the method adopted for its cure. Nor can we think that the dread has been undeserved; for, sooth to say, the affection is a very dangerous, and often an extremely fatal one.

The complaint in question consists essentially of inflammation of the membrane which covers the inside of the walls of the abdomen, and the outside of the stomach and bowels. The inflamed condition is necessarily attended by a thickening of this thin serous coat, and a dryness of its surface, that interfere materially with the natural movement of the intestines. After a brief period, there is an outpouring of lymph, more or less solid, which may endanger life by its

quantity, may poison the system by its extreme acridity, or may glue the bowels into one mass by its adhesiveness. In some instances there is little effusion, but great thickening, and the peritoneum, which is normally about the sixtieth of an inch in thickness, may become a quarter or even half an inch from one surface to another. To a great extent, these results depend upon the cause of the inflammation; for as we see a difference in pyrexias, dependent upon gout, rheumatism, and variola, so we see a distinction between tubercular, uræmic, and puerperal or erysipelatous peritonitis.

When we recognise the fact that the phenomena of the disease in one case differ from those in another, it necessarily follows that distinct diseases are described under the same name, and that any essay upon the subject must deal as much with causes as with effects.

The causes of peritonitis may be thus enumerated:— 1. The tubercular diathesis. 2. A cancerous affection. 3. The puerperal condition, *plus* exposure to a contagious element allied to erysipelas, fever, &c. 4. The extension of disease from the abdominal walls or viscera. 5. The existence of poison in the blood, as in uræmia. 6. The presence of an irritating material, as in rupture of the stomach or bowels; and in the accidental flow of an injection into the womb, going beyond and through the Fallopian tubes; or when an abscess in the ovary, &c., bursts into the abdomen. 7. Mechanical injuries or surgical operations, &c.

Without enumerating more causes, let us fix our attention upon two or three. It is clear that, if any peritonitis be tubercular, we have not to do so much with local disorder as with constitutional disease; and if the complaint prove fatal, it is problematical whether the patient dies of the abdominal

change, or from the state of the system generally. Just as in phthisis a person may die with a very small portion of his lungs diseased (a portion infinitely less than the whole of one of them, which may be sacrificed in pleurisy without fatal effect); so in a corresponding affection in the abdomen a person may die with comparatively small local mischief. Again, when in an unfortunate individual the stomach or intestine is ruptured, and its contents poured into the peritoneal cavity, the patient cannot be said to die of peritonitis; for that condition designated as inflammation may not have time to arise; such victims rather perish from the profound constitutional shock produced on the system generally. Again, when a poor woman, who has just become a mother, is infected by the erysipelatous or other contagion, and has peritonitis, with effusion of lymph so acrid as to almost blister the hands of the surgeon who examines the body after death, we assert that the danger arises as much from the general condition of the system, as from the local disease. Just as we regard death in cases of small-pox to be dependent upon a constitutional affection, rather than upon pustular inflammation of the skin; so, in puerperal peritonitis, we fix our eyes upon the general condition, quite as much as the local state.

The importance of this consideration will be recognised when we contemplate the state of a woman after parturition. Whatever may have been her previous health, or the nature of her constitution, she has just gone through enormous muscular exertion, and is, consequently, more or less exhausted. Of itself, erysipelas is a singularly depressing disease; if, therefore, it be superadded to existent debility, the patient will have great difficulty in rallying. That puer-

peral peritonitis is allied to erysipelas, it is unnecessary for me to prove; for I believe that experienced observers have no doubt about the matter.

Again, in peritonitis attending upon certain diseases of the kidney, the danger to life is not so much from the local affection as from the general uræmia; and we thus again recognise the fact that a study of the concomitants of the disease is of as much importance as the affection itself. We believe this the more readily because we think, from our personal experience, that many individuals have had peritonitis, eventuating in agglutination of the intestinal organs into one mass, without the patient being cognizant of any disease during life. Upon what such affection has depended we do not know; but we certainly have seen the bowels glued together by old adhesions in cases wherein the strictest inquiry could elicit no evidence, either from the individual or his parents, of antecedent inflammation.

Next in order to a study of the causes of peritonitis, is an investigation into its symptoms. Nor is this the less necessary because they are supposed to be well known. We aver that the pure disease has few other symptoms than enlargement of the abdomen. This enlargement depends upon the thickening of the membrane; occasionally on a large effusion of lymph, which is attended with a flatulent distension of the bowels. With this there are increased local heat, and a rapid pulse.

Pain is not an essential element in peritonitis. To this fact we desire to call especial attention. That this symptom has been generally regarded as one of the most important elements in the diagnosis of the disease in question, has been the cause of much medical confusion. To this, anyone

will readily assent who studies the writings of those authors who have talked of or described hysterical peritonitis; that is to say, a peritonitis that is not peritonitis, and inflammation that is non-existent! We affirm that pain is not a necessary symptom, because there may be very severe peritonitis and no pain, and very acute abdominal pain without inflammation of the peritoneum. How, then, is this? Simply that the existence of suffering, when present, depends upon the extension of the inflammation from the peritoneum to the muscles of the abdomen and of the intestines.

I cannot illustrate the importance of this observation better than by giving a few cases. A. B., a middle-aged widow, after a hard day's washing, was suddenly seized with intense abdominal agony. When the doctor saw her, he found the belly exquisitely tender; the woman lying upon her back, with her legs drawn up, and her respiration very difficult. As she was neither young nor interesting, there was no suspicion of hysteria, so 'acute peritonitis' was the diagnosis made; the treatment was enormous local bleeding by leeches, with calomel and opium. Next day the patient, being worse, was taken to St. George's Hospital, and was again profusely bled by leeches; the mercury was continued, and blue ointment rubbed in. Yet there was, in reality, no inflammation present; the affection was simply myalgia of the abdominal muscles, dependent upon long exertion over the wash-tub, and yet nevertheless the patient narrowly escaped death. I have known many similar cases, some ending fatally.

C. D., a young girl, æt. twelve, of very delicate constitution, suffered from intense abdominal pain, which came on suddenly. The doctor, judging from the symptoms, inferred

the presence of peritonitis; and, being one of the old heroic school, he ordered aperients by the mouth, a turpentine enema by the rectum, and sinapisms to the skin. The patient under this plan gradually became worse; and the father, being very anxious, for the child was the only survivor of a large family, dismissed his doctor, and applied to another. When the last investigated the case closely, the conclusion drawn was, that the original pain depended upon myalgia, consequent upon a long run; that this became developed into myositis under the influence of irritants; the muscular inflammation then spread to the peritoneum, and thence to the bowels, including their mucous membrane. It then became the physician's business to counteract the effects of the remedies used in the attempt at cure. But the impression made upon the constitution was so severe, that recovery seemed almost hopeless, and a very long period elapsed ere convalescene was established.

With this case I would contrast another, in which, though the symptoms were the same, the doctor refused to see peritonitis. He felt certain that there was neither hysteria nor inflammation present; but the cause of the pains he could not tell. He temporised, and the patient soon got well. She had simply been running a long distance the night before, and was the victim of myalgia.

And now, at the risk of being thought egotistical, I will recount an anecdote told to me by my friend, Dr. Grimsdale. "Going round," he said, "my wards at the Lying-in Hospital, I saw a young woman sitting up, who had been confined only three or four days before, and I ordered her at once to bed. Next day, when I went, the nurse looked gloomy; and, in answer to a question, said she feared that they had

'the fever' in such a ward. On going with her, I found the patient suffering from intense abdominal pain; the belly exquisitely tender, the knees drawn up, the skin hot and dry, the tongue brown, and the pulse high. Whilst examining her, I recognised the patient as the one whom I had sent back to bed the day before, and said to myself, Probably, instead of peritonitis, she has Inman's pains (the first designation given to myalgia); consequently I only ordered warmth, an opiate, and good diet, and she was all right in a day or two."

An anecdote like this naturally became the origin of a long inquiry; and I examined diligently every treatise upon puerperal peritonitis upon which I could lay my hand. After a short period, moreover, one of the most assiduous of my pupils,—one who had been with me during the time that I was investigating the whole subject of muscular pains,—became attached to a lying-in hospital of venerable age, and attended by doctors whose standing certified them as belonging to the old school. He soon found out that the institution was supposed to be much infested with the disease in question, which usually began on the fifth day after delivery, sometimes before. He ascertained also that the routine treatment in vogue was, mercury to salivation, and low diet. On examining the books of records, he found that the mortality was very great. He then set himself closely to investigate the circumstances under which the affection came on; and he readily came to the same conclusion that I had done from books, viz., that a vast number of cases, said to be puerperal peritonitis, were cases of myalgia, dependent upon women, already delicate and exhausted by their labour, leaving bed, sitting up, and doing work too soon.

Then there came across my mind a significant anecdote of a young, but orthodox, doctor of the old school, who once became alarmed at finding that a patient, whom he had recently delivered, had the much dreaded "puerperal peritonitis." Having been justly disgusted with the results of allopathic plans of treatment, he visited a Homœopathic friend to learn his practice under similar circumstances. He adopted it, and simply gave globules. The pain kept the woman in bed; the physic did no harm; the supposed disease vanished rapidly; the doctor abandoned his district; went to Germany to study the doctrines of Hahnemann, and has become one of his most ardent disciples. He was, indeed, converted by curing a disease that had no real existence. The woman simply had a very severe belly ache, from getting up and washing her dirty linen ere her tired muscles had recovered their powers. Like many others, this doctor regarded the pain of myalgia as the certain proof of the existence of inflammation of the peritoneum; and when, by being let alone, the patient got well, he attributed the result to the active operation of an infinitesimal dose of something equivalent to nothing.

Cases like the preceding introduce us naturally to the consideration of what used to be designated hysterical peritonitis. In the diagnosis of this, the physician depended upon the fact that there was tenderness to a light touch, but that the patient, if her attention was drawn away from the doctor's hand, could bear a heavy pressure. But, unless the individual was feminine, unmated, and young, this symptom did not suffice. If such a phenomenon occurred in males and married women, real peritonitis was sure to be diagnosticated.

When once the physician satisfied himself that the pain

was hysterical, a curious mental muddlement arose; there was pain, but there was not, for it was only hysterical! There was suffering, but it was only fanciful. There was pain, to be sure, for it was increased by the patient thinking of it; yet there could not be pain after all, for the girl was a poor silly creature, who only wanted sympathy for something that she did not suffer from! We now know that hysterical peritonitis, like pleurodynia, is simply myalgia, arising from the abdominal and other muscles being too weak to do that work comfortably which they have been compelled to perform.*

Having now eliminated from the category of peritonitis all cases purely myalgic, and having ascertained that the treatment of the disease in question must be general, as well as local; passing by, moreover, the character of the constitutional treatment to be selected, inæsmuch as that must be regulated upon the general principles of medicine; we proceed to inquire whether there is any plan of practice specially applicable to inflammation of the peritoneum.

Now I think we may lay it down as a general rule, that the doctor should do everything in his power to put all inflamed parts in a state of repose, as far as possible. As the bowels are in almost constant motion, unless restrained, such medicine must be administered as will make them either absolutely quiet or sluggish. Opium fulfils this indication. This drug, moreover, has direct influence in checking inflammatory action; consequently, opium by the mouth, the bowel,

* To those who have access to the work preceding this, and entitled *Preservation of Health*, I would strongly recommend the perusal of the long letter in chapter xxii., which gives a sensible woman's views about doctors and hysteria.

and the skin, is, *par excellence*, the remedy for peritonitis. Warm applications are adjuncts to it.

But, and the reservation is important, when opium is used, and even if it is not, there are certain things to be avoided. Sinapisms, turpentine stupes, and blisters, are all prejudicial, for some of these will of themselves produce the disease. Take, for example, a dog or a rabbit, shave its belly, next apply a strong rubefacient or blister, then kill the creature, and look inside; under such circumstances, a patch of inflamed peritoneum is almost certainly to be found corresponding to the blistered surface of the skin. It is as useless to attempt to cure peritonitis by rubefacients, as to repress poverty by fine and imprisonment.

If, then, as is certainly the case, a vesicant to the cuticle is objectionable in this disease, it must, *à fortiori*, be injudicious to apply an irritant to the bowels. If in the one case the acrid matter can find its way through fleshy abdominal walls, perhaps an inch thick, it is nearly certain that a similar material can permeate the wall of the intestinal canal, which is barely the eighth of an inch from one side to the other; consequently, all purgatives and irritating enemata are to be avoided. Whilst I write this, there rises before my mind's eye the case of a young woman, an inmate of King's College Hospital during the time that I was a clinical clerk there. The diagnosis was "peritonitis," the cause of the disease was doubtful. There was some slight constipation; this was the only symptom "tangible." It was treated by pills being given, gradually increasing in acridity until the bowels acted. The symptoms deepened in gravity as the purgatives became more irritating, yet perseverance was the order of the day. At length, the back-door was opened, and soon after-

wards life left the "tenement of clay." The autopsy revealed the fact that the peritonitis was consequent upon abscess of the ovary; that there was no accumulation in the bowels; and the deduction was drawn that every dose of physic had aided the disease.

Let us for a moment moralise upon this, and ask, "Why should doctor and patient so pertinaciously insist upon 'opening the bowels,' when Nature so determinately 'closes' them?" The natural reply is, "that the 'rectum,' by being neglected, may get so full that it cannot naturally empty itself." We grant unreservedly the apparent reasonableness of the reply, but inquire farther, Why should we try and empty that receptacle until we know that it is stuffed; and, if even we know that it contains much, why should we not remove the mass by the aid of warm water enemata, rather than by drastic cathartics? Surely, it is the height of absurdity to prescribe strong medicine to remove an accumulation that has no existence; and surely it is better, when we want the bowels to be quiet, to give our patient opium, than to "rout them out" by any purgative whatever.

We come, then, to the conclusion that the most important elements in the treatment of peritonitis are "peace and quietness," "warmth and comfort." These will not always cure; there is nothing known that will; nevertheless, if the doctor calls in their aid, he may feel certain that he is not assisting death, and hastening the advent of the "undertaker." It is certainly pleasanter, as a general rule, for a man to die of disease, rather than of the doctor; and, speaking as a man, I would rather, if I had peritonitis, sleep my time away, than yell in agony from potion or pill until my last hour struck. I try to do to others as I would be done by.

It has been pointed out to me that the use of opium, or, what I shall try in its place if an opportunity should offer, Chloral Hydrate, is not applicable in the peritonitis arising from uræmia. The objection to it is, that this disease is so liable to produce coma that it is injudicious to increase the tendency to that condition by the use of a narcotic drug. The apparent validity of the objection is not to be disputed. Yet, I have seen great comfort produced by the use of chloroform inhalation in uræmia, and have been so urgently entreated to use it, that I doubt whether a regard for euthanasy would not induce me to forget strict philosophy. Where a physician cannot cure, he can comfort; and it is pleasanter to sink to the grave along a smooth descent, than over one rough with stones, or beset by cruel thorns.

CHAPTER XXIV.

ON DIARRHŒA, DYSENTERY, AND CHOLERA.

Groups of diseases—Diarrhœa and cholera—Rival theories respecting—Parties in medicine—Elimination theory—Pros and cons—Catarrh and opium—Suppuration not a curative process—Astringents and cathartics—Increased secretions, what caused by—Causes of diarrhœa—Diarrhœa diminishes bile—Therapeutics—Drugs—Solid and liquid medicines—Enemata—Astringents—Lead and opium—Diarrhœa in the phthisical—Bismuth—Dysentery—Its nature—Opium—Its *modus operandi*—Preventive measures—Alcohol—Dysentery and fevers—Asiatic cholera—Kill or cure medication to be deprecated.

Although we group these three diseases together, to furnish a text for an essay on Therapeutics, they have in reality very little in common. They are characterised by a relaxed or "open" condition of the bowels, but that symptom, though it exists in all, differs in each. In one case, the discharge is more or less natural, something in excess of one or more elements of the normal fæces; in another, it is bloody, and wholly dissimilar from the usual evacuations; whilst in the third it is enormous in quantity, and very peculiar in quality.

Yet, though diverse, there are points in which the three much resemble each other. Diarrhœa, for example, may be attended by so severe an inflammation of the mucous membrane of the rectum as to give rise to dysenteric symptoms; and

the same complaint may be so violent as to be undistinguishable from epidemic cholera. Indeed, after careful inquiry, it is all but impossible to define the difference in character between the severe diarrhœa, to which the name of English cholera has been given, and that of the Asiatic affection, which occasionally desolates many regions of the world. As far as observation has gone, all that can be said is, that the European disease is very amenable to treatment, whilst the Oriental is implacable.

It would, perhaps, be difficult to discover any ailment for which doctors are consulted which has not been the cause of medical strife. Certainly, diarrhœa and cholera have not formed an exception. Indeed, although controversy respecting them is now in a quiescent state, it is merely slumbering; and will arise again as fiercely, and rage as determinately as it has done before. Nor is the discussion likely to end in any compromise, for the opposite parties place their confidence on such contrary principles that one alone can fairly triumph. As is usual, whenever rivals, or, perhaps we ought to say, friends — for there may be "parties" in medicine, though, as men, the contending factions are personal allies— adopt opposite sides of a question, there is some foundation on which each builds his ideas; some truth patent to all, but differently interpreted by individual observers. To use a familiar illustration, let us recall to mind the case of Mr. Davenport, who, many years ago, was profuse in his liberality towards the Church, and gave away annually many thousand pounds towards the endowment, or erection, of ecclesiastical buildings. Here was a certain fact, and from it many drew the inference that the man must be imbued with an amount of religious fervour far beyond any other mortal; whilst

others, who knew him better, were able to satisfy a jury that he was simply a lunatic, and not responsible for his actions.

The fact mutually agreed upon by the parties contending about diarrhœa and cholera is, that in both the discharge is more or less irritating; and, occasionally, productive of a like effect on a healthy person, if, by any means, *e.g.*, inefficient sewage, a portion should enter his body in the water which he drinks. From this, two distinct theories have arisen—the one that the discharge is the result of an "effort of nature" to expel a poison, consequently that the symptom is to be encouraged, until the whole is eliminated; the other, that the discharge is a necessary effect of an irritant, and that the system should be assisted to bear the poison, rather than be goaded by medicaments equally irritating. As variants of the above, the first asserts that the removal of the secreted matters, which are themselves irritants, is a salutary measure; the second asserts that such removal *per se* does not suffice to effect, or even to promote a cure, and that those cases do not the most certainly get well in whom the discharge is the most excessive; on the other hand, that the danger is generally to be measured by the quantity of the material evacuated.

The arguments made use of to support the first theory are drawn mainly from small-pox, in which the symptoms are relieved when the eruption first appears. But even this observation is nullified by the fact that variola is severe or mild, according to the extent of the pustulation; and that treatment based upon the procuration of a profuse eruption, after inoculation, was very fatal; whilst that which aimed at reducing the pocks to a minimum was peculiarly successful.

The arguments made use of in support of the second theory are based upon the influence of opium in such diseases as catarrh. Look, those who use them say, at yonder patient who has coryza; his nose is "running" perpetually, and he snorts repeatedly; by dint of the use of a handkerchief, and sneezing, he removes a vast amount of mucus, yet the nostrils are no better; indeed, you may see that even his eyes have begun to water, and the conjunctiva weeps like the nasal membrane; we see, moreover, that his upper lip is swelled, sore, and inflamed by the irritating discharge. Surely, if all these symptoms be an effort of nature to expel a poison, the more abundant the secretion, the sooner should the patient be well. Yet it is not so.

Still further, if we are facetious or philosophical enough to induce the patient to take a pinch of snuff, so as to increase the discharge, or make the system more energetic in blowing the objectionable stuff away, is there any relief therefrom? Clearly not, for the distress is greatly aggravated. Let us now — and in this I speak from prolonged experience — give the sufferer a dose of opium. In twenty minutes the discharge ceases, the nostrils are dry, the eyes no longer water, the sneezing is at an end. If, instead of using the anodyne generally it is used locally as snuff, a similar result follows. There is an immediate aggravation of the symptoms, while the powdered opium acts mechanically as an irritant, but subsequent improvement follows as soon as the drug begins to act medicinally.

We do not, however, mean to declare that the patient is cured by the opiate. By no means: catarrh will, like many other diseases, run its natural career in spite of drugs. We believe that the sneezer such as we have described would get

well in time without anything. All we wish to assert is, that if we can relieve him for many hours at a time, until the course of the coryza is run, we have done well. To paraphrase a well known saying, we endeavour to make the patient as comfortable as possible whilst nature is effecting the cure.

We might indefinitely multiply our illustrations to show that the most philosophical as well as the most successful practice is one which endeavours to diminish too profuse secretions, rather than to increase them; but we content ourselves with one that speaks to the eye of the surgeon. We see a large sore, the result of hospital gangrene; it secretes pus in vast quantities, and so long as it is open it will form a fluid which may act as a poison, and produce a similar disease in others. I have been almost appalled by the flood of matter which has followed the removal of a linseed poultice from such a granulating surface. To encourage the flow may be said to promote "elimination," but it certainly encourages the advance of death. To check it, we cover the sore with dry lint, or cotton wool; and in less than twenty-four hours, no flow of pus is to be seen, and the patient is sensibly better. But though our new plan of dressing operates well, we do not therefore leave the lint unchanged. On the contrary, we renew it daily, until nature has effected the cure. In like manner, we renew our medicaments internally, for the relief of other discharges, until the constitution has righted itself.

Having thus stated, and pretty fairly, as we believe, the two sides of the question, as to the best method of treating profuse discharges from the body, the reader will naturally conclude that our opinion favours the plan of medication

which has a direct tendency to diminish the secreting propensity of the various membranes; or, to speak more particularly, we give more credit to what are called "astringents," in the treatment of diarrhœa, than to "aperients," or "cathartics."

Before we go farther, however, into the question, we must call our reader's attention to a subject, upon which, perchance, he has never thought before; and point out to him that the most common cause of increased secretion is diminished vitality. The assertion almost seems a paradox,* but its truth is readily recognised. A few examples suffice to demonstrate it. A patient dying of apoplexy has cold sweats, and an enormous amount of mucus in the throat; with dying comes 'the death rattle.' The failing consumptive complains of night-sweats, and diarrhœa; the feeble child has a "snotty" nose, and dies of diarrhœa; sickly youths have a more profuse discharge in gonorrhœa than the strong; and delicate women suffer more from "whites" than the robust. Old men have bronchorrhœa, from which the young seldom, if ever, suffer. If a patient has bronchitis, antimony will increase the secretion from the lungs and skin, whilst, on the other hand, steel and stimulants will diminish it. As the sweating from the skin in phthisis is best prevented by improving the patient's general health; so the diarrhœa arising from a corresponding cause is checked by a similar plan. Hence, perhaps, it is that brandy has a character for relieving relaxation of the bowels. Hence, also, we can understand how warm milk, with a due proportion of alcohol,

* This subject, and the important deductions which follow it, are discussed at length in my book entitled *Foundation for a New Theory and Practice of Medicine.*

combined with rest in bed, has proved more efficacious than any other remedy, except opium, in the relief of diarrhœa. Opium, the friend of the aged, the favourite of the bloodless, the darling of the doctors, we must refer to at length by-and-bye.

It would be preposterous for me, in an essay of limited length, to enter into all the various causes of diarrhœa, and to endeavour to lay down the means by which any one form can be unerringly identified. With all the modern appliances of physiology, chemistry, or the like, I doubt whether there is any physician who can say what is the cause of every case that comes before him. It is true that he may say, *ex cathedrâ*, this is bilious diarrhœa, and that arises from an absence of the liver secretion; but if I were to cross-examine such an one, and ask for proofs, I should find none. The utmost he could say would be, that, in the medical mind generally, such and such appearances are supposed to indicate bilious diarrhœa, and he imagines that the many must be right.

We do not assert that such an occurrence never happens, for we believe that it does, upon rare occasions; but, as a general rule, we aver that diarrhœa and an increased flow of bile are incompatible. Sometimes there seems to be a condition of things in which the liver secretes an enormous amount of bile, deluging both the stomach and bowels, and then there is certainly purging; but when this state of matters is not present, the diminution of the intestinal blood, consequent upon increased secretion, must both diminish the quantity and impoverish the quality of the blood flowing to the liver through the *vena portæ*, and, consequently, curtail the secretion drawn therefrom.

Be this as it may, we are convinced, in spite of all quasi-philosophical treatises, that the treatment required for diarrhœa has been deduced more from empiricism than by any other plan, and that a system of trial of various drugs still supersedes the profoundest physiological theories. We may assert that ordinary diarrhœa has, of itself, a tendency to get well, just in the same way as coryza, catarrh, and the mumps have; that the period for spontaneous cure is less than about three days; and that, if it exceeds that period, each doctor has recourse to some favourite prescription in which he has faith; and, if this be unsuccessful, he adopts another and another, according to his general belief in their value.

In the empirical arrangement of remedies, the conclusion to which we have arrived is, that solid medicines are more efficacious than fluid, and that enemata are as important as drugs taken by the mouth. For routine practice—especially with children—we prefer an injection of laudanum, with tincture of the sesquichloride of iron and warm water, twice a day, to every other means. It is equally efficacious with adults. When patients dislike enemas, our favourite combination is sugar of lead and opium, whose operation is usually marvellous, both as regards the rapidity and the completeness of the cure.

The case in which I first adopted this combination deserves record. Whilst yet a beardless apprentice boy, I was sent, at five o'clock one morning, to see a poor woman who was said to have cholera. Having been recently perusing some report about it, and the value of lead and opium pills, I made up, ere I left the house, a boxful, probably six dozen. With these in my pocket, the patient was visited. She had

been terribly purged, and the vomiting was very severe; the evacuations resembled rice water, and the rinsings of a cold paste jar; the limbs were racked with spasms; the voice was feeble and curious; and death seemed imminent. I gave a pill at once, and ordered a second to be taken in two hours; then left, promising to call soon, or send the "master." On his declining to go, I went again in the afternoon, with all the enthusiasm of a lad, and found my patient all but well. The pills I left behind me. There for a time the affair ended. Some twenty years afterwards, the postman delivered to me an illiterate scrawl, penned to bring the writer to my mind, to tell me how the pills had been used only in very bad cases; how my quondam patient had become a bit of a doctor on the faith of them; that the last had been expended; and that the quondam patient would be grateful for more. Not having the fear of man before my eyes, I sent her a prescription, and doubt not that she enjoys a reputation in a certain part of Proud Preston equal to that of any female M. D.

For common domestic use a teaspoonful of 'aromatic confection,' with an equal quantity of brandy and a wineglassful of water, is the preparation preferred amongst the members of my household.

In those distressing cases where purging takes the place of the usual form of consumption, I have been baffled. Whether called in to manage the case alone, or in consultation, I cannot say that success has ever followed my efforts. Such patients have, I know, sometimes got well; but medicine has had no pretensions for saying that it has been the curative agent.

There is yet one drug to which I would advert, and I may

as well tell what I wish to say in the form of a narrative. A lad, about ten years old, was brought to me by an aunt — his mother being dead, and his father absent—who informed me that he suffered much from diarrhœa, and was emaciating visibly; that he would not try any domestic remedy; was an obstinate fellow, and determined to take no physic. The problem was to find something to fulfil the indications. After duly sending the lad to another room, I recommended the lady to get some 'white bismuth,' and give it to the cook, telling her to mix a large pinch of it with some of the butter used at meal times, and to send in the bread and butter so arranged that the lady would know which was for the boy. This was done. The lad was duly drugged without his knowledge, and the diarrhœa stopped in two days.

As we may say, generally, that diarrhœa is an increased intestinal discharge without ulceration of the bowels, so we may aver that the essential character of dysentery is ulceration of the mucous membrane of the colon. As a rule, to which, however, there are many apparent exceptions, it is produced by the same cause as yellow fever. A boat's crew, for example, may be told off for night duty in an African river, and on their return on board, half will have dysentery, and the other half fever. There are, in the first place, signs of severe pyrexia, which indicate destructive or gangrenous inflammation of the mucous membrane of the large bowel; and this is followed by a copious, almost incessant, discharge, of a curious looking matter, which is passed with severe suffering. The patient becomes weakened by the destruction of tissue and subsequent suppuration, and may die, either from the disease extending through the bowel, and permitting the contents of the intestinal canal to pass

into the peritoneum, from the occurrence of abscess of the liver, or from gradual exhaustion. I know of no other disease in which there is such excessive emaciation as in chronic dysentery.

The nature of dysentery, as regards its pathological condition, is pretty well known, but doctors are no nearer thereby to a certain plan of cure. Theory would say, As the complaint has a similar origin to that of yellow fever, the same plan of treatment which suits the one, should fit the other. The argument seems good, but experience does not endorse it. Quinine and arsenic, the sheet anchors in the management of what are called paludal diseases generally, are useless in this. Indeed, I do not know any remedy, discovered by theoretical reason or philosophical deduction, that proves upon practice to be of any value. After labouring diligently amongst the records of past observers, and having had no mean opportunities of studying the matter for myself, I have come to the conclusion that no medicine is equal in value to opium for the cure of dysentery. Other drugs called astringent may be tried; and some may occasionally seem serviceable, but all disappoint us in the long run. Opium certainly fails repeatedly — all medicines do in some diseases; yet its failures are comparatively few.

Let us now for a moment inquire into the real therapeutical value of the drug which we thus eulogise. Of its power over the nevous system, none can doubt. The limb of a frog, imbued with a strong infusion of opium, does not react upon the application of an irritant as it would do if not so treated. Under the influence of opium, inflammation is deprived of much of its sting. An opiate gargle will do more than any other to cure sore throat; and for an ulcer in the

leg no dressing is equal to laudanum and water. Opium diminishes secretion when it is excessive; it promotes quiet; and, in appropriate doses, it acts as a tonic. In dysentery we want a drug which shall promote cicatrisation of ulcers, check secretion, and support life. The drain of dysentery is equivalent to the drain of blood in a flooding woman. Opium, better than any other medicament, fulfils all these indications; I know no other material which does. The routine treatment of dysentery, therefore, should be, in my opinion, a diet of warm bread and milk, with an appropriate supply of rum or brandy therewith, and regular doses of opium every four hours. The quantity required in each case must be regulated by the effects of the medicine on the constitution. It should be short of narcotism.

Where the doctor cannot cure, he endeavours to prevent; and it is pleasant to know that medical acumen has materially checked the ravages of dysentery in our troops serving in miasmatic regions. Salt rations were found to favour its onset; whilst fresh provisions were found to be its foe. Hence the law has been deduced, that those who are obliged to dwell in paludal* districts, should endeavour to maintain themselves not merely in health, but in as high a state of constitutional salubrity as it is possible to attain. There is not any medicinal prophylactic; but good, ample, digestible diet, a due amount of alcoholic stimulants, and an adequate care of oneself, are excellent hygienic remedies.

* Dr. Oldham, an Indian army surgeon, a rare observer, an indefatigable reader, and a close reasoner, has recently published the most important book which exists in any language, on the subject of what have been called paludal diseases. The work is entitled, *What is Malaria?* Lewis: London; and externally is very unpretending. I strongly urge every philosophical physician to read it.

Here I would endeavour to anticipate any attack, and disarm such opponents as would regard me as an enemy to medical science, by recommending the use of alcohol in dysentery. Remembering what has been already said about the probably identical cause of the disease in question and feverish ague, let me recommend my readers to peruse the observations made by Sir S. Baker, in his journey to and from the Albert Nyanza. Worn with fever, he and his wife lay in an African village, and were all but powerless to move. Without quinine or any drug wherewith to combat the effects of climate, their health was well nigh destroyed; and death seemed more or less imminent. At this juncture, the adventurous explorer contrived to make whisky from sweet potatoes. He drank it, and gave some also to his wife, and she did drink; and—hear it, ye teetotallers, who talk much stuff about the uselessness of alcohol, even as a medicine,—both were cured at once, and completely. The natives soon learned the art; and who dare aver that so potent an ally of the white man must, under all circumstances, be a curse upon the black? For myself, I have a profound contempt for the reasoning which asserts that wine must be bad because some folks drink it to intoxication. We might as well vote every romance, built upon the ardent affection which so often exists between man and woman, as wicked, because, on some occasions, or in some tales, people are represented to have loved, not wisely, but too well.

We have left small space for our observations on Asiatic cholera, nor have we acted thus unwittingly. If there is little to be said, a corner of a sheet suffices. Where so many previous writers have exhausted the subject, and no new matter has accrued, all that an author can profess to do, is

to sum up the evidence and announce his own conclusions. Mine are as follows :—Epidemic cholera spreads in more ways than one. It is certainly contagious, though not so much so as typhus. To a great extent, it follows the same laws as the plague. When it has recently come upon a community, its severity is greater than after a period. During its invasion, no treatment can be said to avail ; during its retreat, all remedies seem successful. Of the true nature of the presumed poison which produces it, and of the *modus operandi* by which that poison causes death, I believe, in spite of all treatises to the contrary, we are ignorant. There is not, so far as I have been able to observe, any certain means of cure. After much reading, observation and thought, I have come to the conclusion that cholera is best guarded against by obviating diarrhœa ; and whenever it invades my own person, I have resolved to use no other means of cure than copious draughts of cold water. *Parturiunt montes, nascetur ridiculus mus.* But when Etna is in labour or Vesuvius in its throes, the people below would rather see a small stone than a torrent of lava, or a rain of boiling water or ashes. In like manner, a harmless remedy, and one which experience has endorsed, is better than a fiercely heroic treatment, that is as likely to kill as to cure.

CHAPTER XXIV.

ON DIABETES.

Classification of diseases—Curable and incurable—What diabetes is—insipid, sugary—Effect of fright—The "funking-room," hysteria—Saccharine urine—Liver a tit-bit, why—Liver and sweet stuff—Influence of nervous system—Allopathy—Applied to diabetes—Opium—Diet—Empiricism—Cod Oil—Experience.

When a physician chooses to occupy his attention in classifying diseases in a variety of ways, and upon plans entirely personal to himself, at one time he divides them into those which he loves to treat, and those that he detests to grapple with; at another, the lists are made up of the complaints which will get well of themselves, and others that have no tendency to spontaneous cure; at another time the doctor will separate his cases into those which he can generally manage, those that he can remedy sometimes, and those which he can never cure. Occasionally, when in a reflective mood, he may select, as his first class, some of which the medical profession may be proud, and, as the second, those which give no credit to the mediciner. Into which of all these *genera* of diseases must we put diabetes?

It is far easier, in a general way, to ask a question than to find a satisfactory reply. It is certainly so in this case. The Profession has reason to feel pride in the researches which have been made in the pathology of this complaint;

it has also reason to applaud itself for having discovered plans of treatment that seem to have removed diabetes from the category of incurable diseases, into one wherein cures are frequent, and often complete. Yet, after all, it is doubtful whether we should deserve as much credit as we take, if we could discover the practice of many an ancient medical flower, that has wasted its fragrance on the desert air, or, in other words, has deserved well, but left no writings behind. My earliest recollection of the disease in question dates about thirty-six years ago, when, in rummaging the drawers of my uncle, ere yet I had become apprenticed, I found a small note book, in which, amongst others, a case of diabetes was detailed. Being of an enquiring turn, I eagerly asked about the nature of the complaint, and its treatment; and then heard from the doctor an account of both, which did not materially differ from that which I read to-day.

When we endeavour to investigate the disease called diabetes, which signifies an unnatural and excessive flow of urine, we find that there are two varieties, one in which the water is not much denser than that drawn from wells, and another wherein it resembles a moderately strong solution of sugar. The first, of which comparatively little is known, is rarely treated of systematically. The second, which is medically curious, has received unusual attention. We may say a few words upon each.

The first variety, which goes by the name of diabetes *insipidus*, has generally been supposed to depend upon some disease of the kidney; but of this there is no proof. That it occasionally depends upon a peculiar condition of the body, and especially of the nervous system, there is abundant

evidence. For example, the late Mr. Abernethy, in one of his lectures, relates the case of a young and healthy woman, who, whilst passing over Blackfriars Bridge, was assaulted by a broad-horned ox. In alarm, she fled into one of the angles, and there remained in an agony of terror until the infuriated animal was driven away. She then, he says, began to piddle, and continued doing so until she was as thin as a whipping-post.

In this case there can be little doubt that fright was the cause of the phenomenon. We can the better believe this when we find that a similar cause frequently operates in the same way. Whilst I was myself undergoing the mental miseries of the "funking room," at the London College of Surgeons, my attention was insensibly drawn to a young man, whose visits to the corner were extremely frequent. He alone, of all the company then assembled, used the utensil, and when, after a brief absence, he returned to us again, pallid of hue, with a staggering gait, and a falling jaw that scarcely uttered aloud the word "plucked," it was clear that his previous emotion had been extreme. It so happened that I was summoned before the examiners last of all; and I took the opportunity of being alone, to investigate whether the unfortunate student's nervousness had produced an unusual flow of urine, or simply a frequent desire to empty the bladder. I found the vessel — a large one — almost full of what seemed to the eye to be pure water.

If, now, we compare this with the phenomenon of what is called a fit of hysterics, in which, after more or less violence, a woman urinates, and very often lachrymates* excessively,

* I do not use this word pedantically. If, in its place, I had said *cries*, the meaning would have been doubtful; for crying and cries may mean shouting and shouts.

we shall recognise the fact that a peculiar condition of the nervous system will provoke excessive discharge of watery urine. Still farther, by carrying our observations backwards, we may say, as fright, a very depressing mental emotion, produces profuse urination, and an hysterical attack does so too, there is something in common between the two; and a woman recovering from, or about to fall into, a fit of hysterics, cannot be regarded as one whose health is high. Indeed, if any evidence were needed to show that these fits depend upon a very exhausted, or otherwise depressed, condition of the nerves, we should find it in the symptom which we describe.

But aqueous diabetes does not always depend upon fright and upon hysteria, although there is reason to believe that it may depend upon a nervous system impoverished by one cause or another. In the only case of this disease which I have seen in a man, there was nothing to which it could be ascribed beyond sheer debility. Though the patient was under my care for some weeks, I could not trace the origin of the complaint, discover anything organically wrong in any of the organs, or make any impression upon it by hygiene, diet, or medicines. The man, I was told, gradually sank and died, without any subsequent *post-mortem* examination being made.

In saccharine diabetes, or *diabetes mellitus*, the symptoms are that the patient passes an enormous quantity of urine of a deep colour, containing the usual ingredients *plus* a very large amount of sugar. Two gallons or more of the fluid is not an uncommon daily discharge, and this contains, perhaps, a pound of sugar. If left alone, this fluid will ferment, and the curious chemist may extract "spirits of wine" from a

diabetic "Jordan." When this disease is present, there are, in the first place, preternatural appetite and thirst to compensate for the enormous drain; but, notwithstanding these, the patient, in the second place, complains of debility, and there is progressive emaciation. Into the curiosities of this complaint it is unnecessary to enter.

When we endeavour to investigate upon what the saccharine condition of the urine depends, we find ourselves much in the same position as the intelligent urchin was, when he inquired of some one, "Why they rang the bells?" and was told, "Because they pull the ropes." "But why do they pull the ropes and ring the bells?" "Because there 's a wedding." "But why do they ring because there 's a wedding?" "Because it 's a sign of joy." "Then why do they ring at funerals?" &c., &c.

Thus, if a young student inquires, "Why such an one passes so much sugar," he learns that there is so much sugar to pass. "Why, then," he perseveres, "is there so much sugar to pass?" Here the professor looks wise, perhaps, and says, "Young man, you must know, from your gastronomic experiences, that the liver of an animal is a titbit,*

* Few, if any, of the accounts of real adventures in Australia, have made a deeper impression upon my memory than the detailed confession of a bushranger. He, with another man equally daring, escaped from a penal settlement into the wilderness; but, failing in the discovery of food, and unable to rob settlers, the two began to suffer from hunger. Each looked upon the other as so much meat; and both feared to sleep. As they were equal in physical strength, they did not fight. But the power of resisting fatigue and sleep was unequal, and one could not keep awake. He was killed; and the survivor began his feast by devouring the liver. For a time, the cannibal escaped, and the folk, in a wide extent of country, became horrified by finding many persons dead, each of whose livers had been cut out. After great exertions, the guilty man was tracked and found asleep, with a portion of the favourite morsel, taken from the last victim, uneaten, in his hand. Captured, as it were, *in flagrante delicto*, he con-

it is sweet; and livers, when they are alive, form, in some way or another, a material which becomes sugar when they are dead, or when they are exposed to the atmosphere. The liver pretty regularly forms this stuff, which the learned call glycogen, and the product goes into the blood, then to the heart, then to the lungs, and then what becomes of it nobody knows. Some facetious person declares that it passes into "manners," and that a person of great "sweetness of disposition" has an unusually large amount of sugar made by his liver; and thus it is that, when a man is cross, or, as it is often said, has a sour temper, the doctor is sure to say that "he is bilious," or that "his liver is all wrong."

But this is only an absurd bit of fun. As we do not know what ordinarily becomes of the hepatic sugar, so we cannot tell by what mischance it is that, not being consumed as usual, it passes on to the kidneys, and through them escapes from the system like steam from a leak in a cylinder.

We are still further bothered by the fact that we do not know whether we must believe that the liver makes too much of the raw material, or the corporeal manufacturer uses up less than usual. It may be that the liver secretes double or treble the common amount of glycogen; if so, diabetes may be called an hepatic disease; or it may be that the constitution does not assimilate it properly, and then we must say that the complaint is a systemic one.

In favour of the former, we can compare the liver, in

fessed his crimes; and his observation was, "That the liver of his first companion was so delicious that, even when he had plenty of food, he had murdered perfect strangers solely with the view of renewing the feast." The authorities, disbelieving him, tested the truth of his confession, and found, to their surprise, that it was true. It is, I believe, more than thirty years since I read the account, and I have no recollection of the "authority."

saccharine diabetes, to the kidneys in the insipid variety, and say that it is something wrong with the nerves which makes the hepatic secretion enormous. In aid of this, we may advance the observation that mental emotion will sometimes materially influence the biliary secretion; that an injury to the brain will also affect the liver, and that diabetes is often brought on by a sudden shock to the nervous system,* and by certain lesions of the intercranial mass. Granting, then, as we must do, that some altered condition of the nerves, &c., may act upon the liver in one case, as it does upon the kidneys in another, we have next to inquire into that mysterious something which we have called "an altered condition." Here we touch upon the unknown. Whether we shall ever penetrate beyond, who dares to decide?

* By far the most intelligent patient whom I ever had under my care for glycosuria, was an American, who came into the Liverpool Northern Hospital whilst I was physician there. No one could have seconded my desire for information better than he did. He not only submitted to be closely cross-examined, but seemed to regard the process as a proof that I was anxious to do him good. He attributed the disease, and probably correctly, to falling overboard his ship, when the water around it was covered with ice. Prior to this, he had been concerned in the rescue of a crew from a sinking steamer; and, being a noble fellow, had given up his berth to some miserable survivor, who was worse off than himself. From the day of his own deliverance from marine peril, he had begun to droop; his hair came off in handfuls, his strength failed, his flesh withered, and his urine increased excessively. For such a man, I ransacked every pigeon-hole of medical skill that was known to me. But the constant report ran: "Every new thing that you recommend does me good for two days and no more." At length, and very much like Killbuck spoke to La Bonté (see Ruxton's *Life in the Far West*), he said, "The only thing that I have any faith in is raw meat." But this did not cure him, and his last remark to me was, "Well, doctor, I 'm going to die, and I 'd like to die at home; I 'm sure you 've done your best, and I am grateful for it; I sail for the States to-morrow." He was dying with *diabetes mellitus* of "decline," as I once saw a woman do whose urine was normal.

Leaving, now, the mysterious cause of glycosuria, let us confine our attention to the strict analogy that exists between an excessive flow of urine from the kidneys in insipid diabetes, of mucus from the bowels in diarrhœa, from the stomach in waterbrash, and of blood from the womb in menorrhagia, and inquire upon what principle we endeavour to treat these complaints.

Without fear of contradiction, we may assert, that whenever a doctor meets with a disease, he endeavours to remove the cause thereof; and if no known source can be discovered, he administers such drugs as he knows to produce effects contrary to those attributed to the disease. Somnolence, for example, is treated by infusion of green tea, and wakefulness by food or opiates. If there be, from any organ, an excessive flow, and the physician knows a remedy, whose effect is to diminish production from such a part, he naturally uses it. He can no more tell why in epidemic diarrhœa there shall be purging, than why opium checks secretion. That it does so, is enough for him.

Whenever there is reason to believe that the liver is forming either more bile or more glycogen than is compatible with the patient's health, opium, which materially influences the secretion of that organ, is the remedy *par excellence*. Opium is the oldest, and it is yet the most reliable drug in the management of diabetes. As gunpowder was invented long before the reason of its explosive power was discovered (even if it is yet), so the value of the gum in question was known long before Bernard and Pavey told us of the probable connection between saccharine diabetes and the liver.

After long observation, and many differential experiments,

I have come to the conclusion that the most satisfactory routine treatment of the disease we speak of, is large doses of opium, and some such tonic as quinine or steel.

But it will naturally be inquired whether no stress is to be laid upon cutting off the supplies, diminishing or wholly excluding such articles of diet as bread and other materials, from which sugar can be formed in the laboratory and in the body. Surely, it may be said, with the results recorded by observers proving the influence of a restricted diet upon the flow of urine, you would surely adopt such a plan! In reply, much may be said. Let us, for example, in rejoinder, ask the querist, Whether, in dropsy, he prohibits drink? whether, in diarrhœa, he enjoins starvation? and whether, now, he practises venesection to relieve hæmoptysis and menorrhagia? I trow not. Yet, such a plan is quite as rational as cutting off certain supplies in diabetes. The effect is simply to diminish the outflow by reducing the influx; the disease itself is wholly uninfluenced thereby. Such a diet, instead of assisting the system to repair damages, prevents its doing so, by depriving it of the materials that it has been accustomed to assimilate. The plan is, to my mind, unsound, though *quasi* scientific.

In this disease, it is to be confessed that empiricism carries the day against pathological philosophy. As an empiric, I have investigated the real value of every plan of treatment hitherto propounded, and have come to the conclusion that the most valuable of them all may be thus summed up. In mild cases, full doses of creosote will suffice to cure. In more severe examples of the disease, the patient must be kept comfortably warm, may eat and drink as he likes, but must take regularly as much opium, with or without a tonic, as

he can manage without being narcotised. Under such management, I have seen so many bad cases recover, and I have so frequently compared this with other plans in the same individuals, that it will require much to shake my faith in the value of the course proposed.

That the conclusion is not brilliant, that my philosophy is meagre, that my apparent contempt for *quasi* scientific remedies is great, I readily allow; but, metaphorically, I turn first one and then another cheek to the smiter, and go on my way unheedingly.

It has been noticed, and I gladly acknowledge the criticism, that, in the list of remedies above referred to, no mention is made of Cod Oil. The reason for the omission has been the desire on my part to save the reader from having to wade through a barren waste of names or words. It was stated in the original essay that many differential experiments had been tried. Amongst the medicinal and dietetic remedies employed were "everything commonly spoken of as tonics." Amongst these, my greatest hopes centred originally around Cod Liver Oil. As a matter of duty, I have recommended it in every case which has been under my care. But it has uniformly disappointed me.

Many years ago, I delivered an address, having for its text the words *Experientia docet*—does it? As it was out of print, I have recently issued it as an appendix to a new edition of my work *On the Preservation of Health*. In it, I tried to call attention to the fact that the "Experience" of those who lay claim to the title of "Philosophical Physicians" is not uniform. Consequently, an effort should be made to discover the reason of this. In a succeeding chapter, on Acute Rheumatism, it will be seen how my own

experience has varied in the same town. I cannot yet find out why. When, therefore, I assert that Cod Liver Oil has not, in my hands, done manifest good in glycosuria, I certainly do not aver that it has been equally disappointing in the practice of others.

CHAPTER XXV.

ON DROPSY.

Rev. Rowland Hill—An author's dilemma—Some forms of dropsy incurable—What dropsy is—Various names for different forms—A disease or a symptom—Causes of dropsy—Œdema—Case—Cirrhosis—Curability, and the reverse treatment—Appropriate tonics—Scarlatina—Dropsy from sudden chill—Influence of bleeding—Diuretics—Dandelion—Gin—Ovarian Dropsy—'Anasarca'—Puncture—Needle to be used described—Danger—Critics answered.

On one occasion, when a vast congregation, sweltering all together on a summer day, were eagerly waiting for the celebrated Rev. Rowland Hill to give out the text of his discourse, they saw him wipe his face with a kerchief, and heard him say, "It's damned hot!" a sentence he repeated twice. This caused a profound sensation, and a deeper one yet was felt when he said, "These were the words that first struck my ears when I entered this place of worship." Then followed a scathing reproof of profanity in general. Now, when I consulted my memorandum, to find what was to be the subject of my next essay, and found it to be dropsy, the first words that came to my mind were, "And I lost a patient from it yesterday." How, thought I, dare a physician compose an essay on the subject of the restoration of health, with his hands yet unclean, as it were, from signing a certificate of death from the disease which he professes to show others

how to cure. Surely, such seems almost as incongruous as beginning a sermon with a curse.

But, on second thoughts, it must be evident to all that there are diseases which inevitably baffle a doctor's skill; and that he must be a faint-hearted physician who would not try to cure some, because one of his clients had died. Nevertheless, it is sometimes hard work to keep up a good fight when one is often beaten, and to encourage each other with hope when the prevalent feeling is despair. Speaking for myself, I believe that there are some forms of dropsy wholly incurable by medical skill; and if we were always certain that a given case before us was in this category, it would be questionable how far the patient should be tormented by the doctor; but as there are some forms of the complaint amenable to treatment, we generally feel a hope that each person who complains to us of having the disease in question is not absolutely doomed.

This consideration naturally induces us to examine what dropsy is, and upon what causes it depends. Strictly speaking, it consists of the presence of a large quantity of water, technically called 'serum,' and closely resembling diluted white of egg, in parts where none, or only very small quantities, naturally exist. We find this accumulation in the head, in the brain, in the face, in the eye, in the chest, in the abdomen, in the ovary, and in the limbs; in fact, there is scarcely a part of the body not liable to be affected with aqueous distension to a greater or less degree. Doctors, however, do not generally apply the word indiscriminately, for, being desirous of precision, they have names for different varieties; for example, dropsy of the brain is 'hydrocephalus,' of the chest is 'hydrothorax,' of the pericardium,

'hydropericardium,' which are simply Greek varieties of the vulgar English; then they have the name 'ascites' for serous accumulation in the abdomen, depending upon a faulty liver; 'ovarian dropsy' is the name given to the same occurrence if it is caused by a diseased ovary; 'anasarca' is the term given to general, and 'œdema' that which is applied to local, dropsy.

When the physician reviews these, he very naturally inquires whether the affection spoken of is really a disease in itself, or simply the symptom of some other complaint. The significance of this question is soon recognised, if, instead of an apparent increase of bulk, we find a great diminution. Is "thinness," or emaciation, a disease? Clearly not, is the reply. It may depend upon dysentery, consumption, or simple starvation. Exactly so. Well, then, we rejoin, it is clear that if you inflate the skin, as butchers sometimes are said to blow up oxen, in order to make them look fat, and thus make a patient seem to be lusty, you have not cured him of the disease that pulled him down. In like manner, if dropsy be the result of some affection of the kidneys, or other part, you do not cure your patient, even though you can make him as thin as as a knitting needle.

Practically, then, we may associate together too much water, and too little fat, and say that neither the one nor the other are diseases *per se*, but are symptoms of some different affection existing in other parts. We, therefore, no more can expect to cure a patient of dropsy by evacuating the superfluous water from the skin, than we can cure a consumptive by injecting oil into his "cellular tissue."

All this seems very plain when it is thus stated; nevertheless, in practice, both doctors and patients too often direct

their attention solely to the serous distension, and imagine that the removal of the water is all that is to be sought for. We are not astonished at the victims of anasarca thinking that they would be well, if all the superfluous fluid were to be drained off; for the bulk of the limbs is painful, the stretching of the skin is distressing, and the size of the legs almost prohibits locomotion, whilst the presence of water in the belly and chest makes respiration difficult and laborious. We are, however, sometimes surprised to find physicians directing their attention solely to the symptom in question, and endeavouring to remove it by a plan of treatment likely to aggravate the real disease.

If, now, we investigate the causes of dropsy, we are obliged to confess ourselves frequently nonplussed. We can say that 'water in the head' is associated with the strumous, scrofulous, or tubercular diathesis; that 'hydrothorax' is a common attendant upon the same constitution; that 'ascites' may be dependent upon tubercular peritonitis; that 'hydropericardium' may be the result of feebleness in old age; that no one knows why an ovary should become turgid with fluid, nor why, in a certain disease of the liver, the belly fills with serum. We see that, in some cases of diseased heart, dropsy occurs; but that in others, of a similar nature, the symptom is absent. We know that, occasionally, 'anasarca' will come on after great losses of blood; that it commonly attends certain diseases of the kidneys; that 'œdema' may come on from an obstruction to the flow of venous blood; yet we are equally certain that very considerable obstruction may ensue, as in 'phlegmasia dolens,' without there being dropsy even locally.

Again, we repeatedly see 'œdema,' and sometimes to an

enormous extent, associated with a local abscess, though only for a time. To give an example, let me state that a man one day entered the Liverpool Northern Hospital under my care, suffering from enormous serous distension of one leg. Unable to find a cause, I simply ordered him to bed; and next day found the turgescence confined to one spot. An exploring needle then discovered an abscess at the back of the central part of the tibia; and, the matter being evacuated, the swelling subsided. At the same time, another patient had serous swelling of the right side, apparently dependent upon abscess of the liver, from which, indeed, he shortly died.

Again, we know that dropsy is very often accompanied with disease of the kidneys, in which case the urine is commonly albuminous. Hence, the physician is apt to associate the one symptom with the other; but in point of fact, we may, and repeatedly do, find that there is albuminous urine without dropsy, and 'anasarca,' with disease of the kidneys, in which the urine is not albuminous. In addition to other facts known, experience has taught us that dropsy, dependent upon diseased kidneys, usually begins in the face, and in the upper eyelids especially; whilst that caused by cardiac affections is first found in the ankles. We find, also, that a bad tooth, or an attack of tic-douloureux, will swell the face as much, if not more, than renal disease.

I doubt—although much has been written upon the subject—whether we have any definite knowledge upon what condition the unnatural increase of serum proximately depends. The nearest approach that we can make to it is that, in almost every case of dropsy, except in that arising from diseased ovary, there is an impoverished condition of the blood. In cases of cirrhosis, the cause assigned for the

ascites is usually "obstruction of the venous current through the liver;" but this we believe to be untenable—1st, because, if there be obstruction, the amount of blood seeking passage is reduced in consequence of the patient's emaciation; 2nd, because venous congestion of the intestinal coats is absent; and 3rd, because there is no evidence of any obstruction at all. As serous expansion of the back of the hands frequently attends cancer of the stomach, without there being any obstruction in the brachial veins; and as there may be 'œdema' of the leg from an abscess below the periosteum of the tibia without obstruction in the crural bloodvessels; so we believe there may be effusion of fluid into the peritoneum, without there being any blockade in the *vena portæ*.

When, leaving these difficulties aside, we endeavour to arrange our knowledge, we are disposed to divide dropsical cases into those in which the symptom depends upon *(a)* curable, and *(b)* incurable, conditions or diseases. In the first category, we should place dropsy from simple debility, loss of blood, mild forms of disease of the heart, sudden chill, scarlet fever, and certain recent diseases of the kidney. To these we may add the ovarian form, solely because it is amenable to treatment by surgical operation. Into the second category, we should put dropsy from old organic disease of the kidneys, of the liver, and of the heart.

Having now cleared the way for a farther advance, let us ask ourselves, What is the most appropriate method of treating patients who have aqueous distension from any removable or curable condition? We can see our way very readily in those cases where the patient is simply weak; for nothing can be easier to understand than that our duty is to attempt to restore the constitutional powers of the individual, by

rest of body, good diet, pure air, warmth, and appropriate tonics.*

But where there is, for example, scarlet fever, the matter is much more difficult; we cannot tell, with certainty, why, when the complaint settles upon the kidneys, there should be 'anasarca.' We know that those organs cease to secrete "water," but so they do under other circumstances, without dropsy following. Total suppression of urine is often noticed, without there being the smallest symptom of serous effusion; and many an individual passes no more fluid from the kidneys than a scarlatinal patient does, without having a sign of disease. A similar observation may — *mutatis mutandis* — be made in cases where dropsy has come on from sudden chill. A young woman, for example, whilst washing clothes in hot water, on a hot summer day, left her work, and stood in a current of cold air to cool herself; almost instantly she had distress of breathing, palpitation of the heart and swelled limbs, little urine flowed, and that was loaded with casts of kidney tubes; yet there was no albumen in the secretion. Cases like this lead us to doubt whether it may not occasionally happen that an apparent disease of the

* In making use of the words "appropriate tonics," I desire to indicate those which experience has shown to be the best in any disease or individual. In these essays, details have been as a rule avoided. My aim has been to effect for doctors what Simeon did for divines. These 'papers' are 'skeletons,' rather than plump beauties, ready made for a lover's arms. If I had thought it right to give a list of those strengthening medicines, which are to me like personal friends—with the reasons why some are preferred to others—there would, doubtless, have been found many a professional knight who would have broken a lance with me in favour of his own medical love. But, lest anyone should brand me as a craven, and unworthy to have a *chère amie* to joust for, I proclaim my own favourite tonics in cases of dropsy to be the "potassio tartrate of iron" and "gallic acid;" never combined, but given alternately. All bitters and oils have disappointed me. Gin I regularly use, but more from routine than respect.

kidney may be due to some dropsical distension of its substance. Certainly, I have known cases of anasarca, in which renal disease could neither be found after death nor discovered during life.

If, then, we find reason to believe that dropsy may be a symptom produced by a cause to the doctors hitherto unknown, the only principle left to the physician for guidance is to endeavour to counteract the supposed disease. The mysterious influence compels the body of the individual to operate in a certain way; that way produces discomfort, danger, and probably death. The watchful physician must, if possible, 'out-general' it, and by removing bad effects enable the patient to tide over his difficulties until kind nature shall put things right again.

In removing dropsical effusions, suddenly produced, small bleedings (if the patient has strength to bear them), smart purging, hot air baths, and warm rooms, are very efficacious; to these may be added, punctures through the skin, made by a triangular needle. I have seen the happiest results follow from this practice. As an example of success, I may mention the case of a young girl, who had general œdema and engorgement of the lungs, resulting from scarlet fever, who was cured by four leeches applied over the region of the kidneys every four days. The relief on each occasion was conspicuous, all but immediate, and the progress to health was steady. It was indeed almost a sensational instance of the value of small losses of blood. But on the other hand, the practice has its dark side, as the following case shows. A young man, himself a doctor, asked advice on his own account; he had sudden dropsy, and the urine indicated acute congestion — one might call it inflammation—of one, or

both kidneys. Hot air baths, aperients, punctures, &c., having been of no avail, I suggested the use of leeches to the loins. Four only were applied; yet, trifling as was the loss of blood, the patient died exhausted in less than twenty-four hours thereafter.

Although, then, the means which we thus describe are frequently the only appropriate remedies, instances will arise in which they are contra-indicated, and the doctor's sole aim must be to keep the patient alive, leaving the care of the extra fluid to nature.

To the indications of treatment above mentioned, we must add another, viz., diuretics. The other means which we have described are supposed to be adjuvants. "The kidneys," says the doctor, "do not act as they ought to do—make the skin, bowels, and lungs act for them." Then, he adds, "Try, nevertheless, if you can make the kidneys discharge more than usual; it is their business to remove water and fluid from the system; keep them up to their work, make them do double duty, and then probably the good ship may be pumped dry." To fulfil this indication, the physician seeks for those things which in health seem to make people micturate more freely than usual.

The dandelion has received the name of "piss-a-bed;" consequently it is, or rather it was, employed in dropsy. How many other drugs or simples have been used with the same intention it is difficult to say. After diligent trial of the merit of each, I distrust them all. Even gin, the most popular of them, has been greatly overpraised, and only deserves eulogy as an useful stimulant. Our theory is good, but our practice is bad from want of proper tools. Perhaps the most efficient cure for removable dropsy is a hot climate.

If the doctor, by any means, can remove the accumulated fluid in cases of curable disease, he often affords to Nature an opportunity for restoring her child to health. He has, indeed, "cleared the decks for action." To assist nature then must ever be his study.

In cases of ovarian dropsy, there is not, I believe, any cure but extirpation of the diseased organ, and that this can be done with a large amount of success, is one of the triumphs of modern surgery.

When the doctor is called upon to treat anasarca arising from any incurable disease, it is difficult to say what is to be done. The sufferer and his friends urgently implore help, and the physician is trusted as, it is said, drowning men catch at straws. Humanity urges us to do our best, to seem to do something, and to scheme out some new plan. Yet our knowledge of the danger of certain methods once in vogue prevents us adopting what is old, without giving us anything new whereby they may be replaced. To bleed, to purge, to sweat, and the like, manifestly curtail the patient's days. Strong medicines almost act as poisons.

Whilst seeking for those things which give relief without any great danger, it is probable that every physician will have recourse to puncturing the skin. I well remember the first case in which I tried it; the man was gasping for breath, and unable to lie down; he felt uncomfortable whilst sitting, and standing was, from the size of the scrotum, painful. All other means having failed to give any relief whatever, I pricked the bag with a triangular needle. A small stream flowed, and ere it reached the floor the patient could breathe easier. On relating this to friends, each could tell me of corresponding cases. The needle which I refer to is very far

superior to the common cylindrical one. In the body it consists of three sides, which ought to be sharpened on a whetstone before use; all these terminate in a point, which should also be improved by a hone. The eyelet end should be mounted in cork or ivory. Thus prepared, the skin can be effectually punctured with the greatest ease, and a good-sized *open* aperture is left behind, which does not soon close, whereas that made by the round needle is choked almost immediately.

In the last case where this puncturing plan was used, it gave very great relief; the legs and feet being pierced by a few small holes, allowed the fluid to drain from the lungs, the heart, and the abdomen, and the patient became thin without inordinately losing strength. I have, indeed, heard from medical friends, of individuals supposed to be incurable, who, after being "drained dry," have not "filled again" for many years. In the example, however, which I refer to, the individual "filled" as rapidly as he was "emptied;" and finding the pain of the punctures was not compensated by a corresponding permanent advantage, he elected to die in peace, not of the dropsy, but of disease of the kidneys. The doctor could remove the fluid deposited in the wrong place, but he could not remake damaged organs.

It is, perhaps, necessary to add that punctures sometimes give rise to erysipelas, and thus increase the patient's pain and distress. Yet the danger is small. If, indeed, such risks were never run, no relief could ever be given. All know that the inhalation of chloroform may prove deadly, yet most would run the very small risk that they may escape a certain painful infliction. So long as doctors, who use drugs or surgical implements, exist, there is some danger to

their patients ; just, perhaps, so much as there is for every individual who enters a railway train. Yet science has reduced the risk to a minimum ; and people now-a-days trust both engineers and physicians alike.

In concluding this chapter, notice must be taken of a criticism in the *Medical Quarterly*, which almost reproaches me for not referring to the use of iron, and oleaginous remedies, in chronic dropsy, although I must have used the former hundreds of times. It is quite true that I have been familiar with the use of both the articles referred to, ever since I have been a medical man ; and it is equally true that I have not recommended my readers to employ them, except in those cases of debility where there is not serious organic disease. The reason for my reticence is, that I have never yet been able to satisfy myself that the drugs spoken of have done the good which it is generally expected that they should effect. I have not the heart to eulogise anything in which I have no confidence ; and I prefer saying nothing, to recommending as valuable, that which will, in my opinion, disappoint those who trust in it. The practice of teaching students to adopt a plan of treatment that has always failed, does not advance the cause of Therapeutics. Hence I shun it.

CHAPTER XXVII.

ON THE TREATMENT OF INFLAMMATION.*

Vague ideas of inflammation—Case in point—A victim to vagueness—A rescue from ignorance—Definition of inflammation surgically—Pain—Its value as a symptom—'Hepatitis'—Myalgia mistaken—Lead colic—Peculiarities of inflammation—Causes of inflammation—A knotty point discussed—Dying *with* or *of* a disease—A resultant question—Phenomena of inflammation—What nature does—What inflammation does—Relations of the complaint—How they influence treatment—Plan of medication—Routine course proposed—Opium.

A long time ago, I was requested by a medical friend to visit, during his absence, a certain lady. She was remarkably handsome, adored by her husband, petted by her friends, and indulged by herself. She had recently miscarried, and was much debilitated by loss of blood, but was recovering satisfactorily. For many days our meetings were simply formal—no accidents happened, and no change of treatment was required. At length the patient was able to leave her bed and go into the garden. The time was autumn, and

* This Essay ought properly to have preceded the third, but the author did not think of the subject in connection with this volume until he was mentally preparing his remarks upon the treatment of peritonitis. He then felt that he must either bring in the question of inflammation episodically, or devote a whole chapter to it. The latter is selected as being the more appropriate.

peaches, ripe and unripe, were on the wall. The day after the descent the lady seemed to be very ill, and complained of severe pain in the abdomen. Unable to detect any signs of real mischief, I told the anxious husband that no inflammation was present; and that the symptoms ought not to be combated by the means then, and too often now, used to remedy that state of things. Indeed, I said that if such treatment was adopted, in the lady's actual condition, she would die therefrom.

It is useless to report what my directions were, as they were not followed. I looked too young to be able to give sage advice, and an old-fashioned, elderly surgeon, by whom everybody swore, was called in. On hearing of the symptoms, and especially of the pain, he pronounced the case to be one of violent inflammation, and purged, physicked, and blistered in the popular style. The lady became steadily worse; her own doctor then came back, and the two oldsters, who met in consultation, carried on the same plan, until, in a fortnight's time, the patient was carried to the grave. Ere she died, she avowed her belief that the sole cause of the pain complained of, was eating immature peaches. Having been forbidden to touch them, she did not like to avow the deed at the commencement of her illness. Being somewhat chivalrously disposed, I wished to break a lance in her honour, even after her decease, and being friendly with the old gentleman who had superseded me, I asked him in what place he thought the inflammation which he had talked of was seated. "Oh," was the reply, "in some deep-seated part or another." That was all he knew; and, on the altar of such vagueness, that lovely woman was immolated. Such a catastrophe has left a painful, and pro-

bably an indelible, impression upon my mind; and not the less did I feel it, because some year or two previously I had myself bled a man for a presumed inflammation. The poor fellow died, I believe from the loss of a very small quantity of blood; and, on inspecting the body, nothing of the wrong which I believed to exist was discovered.

Another case, barely a day old, when this essay was first penned, recalled the subject of inflammation, and the radically bad opinions entertained respecting it, forcibly to my notice. A young lady, fragile and delicate, yet endowed with great mental and bodily activity, aged eighteen, but so slightly built as not to appear fourteen, having been a sufferer from myalgia, had, after months of care, recovered sufficiently to travel. Returning health made her very adventurous, and she visited a regatta in bad weather, driving thereto some dozen miles, then she sat in a boat for hours, returned home in the evening, finishing off the day with an adventurous mountain climb. During the night she was awakened with intense pain in the body, and a difficulty in drawing her breath. A doctor was sent for in hot haste, and, having been brought up in the old-fashioned school, he imagined that there was both pleurisy and peritonitis; and, in spite of the mother's and daughter's protest, he insisted in largely vesicating the skin over the painful spots. At the same time, he forbade any form of stimulant and flesh diet. Rest in bed soon cured the myalgia, but the debility, left by the vesicant and low diet, remained, and phthisis set in, from which the lady only escaped after a most careful nursing of more than three months' duration, conducted by the skill and tenderness of a devoted and singularly judicious mother.

Let us now ask ourselves, Why doctors, in these and similar

cases, announce the presence of inflammation? and why, after having formed such a judgment, do they vesicate the skin, and pull down the patient's forces? A true answer to these questions will show how large an amount of learned ignorance has prevailed, and does yet exist, in the medical profession. It is believed that every violent pain, not manifestly produced by such injury as dislocation, fracture, &c., must indicate inflammation, and that inflammation feeds upon such things as alcohol and beef, and is starved by their absence.*

There is, indeed, scarcely an idea generally current about inflammation, which is not based either upon false facts or illogical inferences from real ones. I believe that many symptoms ought to be read differently to what they generally are, and that the effects of the most common plan of remedies requires to be studied afresh.

The usual surgical definition of inflammation is that when

* In speaking as I have done in the text, it is due to a great many of my contemporaries to say that the remarks do not apply to them. They refer to that vast majority in the profession which has scrambled through an examination a long time ago, and has never really studied the act of healing since their licence to practise was granted. As a rule, metropolitan doctors are ignorant of the style of medical doctrine which exists in the provinces; and the physicians in large towns resemble their brethren in the capital. The cream which rises to the surface forgets the sky blue stuff that it has left behind.

If I were writing exclusively for my congeners, I should assume that each one was equal, if not superior, to myself; as it is, there is present in my mind a desire to improve the thoughtless in our profession, by means of their *clientele*; and I entertain a strong hope that the remarks which are made in the text will be impertinent, even slanderous, in the next generation. No one can more cordially than myself recognise the yearly advance made in therapeutics by our foremost men; but the very fact that they are acknowledged as leaders, proves that they are in advance of the many. My individual aim is, to qualify 'privates' to rise in the ranks, not to raise myself to the dignity of chief.

pain, swelling, heat, and redness exist in any part, it is "inflamed." There is sometimes added, that this state of things is attended by fever, and by a disagreeable throbbing sensation in the part affected. But we find in reality that pain is only accidentally present in inflammation; the disease often existing without any suffering whatever. Even when complained of, pain is not always seated in the inflamed part. For example, there may be violent inflammation of a finger, and such an amount of suffering that the patient cannot sleep; but if we cut through the skin, the pain ceases; the 'phlogosis' remains nevertheless. Here it is evident that the 'dolour' was in the 'cutis,' not in the part which was really affected by the change in question.

A few years' experience suffices to teach us that the process of inflammation is only distressing when it stretches fibrous or other webs, or where it implicates the muscular tissue. We see an example of the latter in pleurisy and pneumonia, there being no pain either in the one case or the other, unless the intercostals or the diaphragm are attacked. On the other hand, we find severe agony in one part or another of the body, without inflammation being there. Of this, the following are striking examples. So commonly does pain in the right side and shoulder stand for proof of 'hepatitis' in India, that the symptom is supposed to characterise inflammation of the liver. Yet, if patients with the symptom die, nothing is found amiss with that organ—the true cause of the pain being an undue use of the muscles of the right arm and trunk, such as is put forth by artillery drivers, who have to whip their horses much on a military field day, or in a battle.

Again, I have known patients treated for inflammation of

the abdomen and of the bowels, from simply having had too long a ride on horse- or camel-back.

Myalgia is repeatedly mistaken for inflammation, and it has been my misfortune to see, in the person of many an acquaintance who has not been a client of my own, convalescence indefinitely prolonged from muscular pains; the effects of exercise being mistaken for inflammation. I have been summoned by a surgeon to prescribe for an attack of pleurisy in his own person, and I have cured him in ten minutes by 'strapping' the side. Again, I have been sent for to see a lad, who lay in bed helpless from pain in every limb. He had just recovered from bronchitis, and had come into the country for change of air. The day after his arrival he had been taking a long drive, and in the afternoon had sat on a stool watching some old companions play. When I went to see him, the mother told me that he had before had a similar attack, which the doctor had called inflammation, and that it had kept him ill for months. My prescription was simply "rest in bed;" and in three days the lad once more was well. Still farther, it is not uncommon for me, when examining clients for life insurance, to find men stating that they have had inflammation of the bowels, into which, when I inquire specially, it is clear that there has been nothing beyond lead colic or transient fish poisoning.*

* One of the cases here referred to is that of a ship carpenter, who came under my care at the Northern Hospital about seventeen years ago. I do not remember ever to have seen so severe an attack of lead colic: but there was no blue line round the gums, nor any history of exposure to saturnine emanations. The man informed me, that on a previous occasion, at Honduras, he had a similar attack, which was called inflammation, and laid him up for two months. On both occasions the man had been employed near painters, who were using carbonate of lead. Another is that of a gentleman, who, in answer to the usual questions put by medical

Having then got rid of the idea that inflammation must necessarily be attended with pain, and that the presence of unusual suffering implies the existence of inflammation, we may proceed to inquire into the true natural history of the complaint, when it really exists. The first thing which arrests our attention is, that the varieties of inflammation are almost as great as the causes producing it, and the locality of the disease. For example, an inflammation of the eye, arising in catarrh, has a natural tendency to get well in a day or two; whilst that attending the introduction of gonorrhœal matter will not spontaneously cease until the eye is destroyed. The poison producing small-pox gives rise to pustular inflammation, whilst that of chicken-pox produces vesicular, and that of measles papular, inflammation of the skin. Erysipelatous inflammation is frequently suppurative, whilst neither in acute rheumatism nor in gout does such a catastrophe occur. Again, myositis, or inflammation in a muscle, has different symptoms to pneumonia and bronchitis; and croup, measles, and diphtheria are distinct from each other, although all are inflammatory affections.

This being so, it is clearly impossible to regard one inflammation as identical with every other. On the contrary, each

referees to insurers, told me that he had experienced three attacks of inflammation of the bowels. Each had lasted a day only, and in every case it was attributed to the use of fish. The man was a Romanist, and anxious to fulfil his duties as regarded piscine diet on Fridays and fast days. He could, he told me, take such food with impunity, provided that he had meat therewith, but not by itself. Shortly afterwards, a young Irish Romanist priest came for examination; and, telling him of the preceding case, I asked him if such were common. At first his reply was in the negative, adding, that if there were any such, they would have a dispensation; but after a time, apparently spent in trying to recollect, he told me that a certain papal bishop in Ireland had died from what was called inflammation of the bowels, consequent upon a rigid fish diet.

requires to be studied in connection with its cause. To go fully into every variety would require a treatise; and even if we were to accord this to the subject, it is doubtful whether we should do more than demonstrate that inflammations may be normally divided into those which pursue a definite course, usually terminating in apparent health, and those that have no tendency to spontaneous cure, and have an indefinite career. We might, perhaps, still farther divide them into those caused by extraneous agents, and others produced by internal changes.

This latter division is important, as it introduces us to a consideration which has not yet been prominently brought forward. Even some shining medical luminaries have thrown no light upon it. We may best introduce it thus:—Suppose a man takes a poisonous dose of arsenic, and imagine, moreover, that this produces inflammation of the alimentary canal, and the man dies; is it more correct to say that he has died of the local lesion, or the general effect of the poison? Again, when a man has small-pox and dies, does his decease, we ask, arise from the inflammation of the skin, or from the general effect of the poison? In other words, if art could prevent the pustules, would the patient never die of the disease? In fine, are we to regard the local manifestation, or the cause which produces that effect, as the most important?

We shall recognise the point involved in this question, if we ask ourselves the following:—Supposing that pneumonia arises from an extraneous cause, and a person having half of one lung affected dies with that disease, does he succumb to the pulmonary lesion, or to the effects of a certain poison that produces the inflammation in question?

That any one who closely pursues the train of thought which the preceding considerations involve, will find himself surrounded by perplexities, no one can doubt. Such difficulties we shall best meet by suspending our judgment until we have a larger number of facts to guide us. We can test the effects of such poisons as arsenic and 'corrosive sublimate,' but we cannot either isolate the poison producing scarlet fever or demonstrate its actual existence. Until we know more of this subject, we cannot grapple with it. We are, then, more or less compelled to direct our treatment to the effects produced by the hypothetical poison.

We here, once more, find ourselves in presence of the question, Shall we try to counteract the action of a poison by using means that produce an opposite effect; or shall we try to eliminate the supposed entity from the blood by encouraging its action? Both sides of the problem have already been supported in the management of small-pox—one party endeavouring to diminish, and another to augment, the variolous eruption. The result was amply sufficient to indicate, in that disease at least, that it is better to counteract the effects of a poison, than to encourage its manifestations.

Presuming, then, that what is true of variola may be true of other forms of inflammation, we next proceed to inquire into the effects which we must counteract. These are, notably, a physical change, and a consequent alteration of the normal processes of life. As a man who frets himself during the period attending and following the loss of a large portion of his fortune, finds after a time that he can live without the part lost, so does the system fume at the threatened destruction of a part of the body, which, after a time, can be spared without material detriment to life. In both cases the relief

will come spontaneously, but it may be hastened on by judicious treatment.

When an organ is inflamed, the circulation of the blood throughout it is impeded; as the blood is prevented from passing on, Nature, so to speak, attempts to drive it, and gets into a fever because she cannot succeed. If, then, we can by any means diminish the resistance to the blood's flow, we shall calm those efforts which are made to remove the stoppage. Experience, both clinical and microscopical, tells us that the resistance can be lessened by the local use of opium, by mechanical pressure, and by the removal of the blood accumulated in the diseased part by means of a large incision; and we can calm the energy of the furious heart and arteries by venesection and febrifuges. When possible, we make no difficulty in using the first plan. We hesitate to adopt the last, for experience shows that it is best not to deteriorate nature's powers by depriving her of the sinews of war, or by poisoning her food.

But the reader will recognise that there may be internal inflammation in which neither local bleeding, pressure, nor freezing can be used, and will naturally inquire, What can be done then?

Before we can reply to this inquiry, let us look the difficulty in the face, and ask what will the inflammation do if it runs its own course? Experience tells us that it will end in getting well ("resolution," as it is technically called), in the effusion of matter greatly in excess of that produced in health, in causing such deterioration as to convert the structure affected into a fluid, cream-like 'pus' (technically called "suppuration," or the formation of an abscess), or in the absolute destruction of the tissue (technically called "gangrene," or mortification).

The next inquiry is the question, "Do these results depend upon the cause of the inflammation or upon the individual's condition who is affected, or upon any other discoverable state?" To this, experience replies, that although variola, erysipelas, &c., produce "suppurative;" gout "resolutionary;" and anthrax "gangrenous," inflammation, yet, upon the whole, "resolution," "abscess," and "mortification," are more determined by the condition of the patient than by the cause of the inflammation. The same master also tells us that "resolution" is most common in those who, up to the time of the attack, have been previously healthy; "suppuration" most general in those whose *physique* is indifferent; and "gangrene" is most certain in those whose constitution is very bad. If, then, we desire to prevent destruction of tissue from the results of the disease in question, it is clear that we must endeavour to give, or to conserve, as high a state of health in the part affected, and in the body generally, as is compatible with the presence of a disturbing cause.

When we look to ultimate ends, rather than to immediate results, and recognise that the means which allay fever and calm the heart's inordinate action, are those which promote suppuration, &c., we consider it most judicious to decline to buy present comfort with the coin of future danger.

We now allow ourselves to inquire into the "relations" of inflammation, and ask, Whether it is the brother of high health, repletion, and jollity, or the appanage of misery, wretchedness, distress, and starvation? Experience tells us that though many a boil may be traced in youth to the indulgence in "spices," and though brandy, vinegar, ale, and cloves will give a rubicund nose, yet that, as a rule, wealth, luxury,

and comfort, in the domicile and outside, give comparative immunity from inflammation, whilst poverty, debauchery, &c., encourage its activity. A fasting man has inflammation of the stomach, and the impecunious tramp, from his very exercise, gets inflammation of the legs. Consequently, we infer that phologoses are more likely to be warded off, and, if present, to be cured, by a good diet than by a starvation system. When experience tells us that men may die because they have not strength to get well, it is clear that a roborant is preferable to a reducing diet. Yet it is upon this last that patients are most commonly expected to recruit their enfeebled forces !

We have previously called attention to the necessity for local as well as general medication ; and the question now arises, Can we in any way modify the state of an internal organ, so as to assist it artificially in recovering its normal condition ? We have already answered this query in the affirmative, and stated that opiates, incision, and pressure will, one or all, improve the condition of inflamed parts. For example, opium to narcotism, and strapping, both relieve orchitis, large incisions relieve erysipelas, and an inflamed *mamma* may be reduced by a firm bandage. But these cannot be used when internal organs are affected. The last cannot, I believe, be influenced for good in the acute stage, but in the second they may be stimulated to get well.

The " stimulation " of internal organs may be effected, either by administering remedies more or less irritating by the mouth, and so introducing them into the blood, or by applying them to the skin, and allowing them to remain in contact with it until a portion of the excitant has permeated the tissues and reached the portion of the body which is

inflamed. Blisters and rubefacients influence internal organs, just as a stimulating ointment or lotion acts upon an external ulcer. When inflammation is recent, cantharides will exasperate it; when chronic, the same material will assist the part injured to recover itself.*

Let us now shortly sum up what we consider to be the best routine treatment of inflammation. Locally keep the part as cool as possible, even with ice, or as hot as the patient can bear. No two persons are alike in respect to the relief given by cold or heat. With some, the first only increases pain and agony; in others, it deadens them entirely. Endeavour to keep the affected part in the most perfect possible repose; if it can be easily managed, incise the skin to relieve tension, or strap the inflamed organ to drive the unwanted blood away. Generally allay fever by sponging, by the use of water as a drink, by thin diet, and by absolute repose of body and mind. Eschew all strong medicines of every kind. Opium is a great comfort. No alcohol should be taken whilst there is strong fever. After the first two days, or later, according to circumstances, the patient should be helped to get well by generous, not extravagant diet, and by local stimulation. Inflammations without fever require generous, very generous, diet from the time of their invasion.

* For further observations on this head, see the chapter on Counterirritation, in my work, *Foundation of a New Theory and Practice of Medicine*.

CHAPTER XXVIII.

ON FEVER.

Now and *formerly*—Change of ideas—An old opinion—Fallacies fallen—Few good new structures reared—Labour in vain—Nature of fever—Causes—Influence of causes—Examples—Fever a symptom, not a disease—Illustrations—Poisons—Variety of—Typha—Cobra—Animal poisons—Conducting to health—Plans adopted—Value of drugs—Quinine—Hydrate of chloral—Treatment generally—Death from debility—Pulse—Case—Proposed definition—Lewes—Richardson.

As each successive essay on the best methods of treating disease comes up for consideration, I am struck with the difference between *now* and *formerly*. It seems to me that the art, science, mystery, call it what we will, of medicine, which remained almost unchanged for centuries, has undergone more alteration during the last thirty years than in all its previous existence. We are no longer contented, like our forefathers were, to practise according to 'the rules;' nor do we, like many amongst our predecessors, strike out new paths from the sole desire of making ourselves conspicuous; and from the necessity of making a book, that we may, by advertising it, give ourselves the puff indirect. It strikes me forcibly that there is now an earnestness in scientific inquiry, generally, which has extended itself to medicine, and that modern investigators pursue their observations with the

primary object of attaining to real knowledge. If we try to discover by what means this advance has been made, we find that it is mainly due to a rigid endeavour to understand the meaning and import of the words which we employ, when describing phenomena under our notice, and a desire never to use a word that implies a theory. For example, there is not, to my knowledge, a single modern author who talks about "antiphlogistic treatment," "animal spirits," "crudities," "the vapours," &c. Even the word "hysteria," once more popular amongst the doctors than any other, is being dropped, as indicating a theory of which intelligent physicians are now thoroughly ashamed.

I have before me, at the present time, a work entitled *The Conclave of Physicians*, written in London, A. D. 1686, by Dr. Gideon Harvey, Physician in Ordinary to His Majesty, and, consequently, a man of no mean position, yet he thus writes about aperients in fever:—"Those daily evacuations raised the ebullition of the blood, hindered the digestion of humours, prevented the transpiration of the fuliginous malignant salts through the pores, enraged the vital and animal spirits, and were the sole cause that obstructed the cure," p. 66. Who, let me ask, could use these words with anything like a definite meaning? and who could really strive to understand them without finding that his knowledge of fever was excessively vague? On the other hand, could any one laugh at the absurdity of the language referred to without feeling himself bound to replace such a description by a better?

Here, however, comes a difficulty. There are abundance of things upon which false notions have been formed; and the number of those who can ridicule such fancies is enor-

mous; but the list of those who have erected an edifice upon the remains of destroyed structures is infinitely small. With many, it is almost regarded as a crime for a man to pull down a favourite theory, until he is prepared to build up another in its place. Such evidently prefer to pay homage to a straw, than seek for a reality; and delight to take bad money, rather than bother themselves to replace it with pure coin. To the philosopher, however, the work of destruction often precedes that of discovery. To illustrate the bearing of these remarks, let me imagine that an agriculturist party have started for some gold diggings, and have alighted upon a vein of iron pyrites, which they regard as gold. They work diligently at the mine, and imagine that they are making a rapid fortune; but one of their number, more observant than the rest, doubts whether the metal found is what they fancy. Little by little he builds up his proofs, and demonstrates to his own satisfaction that he is labouring in vain. He cannot tell what the material is, but he knows what it is not, and seeks elsewhere for gold. The rest of his fellows, unwilling to be disturbed in their faith, work on and pile up a mass of rubbish, good only where oil of vitriol is wanted. So it is with fever; there is many a doctor who knows what it is not, there are few, if any, who really know what it is.

The discovery of the true nature of fever is rendered the more difficult because the word has more or less vagueness. It is used to indicate both a symptom of disease and the disease itself; and the matter is still farther complicated by there being many diseases, of various origin, all grouped under the same head. For example, we find fever attending measles, small-pox, chicken-pox, gout, water

in the head, and consumption, as a symptom, and not as a substantial disease; whilst in typhus, ague, and remittents, we see the fever regarded as a substantial complaint. To endeavour to remove this difficulty, there is a strong desire at the present day to examine rigidly into the question whether fever is not, under all circumstances, a symptom, and never *per se* an independent disease. To many this may seem like splitting hairs, but a moment's consideration will show the importance of the principle involved. Look at yon man, for example, raving in his words, furious in his manner, dangerous to others, destructive to himself; his shouts, gesticulations, and fury are conspicuous, but they are not a disease. They are symptoms of drunkenness, or insanity, or they are "make believe." We judge of the danger the man is in, not so much by what he is doing, but by the cause in operation to make him act as he does. In like manner, when a man is hot, thirsty, weak, and delirious, we ought to investigate what makes him so, rather than content ourselves with saying he has fever.

We see the importance of this consideration still further when we turn our attention to the errors into which practitioners have been led by regarding fever as a substantial disease. Experience has shown, for example, that every effort to beat down the remittents of hot countries, and to subdue our own "continued fevers" by force, has eventuated in a fearful mortality. I do not hesitate to say that there was a period wherein everybody stricken down by such complaints had more chance of life if left alone, than if placed under the care of an eminent or other physician.

As soon as ever we regard fever as a symptom, that is to say, as an effect following a certain cause, it becomes

apparent that an investigation into the causes are of more importance than a close observation of effects. A few illustrations will demonstrate this. A. B., a delicate child, has an attack of pyrexia; its gums are looked at, and found to be tumid and tender; they are lanced, and the illness is over. C. D. has fever, sore eyes, and cough; an eruption appears; it is measles, and the danger is not great. E. F., has fever; it soon subsides, but recurs day by day; other symptoms show that he has water in the head, and the danger to life is imminent. G. H. has pyrexia and pain in the back; by-and-bye he has small-pox, and if he dies he perishes, not from the fever, but from that which gave rise to it. I. J. has cold shivering heat and sweating to-day, but none to-morrow; they return the third day; he has, indeed, ague, and the cause of this is soon known.

Without multiplying instances, we may say that the phenomena to which the name of fever is given arise apparently from many causes, which can, nevertheless, be reduced to one, viz., disorder in the circulatory apparatus. This disorder may be brought about by nervous irritation, as it is called, that is to say, by something which modifies the normal condition of the nervous masses, *e. g.*, intense anxiety of mind, passion, a mechanical injury, the presence of a foreign body in parts largely supplied with nerves, &c. It is also brought about by rapid alternations of temperature, from great heat to moist cold; from a very exhausted condition of the body; or by the presence of some agent in the system whose existence can often only be hypothetically proved, and to which the name of poison has been given.

As a rule, the poisons which are called mineral and vegetable, when taken into the body, do not give rise to the

symptoms called fever. The poisons which give rise to pyrexia are mainly of animal origin. Yet, even here we speak hesitatingly, for no one has ever yet been able to isolate one such product. Allowing, then, as we are bound to do, that we may be wrong altogether in attributing fever to animal poisons, we say, provisionally if you will, that fever is produced by the poison of measles, scarlatina, erysipelas, small-pox, and what, for want of a better word, we must call 'typha.'

In each of these cases, the poison operates in a definite way, which will bear comparison with the phenomena of snake bite. When once a cobra has driven its poison fang into the subcutaneous structures of a man, no human power can undo what has been done; the poison is in the blood, and must work its will. What its effects are, experience has shown; and the same master tells us, that the only chance of man's survival is that his natural processes of life shall be aided to overcome the influence of the newly imported force. If we can keep the man alive, he will not die; we do not cure him, but nature does. Now, it stands to reason, that a man thus bitten stands a good or a bad chance according to the quantity and malignancy of the poison injected into his veins, and his own constitutional vigour. We can still further see that his chance of life will be diminished if a doctor endeavours to cure him by giving him drugs which operate in the same way as the venom does. Whilst, on the other hand, the odds in his favour will be increased by giving medicines whose operation opposes the deleterious influences of the cobra.

So it is with such fever-producing elements as the scarlatinal, &c. A large dose, actually or relatively, an unfavourable constitution, and the like, augment the danger.

But this is not all; we learn from observers that, when snake poisons produce their symptoms, the duration is more or less limited. To such an extent is this, that the physician feels that his patient will get well if he can be kept alive for a certain number of hours. At the end of a definite period, the influence of the venom becomes expended, and its power for modifying the operations of the body is lost entirely.

In like manner, each animal poison has a more or less definite tendency, and produces a disease of limited duration. We may, metaphorically, compare the strength of measles to the power of a bow, that of chicken-pox to a gun, that of small-pox to a rifle, &c. I think that, when once an animal poison is imbibed into the body, it is as difficult to arrest its career as it is to stop the course of a cannon ball, until its force, given by the explosion of the gun-powder, is expended. We may deflect it easily, but to arrest it suddenly is to ensure a certain amount of destruction.

If our reasoning be correct, it will be almost self-evident that in fever we must endeavour to conduct the patient to health, rather than recklessly oppose the effect of the disease. We must help nature, rather than encourage the animal poison.

Though many will, doubtless, go thus far with us, there is ample cause for difference of opinion as to the best way in which nature is to be helped. One man alleges that we shall effect our purpose if we pack our patients in wet sheets, and thus assist the constitution to thrust the poison out through the skin. Another administers purgatives, hoping to drive out the intruder by the back door. Others have given emetics, so as to evacuate the peccant matter by the front. Some have bled, hoping to induce the poison to go out

through a special opening. Many have tried to subdue fever by giving nauseating drugs, and by cooling the skin with sponging, &c. Others, again, have resolutely endeavoured to support the person's health by stimulants, like Indian doctors do in cases of snake-bite. A few have as energetically given quinine. All of these boast of some success; but, on being tested together, the general failure of many plans is too conspicuous to be overlooked, and the general value of others is too great to be denied. As a general rule, we may say, the less active the interference the less will be the danger, *ceteris paribus;* whilst, on the other hand, we may aver that the danger is increased by all energetic treatment. Bleeding is bad, but excess of stimulants is no better. Brandy in large doses is prejudicial, but starvation is not the reverse. To some wine is of vast importance, to others it does more harm than good.

My own impression is, that the only drug which is of real service in the early stage of fever is quinine, a full dose of which sometimes seems to cut it short. If this does no good, opium, or the hydrate of chloral,—whose virtues are great, and which, thanks to Dr. Richardson's philosophic account of it, has a great future before it,—may be found useful in procuring sleep; but, as a rule, I prefer to treat fevers without any medicaments at all. Administering only whey, milk, jelly, water, ice, broth, &c., with or without alcohol and water.

Yellow fever is most appropriately treated by large doses of quinine. This drug, used as a prophylactic, may prevent a man catching the disease when it is epidemic; and if he is affected, the drug enables the constitution to tolerate the poison.

Without going into the details of the treatment required in the various phases of fever, about which we have nothing new to say, we would wish to call attention to the danger to life which frequently arises after the fever is over. Under these circumstances, patients are generally extremely weak, though, perhaps, quite unconscious of their debility. Hence, they over-exert themselves, and succumb from exhaustion. For example, an army surgeon told me of a chum of his who died, after recovery from yellow fever, of exhaustion, brought on by a joyous conversation, in which there was many a laughing congratulation upon his having escaped the cemetery. The case referred to is given in detail on another page. Systematic writers also frequently relate how death occurs suddenly after a patient has been sufficiently recovered to leave his bed and walk. Indeed, there seems to be as much danger during the first days of convalescence from this affection as there is in the disease itself. In fever hospitals, many patients die from walking to the water-closet, or even sitting up on the night commode. It would seem that sometimes the complaint has inaugurated a state of things in which the cardiac muscle is as weak as it is in fatty degeneration. That such a condition should exist during the early stages of the complaint we can well understand, for all the muscular structures are alike enfeebled; but we cannot well explain why, after convalescence, the heart alone should remain feeble. However we may explain the phenomena, we may take advantage of it as a means of prognosis. A weak heart produces a fast pulse; and this again, in fever, implies great danger to life. A patient whose pulse keeps steadily above 120 is likely, and one whose pulse keeps on increasing beyond that is certain, to die.

A most remarkable illustration of the value of this sign is the following. A young and previously healthy woman had typhus, apparently very mildly, but she did not get better as she ought. When I saw her, she was perfectly sensible, able to eat and drink, to wash her hands and face, get out of bed to the night commode, change her night-dress, to sleep well, and to appear generally comfortable. But the pulse was 140 when the woman was lying down. When asked my opinion, I said that "it was pulse *versus* symptoms; the first said she would die, the second that she would not." It is useless to describe our treatment further than to say that it was restorative. Yet, day by day passed without improvement; the pulse still knelled death, but the general symptoms gave hope. The first proved to be right, for one morning, whilst combing her hair, she quietly lay down and died. In this case, we saw what so many have seen before, viz., stimulants producing no stimulation, food digested but giving no strength, convalescence without recovery, or recovery without cure. The body had undergone a blight, and the heart was the sole organ that seemed conscious of it. Such an effect may be seen from grief, anxiety, or fright, but from fever it is very unusual.

There is, in the *Review* to which I have so often referred, a remark upon fever which deserves notice. The writer says—"Might we suggest, in passing, that a step would be made in the right direction by defining 'fever' to be 'an increase in the temperature of the whole mass of blood?'" The proposal cannot, I think, be adopted, because we have a very considerable augmentation in the blood's heat without there being fever. For example, if on a cold day in winter we are exposed on the top of a coach to a keen wind at 20°,

the temperature in our limbs and face will drop below 40°, nay, it may touch 25°, or lower. On taking internally a good jorum of hot tea, or other fluid, there will be an immediate increase of the body's warmth, yet no fever. Again, it has been found in Asiatic cholera that the thermometer frequently indicates a temperature in the internal parts of the body 14° above the normal standard. A similar rise occasionally occurs in lock-jaw. But, few would say that these complaints were fever. Still farther, Lewes, in his *Physiology of Common Life*, vol. i., pp. 444–5, has collected a number of cases in which the heat of a dead body has risen to 113° after death, and where, three hours after the removal of the viscera, an incision into the fleshy part of the thigh showed a temperature of 110°. Here no one would say there could by any possibility be fever. We are quite prepared to admit that, in pyrexia, there is an increase of temperature, for even our instrument makers place "fever heat" on their thermometers. But this scarcely gives us any help in understanding the phenomenon. At one period, it seemed to me that we might gain some insight into the matter by a reference to Dr. Richardson's observation upon the results of operations for removing a limb, or other large part of the body. He showed that, when an integral portion of the frame was lopped off, there was a sudden increase in the heat of the mass left untouched. To this augmentation, surgeons do give the name of fever. Now, I think that all physiological physicians who have studied the subject agree that, when any organ is inflamed, it does not permit a circulation of blood through it. It is, therefore, in a manner separated from the remainder of the trunk. Hence arises an increment of heat in the latter. But this has no bearing upon such

diseases as typhus, relapsing, and yellow fever, in which there is no evidence that any particular organ is affected; nor will it throw light upon the 'hectic' which accompanies phthisis and other forms of debility.

CHAPTER XXIX.

ACUTE RHEUMATISM.

Unlearning often requisite—Men before their time—Abandoning old ideas—Selection of points for inquiry—Acute rheumatism, Dr. G. Budd—Natural History of disease—How learned—Fallacies—Homœopathic statistics—Author's account of the disease—Symptoms in detail—Perspiration—Sour smell—Observations upon the odour—Deductions—Indications of treatment—Statistics of Hahnemann's followers—Duration of the disease—Fallacies about elimination—Pneumonia a cause of death in acute rheumatism—Alkalies and lime-juice—Various experiences—Plans and drugs tried—Heart affections—A reprinted memoir.

It has been remarked by many teachers, and by many masters, in nearly every business and profession, that it is far easier to instil correct principles and practice into those wholly ignorant of them, than into those who have already learned bad ones, and believe them to be good. The musketry inspectors at Hythe declare that a novice who never handled a gun can be taught to be a good rifleman much sooner than a gamekeeper, who is familiar with a fowling-piece, and proud of birding skill. So also in medicine; it is far easier to induce a young man to adopt sound, tenable, and apparently truthful principles, than to persuade an oldster to review his ideas, or reform his practice. The practical effect of this natural propensity is, that progress is painfully slow, and

errors a hundred times refuted keep their sway. The preachers of any new doctrine are rarely appreciated during their life-time; Moses, called the Jewish law-giver, was unpopular amongst the Hebrews who, we are told, left Egypt with him; and Jesus, the founder of Christianity, was detested by the rulers and most of the wise men of Judea. Yet, as new generations sprang up, untinctured by the prejudices of the first, each teacher was worshipped in turn as the incarnation of wisdom.

If, then, there is so strong a propensity in every one to adhere to the ideas which were first driven into the mind, we can readily understand how great is the difficulty any man must experience ere he unlearns his first knowledge, and slowly attains something more trustworthy, without the aid of a master or even a single sympathising friend.

I know nothing more painful, in my past experience, than the feeling of doubt which gradually stole upon my mind, respecting the validity of those truths which I had taken great pains to master. As misgiving gradually wielded the hammer of the iconoclast, and broke down from its niche one statue, erst respected, after another, there came the dreary feeling that I had spent my strength for nought, and that I must begin the medical world anew. Yet after awhile the idea revived that there must be some truth in medicine, if one only knew how to seek it aright; and with this came the wish to search for, and to do something to establish, true principles, which should sweep away all the mists engendered by despondency.

With so many new points as then offered themselves for investigation, selection was difficult; to grapple with all seemed impossible, and accident had much to do with the

commencement. But I soon found that the experience of the past was only available, as a line of breakers is to a mariner, to warn him off the shore, but not to direct him to his haven. New and careful observations had to be made in almost every subject ; and this involved so much time, "practice," investigation, and experiment, that years elapsed ere anything like reliable principles were found.

When found, they seemed simple enough, but much observation at the bedside was necessary ere their trustworthiness could be tested. This having been effected to a considerable degree, I conceive myself justified in imparting the conclusions which have been drawn to the profession generally, that they may be still farther examined.

Amongst the many subjects taken up, 'acute rheumatism' has had no inconsiderable place. Whilst Dr. Budd's clerk in London, my sympathies were excited by seeing the fearful sufferings entailed by that disease on the patient at the time, and the "imprimatur" which it often stamped, of death from disease of the heart in the near future. On listening to clinical lectures, and reading various books, attending also with all the energy of a partizan to the controversial letters in the current literature of the profession, I soon found that very strong doubts existed about the real nature of the disease, and its proper treatment. Before doubts could be resolved, it was necessary, in the first place, to decide upon stand-points, to get some accurate definitions, which not only close observers would agree to, but which were also true to nature. But none such could be found.

Before doctors can decide as to the value of "treatment" in any disease, they ought to have a definite notion of what that disease would be if allowed to run an unchecked career.

Such information respecting acute rheumatism was then nowhere to be met with. By consulting certain authors, a student might find the course of the disease, when treated by venesection, &c., minutely detailed; in other books, he could see its conduct after treatment by *a*, *b*, *c*, *d*, &c., described. Yet nowhere could I find, at the time referred to, an account of pure or unadulterated rheumatic fever. Its natural history was wholly unknown. To arrive at this, therefore, became a desideratum. It might, I thought, be discovered that the disease had, like measles, catarrh, small-pox, and scarlatina, a generally definite march; and, as they are, it might be irregular only within certain limits; if so, that progress ought to be proximately known.

For the student to attain this desideratum, two means were open; first, to notice the course of the disease in question amongst those who could not command medical attendance; and secondly, to examine its history amongst those who were treated upon the principles of Hahnemann.

But the experience gained by the former is obnoxious to this fallacy, viz., that poverty, like bleeding and purging, aggravates almost every disease,* whilst the experience gained

* In the composition of these essays, I am repeatedly made conscious of a number of episodical points, upon which I ought rather to write a dissertation than make an assertion. When, as in the text, the opinion is expressed that "poverty aggravates disease," the thoughtful reader will see how much mental work must be gone through ere he can either assent to or disagree with the assertion. If such an one, desirous of ascertaining the extent of the subjects involved in the assumption, allows it, for the sake of argument, he will find the next step to be the question, "How can you, then, expect to cure the wealthy by approximating them to the poor?" I cannot, in a reasonable compass, give even a skeleton outline of the sermon which might be preached from this text. To those who would wish to compose such a memoir, let me recommend attention to the fact, that the only cases in which the poor have advantage over the wealthy, as respects diseases, are

by the latter is scarcely sufficiently copious or exact to be trusted to.*

In the absence of straightforward testimony, indirect analogy, or circumstantial evidence, must be resorted to provisionally; and where this is compatible with clinical observations, it may, to a considerable extent, be trusted.

From all these various sources, then, we venture to draw up the following account of the complaint of which we now treat, and our ideas of the way in which it should be managed.

Acute rheumatism is a disease marked by extreme pallor of the skin, great pain in most of the joints, feverishness, a tendency to perspiration, and a peculiar, but *evanescent*, inflammation of the fibrous structures generally, especially those of the hands, feet, knees, and heart. It has been asserted, upon adequate testimony, that the blood in this disease contains an unusual amount of fibrine, which is, in itself, a good indication of a debilitated state of the consti-

those of scarlatina, physical injuries, such as occur in railway smashes and other accidents, and typhus fever. The cultivation of the intellect has its penalties as well as its pleasures. A highly trained intelligence succumbs to corporeal harm sooner than does the life of a hewer of wood. But a drawer of water, who has enough to eat and drink, will survive a crash that would cause his poverty stricken neighbours to give up the ghost.

* As an illustration of this, I may refer to a short controversy which I had with the homœopathic Dr. Hayward, in the *Medical Mirror*. He accused me of misrepresenting the duration of pneumonia treated on Hahnemann's system. The period assigned by him was fabulously small; and, as both our statistics were drawn from the same source, it was desirable to clear up the discrepancy between us. This was soon done. I calculated the length of the illness from the establishment of the disease to the recovery. Dr. H., on the other hand, calculated the persistence of pneumonia, treated homœopathically, from the time when the first globule was ordered, to convalescence. Such a plan vitiates all Hahnemannic statistics, except those which are given upon the plan adopted by the profession generally.

tution. The tongue may be healthy-looking; but wherever there is excessive sweating, it is ordinarily pale, and coated with a thick yellowish-white fur; occasionally, it is brown and dry, like that in typhus.

As a matter of detail, we assert (1.) that the whiter the complexion is, the greater are the tendency to sweat, the severity of the pain, and the gravity of the disease. I have never seen a mild case in which perspiration was a marked symptom; nor a case in which there was an abundant secretion from the skin that was not above the average in severity; nor a single instance in which sweating was not attended by increased suffering; nor in which a comparative drying of the skin was not a good sign. My observations on this point are strongly opposed to those of Dr. Fuller and others, who affirm that the suffering and severity of the disease are less in those who perspire much, than in those whose skin is dry. The matter is the more important, as the doctors alluded to regard the exudation as an elimination of a poison, a salutary effort of nature, and a thing to be encouraged. (2.) The more profuse the perspiration, the sooner it decomposes and smells sour; and, conversely, the sourer the sweat, the more feeble is the patient, and the more severe the disease. (3.) As the amount of the sudation is a fair indication of the severity of the complaint, so is it an indication of the probability of cardiac complications. (4.) The local inflammation of the hand, &c., is as evanescent as that of catarrhal ophthalmia. (5.) Cardiac attacks are as transient as the other local inflammations. (6.) All local inflammations are more severe and enduring when the amount of sweating is great, than when the skin is dry. (7.) Such treatment as reduces the constitution, *e.g.*, bleeding, purging, calomel, &c., favours

the occurrence, and increases the severity of cardiac and articular complications. The same practice increases the secretion of the skin, and the sourness of the odour exhaled by the sufferer's linen, &c. (8.) The more severe the disease, the larger is the proportion of fibrine in the blood. (9.) During convalescence under the most favourable circumstances, the patient has much difficulty in regaining strength. (10.) In ordinary cases, rheumatic fever is as exhausting as typhus.

Putting all these facts together (and I abstain from accumulating evidence to demonstrate their truth, simply from a wish to avoid unnecessary detail), we draw the deductions:— (1.) That in acute rheumatism there is great poverty of blood, and great constitutional exhaustion. (2.) That its symptoms are aggravated by depletion in any form. (3.) That certain remedies are presumed to have been efficacious by being used to drive away symptoms spontaneously evanescent. (4.) That such plans of treatment as do not diminish the natural vigour, will have more chance of success than those which do; hence the comparative success of homœopathy, with its inert doses of powerless drugs. (5.) The roborants are more useful than a purely expectant plan of treatment.

All these conclusions are, it will be seen, more or less negative. They point out the shoals which are to be avoided, and so far they prevent us making shipwreck; but they do not assist us in discovering the true channel that we ought to follow.

In endeavouring to ascertain whether any true indication for treatment exists, some have had recourse to organic chemistry, have tested the blood and various other fluids, and have endeavoured to produce acute rheumatism synthetically.

Most ingenious the investigations have been. Others have resolved to drop all theory, and to stick to a pure empiricism. A few, again, have determined to "treat symptoms" alone, and have tried to relieve pain with opium, exhaustion by brandy, and inflammation by leeches or blisters. All seem to have success, yet how much is it worth?

To determine this, let us consult the statistics of Hahnemannism, so as to arrive approximately at the natural history of the disease, when not interfered with by active treatment. In 47 cases of acute articular rheumatism, reported by Drs. Wurmb and Caspar, there were only 7 recoveries under 20 days; but of these the duration varied from 4 to 20. The writers conclude that a duration of 8 days is exceptionally short; 20 to 30 is the usual time, 30 to 50 a rare one, and 50 to 70 is unusually long. Dr. Black, writing in the *Homœopathic Journal*, No. 44, p. 230, records his own experience in 15 cases. Two are doubtful as regards diagnosis; of these, one recovered in 9 days, the other was fatal; excluding these, one case recovered in 9 days, three in 12, one in 14. The average duration of the whole being 21 days; in 4 the heart became affected; but it is not clear in one case whether the affection was not dependent on a former attack; in a second the heart was cured in two days; in the third the heart recovered itself to a considerable extent. A *rough* murmur was noticed on the second day, becoming very faint on the fifth, recurring on the thirtieth day, but diminishing again on the forty-sixth. The recovery from the rheumatism was imperfect, and the duration, though reported as 47 days, was from September 25th to February. The fourth case was one of endocarditis, and recovered perfectly.

Amongst Caspar's cases there are two deaths, and two followed by very severe chorea—one of these being fatal.

We may then approximately take about three weeks as the natural average duration of the disease, the extremes varying from four days to three months.

If, therefore, under one plan of treatment the average is longer than three weeks, we must conclude that the method of cure is faulty, if not absolutely prejudicial. If, on the other hand, the average duration is shortened, we may conclude that the treatment adopted has been of real benefit.

Thirty years ago I heard the doctrine enunciated, that six weeks was the normal duration of an attack of acute rheumatism; and that if any case did get well in a fortnight, there must have been an error in the diagnosis! At that time, bleeding, purging, antimonials, and low diet, with mercury superadded in case the heart became affected, was the prevalent system of treatment; and, during its continuance, we students used to think that a man had a lucky escape if he got off without heart disease. Under that system I have repeatedly seen patients *hors de combat* for many weeks after the acute rheumatism had subsided. Pale, like bloodless women, they crawled about the wards of the hospital in a vain search for restoration to health.

Without any exhausting measures being employed, I have seen two months elapse ere the patient's strength has been regained after an attack of rheumatic fever, which only lasted for three weeks. Surely we may say, if a man was so weak, though taking tonics of various kinds from the beginning of the second week of the disease, it would be easy to fancy the immensity of the prostration had he taken an eliminative (!) calomel purge every night, and a refreshing cup of senna tea

in the morning, with frequent doses of antimony, to keep up the cutaneous transpiration, and increase the sourness of its smell.

I know no fallacy in medicine, upon which theories have been built, more marked than that the sour-smelling perspiration, in acute rheumatic fever, is evidence of the expulsion of a poison, that the matter eliminated is an acid, and consequently that alkalies are the remedies *par excellence*. In reality, the peculiar odour is simply the result of decomposition. The theory referred to is as untenable as a corresponding one would be if it were founded upon the hart's-horny smell of a baby's foul napkin. Only fancy the absurdity of treating a bad typhus patient with some acid, because the bed-linen smelt ammoniacal from his incontinence of urine, and there was difficulty in renewing the sheets frequently! Yet, on precisely similar grounds, the generally received pathology, and alkaline treatment of acute rheumatism, have been based.

When such an untenable proposition has been advanced, and is still held by medical professors,—a theory so baseless as to prevent its acceptance by any one with ordinary common sense,—we ought to be more charitably disposed than we are and have been to others who advance preposterous ideas. But ignorance is always intolerant, and will continue to be so in spite of moralists.

When I first adopted Dr. Rees' practice, instead of that instilled into me in my early medical days, and treated my patients with lime-juice alone, the result was far different in every way from that with which I was familiar.

During the twenty years that I have been a hospital physician, I have had under my care more than a hundred cases

of acute rheumatism, and most of them have been treated with lime-juice at the rate of eight ounces per day. In some the heart has become affected, but in all the affection has been transitory. Not one has left the hospital with a permanent cardiac disease. Two patients have died suddenly; one had pneumonia as a complication, which passed off in two days; he was well enough to sit up in bed, and was talking vivaciously when he suddenly died; no *post mortem* was allowed. The other died of pneumonia very rapidly, *i. e.*, in less than twenty-four hours.

The average duration of the cases under my care was at one time fourteen days, and this was made so high by ten of unusually long duration and great severity. In one very interesting example, the duration was due to artificial lime-juice having been substituted for the pure material by the druggist, and being used until I discovered the fraud by the impotency of the medicine. While I was one of the physicians at the Liverpool Northern Hospital, four days generally sufficed for convalescence; and during seven years only one case at that institution lasted for three weeks. Successive junior house-surgeons, fresh from the London hospitals, as they arrived, went through an interesting course of sneers, doubts, and confidence, at and in the use of lime-juice in acute rheumatism.

On being elected to the Liverpool Royal Infirmary, however, the plan met with no such conspicuous success; and from the region of confidence I was myself beaten back into the domains of doubt.*

* I feel so desirous of clearing up my difficulties, that I gladly refer to a a suggestion made by the Quarterly Reviewer. His remarks are in reference to lime-juice: "In some London hospitals it has proved a failure, and the poor usually detest it." Why, then, has Dr. I. found success? "Probably

Thus stood the point: many London men, after a trial of the virtue of lime-juice, gave a verdict "not proven." The physicians at the Liverpool Royal Infirmary, at the very time when I at the Northern hospital was meeting with a success which surprised myself, gave the medicine an ample trial, and abandoned it as unsatisfactory; and when I was transferred to the same institution, my own experience tallied with theirs. While at the one place I saw case after case so bad one day that all motion was impossible, and the patients were weeping with the intensity of their sufferings. Yet in three days afterwards they were walking about the wards apparently well. This, moreover, occurred so frequently, that a duration of a fortnight in the hospital was an extraordinary occurrence. The sequence of cause and effect seemed as marked as anything could be. If the lime-juice was not used in a sufficient quantity, or was old, bad, or factitious, there was no improvement; but as soon as the proper quantity and quality was secured the restoration was immediate. I could as soon doubt the efficacy of opium in securing sleep, as I could the

because, in Liverpool, many of the patients were seafaring and amphibious characters, or with their blood brought into a scorbutic condition by a residence in the close alleys of an ill-built town; whereas, in the metropolis, such forms of acute rheumatism are exceptional at the western hospitals." Unfortunately there does not seem to me one single idea in the sentences quoted which my experience assents to. Scurvy is common yet amongst ordinary seamen. It is rare to find a Liverpool hospital, at any time, without one or more scorbutic patients in its wards. Yet no one has ever associated rheumatic fever with scurvy. Myalgia is a constant symptom of the complaint; but that is another matter. In the next place, I have never heard good lime-juice abused; the bad, it must be allowed, is nasty; and I have only once had to suspend its use from a prejudicial effect being produced (purging). Again, acute rheumatism is not peculiar to close alleys, &c., but occurs amongst the scions and servants who live in our mansions. Unable to solve the problem referred to in the text, I still invite assistance.

efficacy of lime-juice in curing acute rheumatism. Yet, in another part of the town, in another institution, I began gradually to lose faith in the remedy. The reason of this I cannot as yet make out. It may be that there are varieties in the disease of which we know little; that the complaint is influenced by local circumstances, not yet thought of nor understood. It may be that, as some epidemics of small-pox are more deadly than others, at one time the cases of rheumatic fever are mild, at others severe. It may be that endemic influences vary in their intensity, just as malaria does; few now venture to deny the value of quinine in ague, yet every physician can recal instances in which it has been apparently useless.

To demonstrate, if possible, the cause of this uncertainty, I have treated my patients in a variety of ways. Having heard extraordinary vaunts of the value of large doses of carbonate of potash, in one of the London hospitals, I determined to test the plan fully. The result has been a failure, and I am forced to the conclusion, either that certain symptoms have sometimes gone by the name of acute rheumatism, although having no real claim to the title, or that experience gained in one locality is useless for another. As the doses used were in some cases sufficiently large to induce severe purging, there can be no doubt that the failure was not attributable to a feeble use of the drug.

After the carbonate of potash, I gave a full trial to the nitrate, after that to quinine, to opium, to wine, to steel, to cod-liver oil. Nor did I omit the use of such old-fashioned remedies as liquor ammoniæ acetatis, and the still more simple one of pure water.

From none of these plans have I been able to obtain so

satisfactory a result as from the treatment by lime-juice alone, although the balance in its favour over warmth, comfort, and nutritious diet, without medicine superadded, is not unvaryingly large.

The practical effect of the doubt, therefore, respecting lime-juice, is simply to modify the belief in the constancy, certainty, and celerity of its operation. Of its superiority over any other medicine yet administered, I have no misgiving.

The way I employ it is simple :—The patient is directed to take at least eight ounces of it in the day; and no other medicament of any kind whatever is used, unless it be opium to procure sleep at night. If the skin is very white, the tongue much loaded, and the perspiration excessive, two drachms of tincture of the sesquichloride of iron are given in addition during the twenty-four hours, and some wine at dinner-time and in the evening. If, during the progress of the case, the hands or feet become unusually swelled or painful, they are merely wrapped up in cotton wool, which has been freely sprinkled over with tincture of camphor. Blisters seem in many instances to do good, but when one has been applied to one spot, and the patient is allowed to decide for himself whether he will have another vesicant placed upon another part subsequently attacked, he almost invariably declines it. He thinks the cure worse than the complaint.

If the heart becomes affected, I make no difference in the plan proposed; I continue the lime-juice as if nothing unusual had occurred, with the full confidence that the complication will be evanescent; nor have I yet been deceived. When this accident occurs, mercury, bleeding, or cupping seem to

to me have the effect of aggravating the mischief, and of rendering a transient complaint a permanent disease.

Of the *modus operandi* of lime-juice, I can form no idea. Vegetable acids, *e.g.*, citric or tartaric, are not substitutes for it. Lemon-juice is inferior to it, though to a very small degree, so that we infer that it is not an acid particularly which does the good. I have never known it purge, though it has seemed to gripe occasionally. It acts quietly, as do arsenic in lepra, quina in ague, and colchicum in gout. This treatment is very simple, and to the patient very pleasant. One of its chief advantages is, that it does not aggravate the extreme debility which attends and follows the fever. It ought entirely to supersede the system of drenching, once so commonly practised under the notion that a poison had to be eliminated out of, or destroyed in, the system.

I must add, that since the preceding pages were written, I have had under my care three unusually protracted cases of acute rheumatism, attended with extreme debility, total anorexia, and a constant tendency to relapse. These gave me opportunities for testing the real value of every suggestion hitherto offered, and all drugs proved equally worthless for cure: this was at last effected, and suddenly, by change of air. These cases seem to unsettle the conclusion already drawn; to a certain extent they do, but that extent is small. We do not lose faith in arsenic because many a case of lepra is uncured by it; nor do we have less confidence in quinine because we see at times a man who is cinchonised have an ague fit; we yet believe in mercury, though it often fails to remove "secondaries," and we still prescribe opium for the relief of pain, though it is powerless to arrest the agonies of gout.

In fine, we constantly have to confess that we possess no single panacea, that disease often baffles our best endeavours, and that the most skilful physician is but human after all. But though a man, he may be a destroyer rather than a helper; and surely it is something to know how we may certainly escape being the former, if we cannot invariably be the latter.

The following is a copy of a paper in the *London Medical Review* for June, 1861, reproduced here to supplement the preceding essay :—

"On Sour-Smelling Perspiration in Acute Rheumatism, and its Significance as a Symptom. By Thomas Inman, M.D. Lond., Physician to the Royal Infirmary, Liverpool, Lecturer on Medicine, &c.—There is no symptom in acute rheumatism which strikes the senses of the physician more forcibly than the copious sour-smelling perspiration commonly attending it. Upon this single symptom certain theories respecting the disease have been built, and on these, again, distinct lines of practice have been adopted. One maintains that some poison is present in the blood, and that sweating is an effort of nature to weed it out. To support this, it is averred that the symptoms meliorate in direct proportion to the freedom of perspiration. Another goes still farther, and maintains that, as the sour odour is due to lactic acid, so that acid must, in some way, be concerned with the poison to be eliminated; the theory is supposed to be demonstrably proved, when, after this acid has been artificially introduced into the blood, cardiac inflammation frequently results.

"As a natural consequence of these views, we find some authorities advocating an eliminant plan of treatment. They encourage perspiration, give a daily purge, and, if possible, get the kidneys to act freely. Others, while not opposing strongly the first, consider it a better plan to endeavour to destroy, or neutralise, the acid in the blood. To effect this, alkalies are freely administered from the earliest stage of the disease up to the latest.

"These are important theories to be built upon so few facts, and we shall do well if we inquire into the stability of the foundation, ere we trust ourselves to the superstructure. We ask—

"1. Is it a fact that all cases of acute rheumatism are attended with a sour-smelling secretion from the skin?

"2. Does the occurrence of profuse sour sweat relieve the other symptoms?

"3. Are those cases the mildest in which the perspiration is the freest and sourest?

" 4. Is the sweat sour when first it is produced, or is its odour the result of decomposition?

" 5. Does a similar sour odour accompany perspiration in other diseases; and, if so, have they anything in common with acute rheumatism?

" 6. Why is the perspiration of a rheumatic patient more frequently sour than that of other people?

" 7. Are the results of the eliminant or alkaline plan of treatment so conspicuously successful as to warrant us in taking them as corroborative of the theories upon which they are founded?

" 1. In answering this question, we are met *in limine* by the fact, that some practitioners consider perspiration to be a necessary accompaniment of acute rheumatism, and refuse to acknowledge as such any attack when it is absent. This, however, simply begs the question, and refuses to acknowledge a fact unless it squares with a theory. As Dr. Copland leaves out this symptom from his definition of the complaint, it is clearly non-essential, according to his judgment, and experience teaches us the same lesson. Perspiration is absent in about one-third of the cases which have come under my own notice, and has been excessive only in one-fourth. A sour odour is not perceptible unless the sweating is very considerable.

" 2 and 3. I have never yet seen the symptoms relieved by the occurrence of perspiration, or by its excess. So far from this being so, I have habitually noticed the reverse, and would say, after an experience extending over twenty years, that the patient improves in proportion as the skin becomes dry; that a return of perspiration is always accompanied by an aggravation of the other symptoms; and that those cases are the worst in which the sweating is most excessive in quantity and most acid in odour. With this experience it is impossible to regard the secretion as a salutary effort of nature to eliminate a poison, unless we are prepared to hold the paradox—'the more a deleterious matter is expelled, the worse it is for the body.' Of course it may be argued that an excess comes out because an excess is present within, as in confluent small-pox; but this argument fails when it is shown that the symptoms improve when the perspiration is checked, and nothing comes out at all.

" 4. In answering this question, we must first agree upon the evidence which we deem conclusive. It seems to me that if we can ascertain—1. That the perspiration when it first appears is free from any unusual odour. 2. That no sour smell is noticed after a complete change of body-linen and sheets, and, for a considerable period subsequently, we have *primâ facie* proof that it is not the natural perspiration alone that gives rise to the odour.

" To illustrate our meaning, let us suppose that we visit a child who wets its bed every night, and notice a strong smell of hartshorn. If we want to know whether the child is in the habit of piddling ammonia, we

should try and investigate the state of the urine when passed, or the condition of the linen on the morning after it had been changed. This has repeatedly been done, and every one now knows that the origin of the volatile alkali is from the decomposition of the urine, and not from its primary state.

"To determine whether there is any analogy between the alkaline smell of an urinous bed and the sour couch of a rheumatic patient, I have paid special attention to the smell of the latter's perspiration when first it has been formed, and have been unable to detect any sour odour, though this can readily be noticed in a few hours. I can best point this remark by narrating the case of a medical student recently under my care, who, with his attendant, paid special attention to this subject at my request. Mr. R., who had twice before had acute rheumatism, asked me to attend him for severe pain in the chest and limbs. The skin was moist and perspiring, but there was no peculiar odour; next day there was excessive perspiration and a sour smell. The case threatened to be a bad one; the treatment consisted of lime-juice with opium at night; the sour smell increased in intensity till the third day, when it was imperceptible. This was accounted for by the whole of the body linen and the sheets having been changed. In two days it was as strong as ever. In two days more the perspiration had ceased; in ten days from the first attack the patient was convalescent, and has continued well ever since. I often cross-examined him upon the point, and he steadily assured me that the perspiration did not smell sour when first it appeared, nor until it had time to decompose.

"5. Being now on the look out for other instances in which there was sour smelling sweat, I was referred to a patient of one of my colleagues, in the Royal Infirmary, suffering from pleurisy, in whom the perspiration was said to be as acid as ever it is in rheumatism. As I had previously noticed a similar phenomenon in phthisis, and other diseases of debility, I went to examine into the statement. There was no unusual smell to be detected, however, *for the patient had just changed all his body linen.* I have at the present time under my care at the Infirmary a young seaman, whose symptoms indicate incipient decline. He has already been two months in the house, and has never had a symptom of rheumatism, acute or chronic; yet, while he was confined to bed, he exhaled as sour an odour as ever I smelt in the disease in question. This was accounted for by the fact that he perspired very profusely, and was not sufficiently cleanly to change his clothes frequently.

"Very recently, too, I have had the case of a young surgeon brought to my knowledge, who was extremely uncomfortable about himself, for he perspired much, and noticed that the smell of the secretion was precisely similar to that attending rheumatism. With this idea he had been dosing himself with alkalies, and continued to do so until my friend, Dr. Rawdon,

our then junior house-surgeon, told him of my views, and persuaded him he had nothing to fear.

"On the other hand, I have now a severe case of acute rheumatism, in which, though the perspiration has been copious, the smell has never been distinctly acid; and have recently had another, in which there was neither perspiration nor odour.

"On examining the literature of the subject, we find that 'lactic acid is more than usually abundant in the sweat of rheumatism and gout, and probably also uric and acetic acid; Dr. Prout detected the last in hectic fever, and both it and lactic acid may be present in the puerperal states, fever, and in erysipelas. Anselmino found free acetic acid in women during their confinement, and Stark an increase of lactic acid in scrofula, rickets, and several cutaneous eruptions.'—Copland, Art. 'Symptomatology,' sect. 30. I can remember to have noticed a sour smell, like that in question, in the case of an elderly lady, whose prominent symptom was excessive debility and profuse sweating.

"On comparing together those diseases, then, in which sour smelling sweat is a common sign, we find that they have little in common except great poverty of the blood as regards globules, richness in fibrine, and constitutional debility. We do not commonly find in any one of these that class of symptoms supposed to be due to the presence of lactic acid in the blood.

"6. But the question still arises, How is it that this peculiar odour is more noticed in rheumatic fever than in any other disease? The answer is a very significant one; the assumed fact is untrue; or, if true, it has a ready explication. It is untrue, for we have the same smell in parturient women who have been excessively exhausted by their labour, who perspire profusely after it, *and are too poorly to have their linen changed.* The explanation of the frequency of the smell in acute rheumatism is simply this, that when the sweating is abundant, the pain is always so severe that patients cannot endure the motion consequent upon an attempt to change their body clothes, sheets, &c.

"There is every reason to believe that the sour smell is the result of decomposition *after* the fluid has been secreted, and deposited outside the body; consequently, no theory can fairly be founded upon the change, as regards a poison being eliminated, and that poison being lactic acid. In fact, we may compare, for purposes of argument, incontinence of urine, and incontinence of perspiration, one with the other, the two having much in common.*

"* I have already called to the attention of the profession (*Foundation for a New Theory*, &c., p. 292), that debility has a direct tendency to increase secretion, including that of the skin; also, that such secretions decompose more rapidly than others, and that they occasionally contain material not found in

"7. Respecting the results of the eliminant and alkaline plan of treatment, I would say little; for the only experience I have of them has been gained by watching cases not under my own care, and by perusing records in various books and journals. After close attention to the subject, I have never been able to satisfy myself that the sour smell has diminished under the use of alkalies, so rapidly as it does when lime juice alone is employed.*

"In the treatment of acute rheumatism, it is necessary to see that the patient has good lime-juice, and plenty of it. I had one case under my care for ten days before I found that the patient was taking a factitious liquid—acidified lemonade. She was getting worse during the whole of that time. I then got for her the pure material, and she left the house well in four days afterwards. I have now under my care, too, a girl who did not improve in the smallest degree so long as she took only three ounces per day, but as soon as she took the quantity I originally ordered, and which I habitually use, viz., eight ounces per day, she improved rapidly. When first I began to use lime-juice, I had many such cases, quite sufficient to demonstrate that quantity, as well as quality, had to be regarded.

"I have, in a vast majority of cases, found all the symptoms meliorate within two days after the lime-juice has been given. But this conclusion was vitiated as an available stand-point for argument, as soon as I ascertained that in some few instances the whole symptoms of acute rheumatism would subside rapidly without any special treatment whatever.

"On the other hand, it is true that a number of cases evince no tendency to spontaneous cure; that lime juice alone does not always cure rapidly; and that patients do get well when taking diaphoretics, purgatives, and alkalies. The question, however, mainly resolves itself into one of time, and average; and if we find, as I have done, that the average duration of acute rheumatism under unlimited administration of lime-juice is about ten days, while the average duration of the cases treated on the eliminant or alkaline plan exceeds that period considerably, we may conclude that

healthy ones. The facts above alluded to corroborate this view strongly. The white complexion, blankety tongue, fibrinous blood, and the excessive weakness of acute rheumatic cases, all show how much debility is present; consequently, we can readily understand how it is that the sweating is the worst, and becomes the soonest sour in the most severe forms of the disease.

"* I cannot help thinking that the alkaline plan of treatment is untenable, until it is demonstrated that the salt supposed to be formed by the commingling of the acid in the blood and the alkali in the medicine is harmless. We know that the salts of arsenic are almost as deadly as arsenious acid, the iodides act much the same as iodine; cyanide of potassium, muriate of morphia, and carbonate of lead, though salts, are all potent and energetic in operation, while all the salts of mercury act much in the same way. In like manner, urate of potash may be as bad as uric acid, and lactate of soda as active as lactic acid.

the success of the alkaline treatment cannot be adduced as a proof of the soundness of the theory on which it is based.

"We conclude from the foregoing considerations, that the supposed facts on which the pathology of acute rheumatism has been built require verification, and this cannot be effected without a careful elimination of all possible sources of error. If, after this examination, the original views are maintained, the next inquiry must be into the interpretation of Nature's signs.

"Until this has been done, we cannot logically show a warrant for belief in the current theories of the day respecting this disease.

"Since writing the preceding, I have met with two other cases, which seem strongly to bear out the view of this question which I have suggested. The first was in a gentleman, the subject of a mild attack of rheumatic fever, and in whom there was excessive perspiration only for a day or two; so long as he was unable to change his body clothes, the sour odour was such, that his wife was almost sickened by it; but when he was able to put off his old 'Guernsey,' and don another, the smell ceased; the lady remarking that "the smell seemed to be in the woollen, and not in the skin."

"The next case was that of an elderly man, very stout, but very active. I never saw him when he was not perspiring; and while he was sitting in my room, he was constantly mopping his face and his bald head. He always had good health, and only came to consult me respecting his son. As he spoke, I became conscious of a very peculiar odour about him, which, for a long time, I could not distinctly classify; on leaving the room, however, and returning suddenly, I recognised at once the sour odour which is so often spoken of as characteristic of rheumatic fever. The explanation of its existence here is easy. The man was always sweating, and rarely changed his body linen, and still more rarely changed his clothes; consequently, there was always about him a quantity of decomposing animal moisture."

CHAPTER XXX.

ON RHEUMATISM AND RHEUMATIC GOUT.

Schoolboys and authors—Rheumatism—Author's introduction to it—Its visits to him—Rheumatism and myalgia—Rheumatism and gout—Rheumatism and fingers—A disease not yet understood—Rheumatic gout—Wasting palsy—Proposed limitation—Locality of pain—Moist skin—Influence of moist cold—Rheumatic headache—Alliances of rheumatism — Influence of warmth — Treatment proposed—Method of using heat—External and internal—Climate.

Like many a lazy schoolboy when called up to recite a lesson that he has not learned, or like a very diligent one who has to acknowledge that the imposed task has been too hard for him, I am obliged to confess that I advance to my master—him who reads these pages—with great reluctance on the present occasion. I would willingly shirk the duty that I have imposed upon myself, and pretend that I had wholly forgotten that such a complaint as rheumatism exists; but such a proceeding would show me so distinctly to be a moral coward, that I must perforce address myself to the hopeless task, and go through with it as best as I can.

When a boy, I was frequently unable to write my exercises for school, on account of pain in the shoulder and shoulder blade; the same cause made me unable to play; yet the suffering only came on at intervals during the day, and got for me the character of a malingerer. As the same affection

came on when school days were over, and 'shamming' was out of the question, I was told that the pain was rheumatism. Sometimes it would awake me at night, and every morning for days together the cap of each shoulder ached to such a degree that I could not raise my arms without great difficulty. When in bed, if I put my hand to the spot, it felt cold; but if, by throwing the arm over my head, I relaxed the muscle, and made it warm by my hand, the pain abated. During the day, the morning's misery went away, but I never knew how and when. Every afternoon my arms were free, every night they were aching, and every morning they were locked to my side.

At length I became an apprentice doctor, and read every single thing which I could find respecting rheumatism; but, though muddled by much learning, I was really no wiser than before. Then, in due course, I "walked a hospital" in London, and bothered the doctors by no end of questions on the same subject, the conclusion being that I was not advanced in my knowledge. Then it fell to my lot to be the House Surgeon of the Liverpool Infirmary; and, on going through the medical wards, I found that about half the patients' tickets were marked "rheumatism." During my period of office, there were four physicians whose practice I could watch, and from whom I could solicit information. This was a grand field for observation, and I availed myself of it to the utmost. I took notes of all the cases, and tabulated the results of the treatment; yet still my ignorance remained. It is certain that many patients improved enough to go out, yet inquiry showed that others treated on the same plan were no better, and that many treated on different plans got well. All that could be said was, that those who reco-

vered did so, "somehow or other." Why others were not benefited nobody could tell. Subsequently, I discovered that those who got well had only "myalgia," then classed as "rheumatism," and that they recovered simply from rest and comfort.

After a time, I had myself a furious attack of the disease, awaking one morning with pain in both arms, in the jaw, in the breast bone, and the shoulders. Unable to move my arms, and barely able to eat, I was almost helpless. But by dint of repeatedly putting my arms into hot water I contrived to dress. So long as each forearm was heated, I could move my hands and fingers; yet, as soon as the muscles became cold, they seemed to be paralysed. During the day, the suffering abated; and in four days, I was well enough to take a sea voyage. The weather was tempestuous, the steamer very lively, and the passengers all sick. For ten hours I was like the rest, but my rheumatism was gone, and it has never returned.

After another period, I became the Physician to the Liverpool Northern Hospital, and again studied the complaint in question. To enable me to hear as much as possible about it, I made it the subject of an essay at our local medical society; yet all ended in disappointment. The same result followed me in my position as Physician to the Liverpool Royal Infirmary, and I am constrained to declare that I am almost as ignorant now about rheumatism as I was when a boy. It is painful for a doctor to make such a confession; but it is not more so than to state that certain other diseases, such as hydrophobia, internal cancer, and others, are incurable by human agency.

Yet, though confessing my ignorance of much, there is

something that I fancy has been learned, both as regards pathology and treatment, which we may thus enunciate:—

1. Under the generic term rheumatism (I am not speaking in this essay of rheumatic fever, or acute rheumatism, but only of that form called chronic), many different conditions have been described. Myalgia, or pain in the muscles from over-exertion, has been mistaken for rheumatism more frequently than can be imagined; and various drugs and many a plan of treatment have been said to be good for rheumatism, when they who have been experimented upon have not had anything more than limbs aching from fatigue, which get well of themselves if allowed to rest. Many a case of lumbago which is called rheumatic is the result of some laborious occupation which has been wholly forgotten. On this subject I can speak feelingly. One morning, I awoke with, as I thought, the very severest rheumatism in the cap of the shoulder that I had ever felt; the idea of its return made me miserable, yet, after awhile, I remembered having had the day before an hour's practice with a heavy "Indian Club," and then recognised the suffering as myalgic. From a corresponding cause I have had lumbago. The distinction between myalgia and rheumatism not having yet been recognised by systematic writers has made almost all extant literature on the latter wholly unreliable. The former I shall treat of in a separate essay.

2. Under the head of rheumatism many pains have been classed, arising from what is commonly called poisons in the blood. Gout, for example, is a fruitful cause of such, and the association between cause and effect is seen by the constancy with which a fit of *podagra* will cure the pains in the joints or limbs. To one who is a sufferer indeed from

such pains, their absence is an indication that for a time the gout has left him. Again, we find that small-pox is almost invariably ushered in by rheumatic pains in the back, the severity of the disease being in proportion to the position and intensity of the lumbago. Here, it is interesting to notice that with the eruption the local suffering ceases. In like manner, rheumatic pains attend influenza, cancerous, and other malignant affections, and the presence of such poisons as mercury and lead. There is, moreover, a form of rheumatism which has been traced to the absorption of the gonorrhœal poison, and another to the presence of syphilis in the system. Nodes on the shins, arm bones and head are sometimes described as "rheumatic" by patients. In these and similar instances, although a doctor may talk of "rheumatic" pains, he does not in his own mind confound them with that which he calls chronic rheumatism.

3. There is yet another affection to which the name of rheumatism is given, which is, though very common, not understood. I refer to a condition of the joints of the hand, in which every articulation is marked by a white or faintly pink swelling. Both hands are usually bad at the same time, and all the finger-joints are implicated. At one time, this was regarded as an appanage of advanced age, but I have found it alike in the young and in the old—in my grandmother, and in a damsel barely twenty. It attacks the poor and the rich indiscriminately, the servant and the mistress, the man and the maid. It cripples the mother, and may equally disable the paternal breadwinner, the doctor, and his client. Sometimes the affection eventuates in absolute deformity.

To this variety the name of rheumatic gout has been given,

but as if to show the poverty of medical nomenclature, the same name has been given to another affection whose phenomena are very different. My own belief is that the disease to which I refer is one *sui generis;* that it is not rheumatism nor gout, but a complaint that requires and deserves a separate study. In it every joint of the fingers is swollen, hot, painful, tender to the touch, stiff in movement, and generally aching; but, as a general rule, there is no redness, the skin being, if anything, paler than usual. The pain complained of is not simply from the distension of the fibrous tissues, for it comes and goes without there being any sensible difference in the bulk of the swelling; nay, I think we may even go so far as to say that the pain very often is severe before any enlargement is seen. The distension also will remain, yet pain wholly disappear.

I have never yet been able to make a *post-mortem* examination of the joints when in this condition, and the suffering consequent on manipulation is so great that I have rarely fingered the swelling. Nevertheless, its shape so closely resembles that of the synovial membrane surrounding the joint, that I believe in the existence of an inflammation and thickening of that tissue, and some consequent effusion into the cavity of the articulation. This seems to me to be wholly independent of struma. So far as I have been able to judge, I think that it does not generally eventuate in any bony change. Yet, as I have only been able to trace the progress of a dozen cases, this opinion is worth little. It is not only possible, but physiologically probable, that chronic inflammation of a membrane in close proximity to the ends of such small bones as the phalanges are, will produce hypertrophy or exostosis of the osseous structures.

In cases of this kind, I have endeavoured to bring about a cure by pressure, by plaister-strapping, by the use of such irritants as iodine and turpentine, and by iodide of potassium internally. Yet, every such effort has been a failure. Abandoning then the attempt to cure, I attempted to palliate by the free use of morphia ointment, containing a grain to the drachm. This the patient is directed to rub in gently, and, if possible, to keep the hands constantly greased therewith. After two days of this treatment, the relief to pain is decided, and the improvement in this respect goes gradually forwards until the individual can use the hands again. Sometimes the cure seems to be expedited by heat, but in many instances warmth aggravates the suffering. I cannot charge my memory with any case that has been wholly cured, but all in which the morphia has been used have been so much relieved that the affection ceases to give much trouble. The pain in chronic cases seems to be determined by the weather, the general health, or any exhausting complaint; cold moist wind, especially that preceding snow, always produces or aggravates the suffering.

The form of disease to which I think the title rheumatic gout more properly belongs, is one in which the joints of the feet and ankles are principally involved, and in which there is manifest inflammation, the skin over the affected spot being red and shining. Like the former, the complaint is symmetrical; it is common to all ages, and is extremely difficult to cure. It differs essentially from gout in not being in the smallest degree paroxysmal, having no tendency to wear itself out temporarily, nor to produce œdema and chalkstones. On one occasion I had a patient under my care who had suffered severely from it during the preceding winter. As he

had then been in another town, and under a first-rate doctor, I was naturally anxious not to be inferior to my neighbours; yet, do what I would, the young man neither was cured nor relieved. The same had happened before, the spring and warm weather alone bringing comfort. I abandoned him reluctantly as a hopeless case, yet not many weeks after I met him whom I had left a cripple, walking as well as if nothing ailed him. On inquiring who or what had cured him, he told me that he had done nothing more than go into the country to a seaside spot, where the houses were built on sand, and that the change had been immediately beneficial, and that he was quite well in a fortnight. But he was unable to live there, his business taking him to various towns. His complaint returned, and he ultimately died in a London hospital, being wholly incapable of work.

4. Amongst rheumatic affections have also been classed those cases of wasting palsy, so well described by Cruveilhier and Roberts. This, in the early stage, is frequently attended by dull, and sometimes by very acute pains, referred in some persons to tendinous, and in others to fleshy parts of the muscles, and the sufferings may endure for weeks before either the patient or the doctor can discover any atrophy. A similar affection also precedes hemiplegia, and I have known a man complain of habitual rheumatism of the lower extremities for years, in which the cause was at length ascertained to be softening of the spinal cord. These cases may, however, fairly be described as myalgic.

When so many different diseases are grouped under one generic name, we can readily understand the difficulty of a student in understanding them all. We propose to confine the word rheumatism to some change apparently confined to

the white fibrous tissues, and especially those about the joints, in which there is almost universally a coldness on the surface of the affected parts, a dull aching pain aggravated by stretching and by movement, and in which the constitutional health is often indifferent, and sometimes very bad. The suffering is not confined to tendons, ligaments and fasciæ, but apparently spreads along the fibrous tissues into the bodies of the muscles, thus apparently involving the fleshy parts. Generally the complaint is unattended by organic change; in a few instances, swellings in some parts, and contracted sinews in others, show that some structural change has taken place.

This affection is sometimes attended with an exceedingly moist condition of the skin, to such a degree that in handling a man you seem to be touching a cold fish, or a wet piece of leather. So far as my experience has gone, these cases are invariably the worst, for no sooner is the patient relieved by warmth than he begins to cool himself by perspiration; and nothing aggravates the complaint more than moist cold.

When we inquire into the causes of rheumatism, we shall find that the most common is exposure to cold, especially when this is combined with poor living and insufficient clothing. But it is not pure cold which is the most prejudicial, it is more especially that which is combined with moisture. The best illustration of this is drawn from the records of Arctic travellers, who state that, if wintering amidst the eternal ice near the poles, there is a period, both in autumn and in spring, when the perspiration and the breath of the men are condensed as moisture throughout their lodging apartments; the sailors being, as it were, thus compelled to sleep in damp clothing. At these periods,

rheumatism is almost universal amongst the crews; but so soon as the winter's cold is sufficiently intense to freeze the moisture, or the summer heat sufficient to dissolve it, rheumatism becomes vary rare.

In consequence of rheumatism being mainly produced by moist cold, it is most common amongst those whose avocations expose them to the danger. Drivers, for example, of public conveyances, who are frequently wet through, and yet obliged to stick to their seat, and to take no exercise to circulate their blood, are particularly liable to rheumatism of the worst form. In the same category we may place ostlers, grooms, seamen, bricklayers, and many common labourers.

Of the connection between even dry cold and rheumatism, many an individual who has to drive for a long period over bleak downs or in keen winds well knows. He leaves home, perhaps, warm and comfortable, but as he proceeds the cold begins to creep upon him, and as it does so he becomes sensible of a gradually increasing cephalalgia, until at length he is almost dazed by its severity. This rheumatic headache he traces distinctly to exposure to the keen air, for he knows that it can be prevented by a warm fur cap, by a closed carriage, or any contrivance to establish warmth.

When the physician recognises the fact that cold, and especially moist cold, is the most common cause of rheumatism, he naturally seeks for its cure in dry heat. But here he is met by the assertion of many a sufferer that the pains increase in severity when he is warm in bed. This fact, therefore, which is certainly true, next demands our attention, and we must endeavour to comprehend it. We have before us two distinct statements—one, that the rheumatic spot is colder than the rest of the body; the other,

that the pain is aggravated when the heat outside the part is increased. These suggest to us other facts — viz., that severe cold produces suffering, which gradually increases in severity until it passes into frost-bite and ceases; that when the spot is so pained, it is cold in comparison with other parts, and bloodless; that bloodlessness will sometimes produce a disagreeable sensation; and that when a part has been nearly frozen, and it is being thawed by heat, there is very severe agony occasionally produced, although sometimes this does not go beyond an ache. I have, for example, seen a lot of boys, after a snowballing match, in every stage of suffering, from that which simply brings out a laughing, "Oh, my eye! how it hurts!" to that which produces floods of bitter tears, agonising cries, and absolute syncope from the severity of the distress.

Hence we conclude that the pain of rheumatism is allied to the "hot ache;" that when the part is cold the blood is more or less stagnated; and that when it is being pushed forward by the more vigorous circulation around, there is a pain resembling that produced when the blood returns to benumbed extremities. Now, as the pangs of hot ache depart as soon as the flow of blood through the half-frozen parts becomes re-established, it follows that an attempt should be made in rheumatism to enable the blood to pass readily through the affected spot.

This can be done by the application of heat locally, by friction, by shampooing, by the application of such a local irritant as turpentine, or by all of these combined. Of the value of this treatment, in ordinary cases, I can speak very favourably, for I have repeatedly noticed that the pain of rheumatism has passed away as soon as the natural warmth

has been restored to the parts affected. The cure of rheumatism would thus appear easy, and perhaps it would be so could the patient always live in a hot bath, or be perpetually shampooed. But this cannot be; and in practice we find that the heated parts soon become abnormally chill, and, when cold, become once more the seat of pain. The reader will naturally imagine that if warmth were all that is required, a cure would be effected, in case any sufferer should go to reside in a hot climate. Practically, he is right; such a measure would, and indeed does, effectually cure the victim. But this unfortunately does not apply to the poverty-stricken people of our towns and villages, neither can it be adopted by the majority of our middle classes.

If, then, we are debarred from the use of the best remedy in the vast majority of cases of rheumatism, the question to be solved is, What is the best substitute for it? Philosophical analogy says, Endeavour to make the patient warm with good blood, and try to keep him jolly in every available way. In detail, I have endeavoured to carry this out by recommending warm food, hot drinks, the use of spices and such stimulating medicines as iodide or bromide of potass, turpentine or balsams, and tonics generally. Hot-air, hot-water, medicated baths, &c., are valuable. I direct the patient not simply to go into hot water, but to put hot water into him. The best illustration that I can give of the value of this is the following: Mr. B. T., a large and powerful man, became affected with rheumatism to such an extent that he could not write, yet he told me he was well as long as he was in a hot bath; but he could not be there and doing business, and as soon as he left the water and became cool, the pain returned as bad as ever. I then told him to put hot water into

him, in the shape of a tumblerful of steaming whisky toddy, three times a day. He did so, and the next day was well.

But the treatment here recommended unfortunately does not answer for all; with some, heat aggravates the pains, with others, it simply causes sweating. The same may be said of shampooing, friction, and liniments of every kind. The doctor, indeed, after using everything that science, empiricism, and old women can suggest, is often obliged to retire discomfited. Rheumatism, like many other diseases, has no tendency to get well spontaneously, as a general rule; and the vast numbers of people who are bed-ridden therefrom, tell but too surely of the powerlessness of medicine. 'T is true, 't is pity, and pity 't is 't is true.

After giving much thought to the observations made in the *Medical Quarterly* on the subject of this chapter, I am indisposed to make any change in what I have already written. Of the essential difference between myalgia and rheumatism, I do not entertain a doubt. Nor have I the smallest misgiving as to the ease and certainty with which the diagnosis between them can be made. The first is very easily managed, the latter is, in many instances, wholly incurable. It would be a waste of time were I to enter here into the reasons why I dissent from the nomenclature suggested by the reviewer, which are, in my opinion, faulty in the extreme. Indeed, there are few medical definitions that are perfect. They have all more or less a tendency to encourage pedantry rather than therapeusis.

CHAPTER XXXI.

ON MYALGIA.*

Subject approached—Difficulties—The muscles and their peculiarities in disease—Cases in point—Dr. Roberts on muscular atrophy—Points established—Muscular physiology—Details of myositis—Muscular irritability—Basis of treatment—Value of rest, of warmth, of shampooing, of anodynes—Wood's syringe—Strapping—Support—Local irritants bad—Cautery—Acupuncture—Tonics—Myalgia in hot climates—Reflections thereupon.

I do not know a more difficult subject in the whole range of medicine than that of myalgia. If we approach it physiologically, we are puzzled to explain how it is that parts essentially nerveless are the seats of more severe pain than is ever experienced in the nerves themselves. If we approach it pathologically, we are astonished to find that a physical condition of the muscles is in one man associated with intense suffering, while in another there is no pain at all. If we approach it therapeutically, we are perplexed at finding a means of cure, powerful in one case, impotent in another; and, if we approach it critically, with the determination to discriminate between the various forms of the complaint, we

* I do not in this chapter go fully into the subject, inasmuch as I have already published a treatise upon it (MYALGIA: Churchill, London, pp. 307); an epitome of which would occupy many more pages than I care in these Essays to bestow.

are arrested *in limine* by the impossibility of using definitions which do not involve lengthy theories.

To give examples of these difficulties, we have only to turn to the pain in the tendo-achillis, so common in gout, and to the suffering in the tendinous insertions of this muscle, and in the plantar fascia, so common in the disease to which the name of rheumatism has been given. In sciatica, we have pain repeatedly referred to the 'fascia lata' of the thigh; and I have recently been attending a lady, in whom the tendon of the 'triceps extensor cubiti' has been the seat of agony, exceeding that of sciatica. Yet in these parts few, if any, nerves are to be found by the most painstaking microscopist. My belief is that they are wholly absent.

But the difficulty does not stop here. Whatever may be the physiological explanation of the pain, it is unquestionably influenced by three conditions, cold, heat, and life; for the former almost invariably aggravates the suffering, while, on the contrary, heat relieves it, and the intensity of the agony is in direct proportion to the patient's exhaustion. The severest myalgia (this word includes pain in tendon or fascia as well as in muscle) I ever see, is in those whose muscles have been used perpetually in "hawking," coughing, or spitting up to within a short period before death. The following are two typical cases:—Dr. S., æt. 50, a retired physician, an accomplished scholar, and formerly a lecturer on the principles and practice of medicine, became afflicted with stricture of the lower part of the pharynx, and felt obliged, every few minutes throughout the day to collect and discharge the mucus which he could not swallow, to prevent it overflowing into the larynx. He gradually became conscious of a pain in both the pectoral muscles, that increased in intensity

daily. To try to cure this, he treated himself savagely with rubefacients; and, in the last few hours of his life, when his words were almost unintelligible, he attempted to dictate a prescription containing *potassa cum calce*. No bystander could wonder that he should try to escape from the agony, for he was compelled by the disease to hawk up the fluid formed, and every effort to do so drew from him both tears and cries of anguish.

R. C., æt. 79, a remarkably hale man, began to be ill from bronchitis. There was great debility, but no pain at all except in the insertions of the respiratory muscles when he coughed. This suffering, which was greatly disproportionate to the work that was done, induced me to form a bad opinion of the result. But day by day passed without any apparent falling off. There was, however, no attempt at a rally, and the ache attending the cough increased. At length he awoke out of a good sleep, told very exultingly about a pleasing dream, and fell back in a dying condition utterly exhausted. Yet, here again, even in cases resembling the foregoing, the difficulty is started that hundreds do the same thing and never have such pain at all.

Again, in that condition of the muscles to which Dr. Roberts has given the name of wasting palsy, we have, in some individuals, anguish so intense that it exceeds that of the severest neuralgia, while in others there is no pain at all. I have had, for example, a woman under my care, who had frightful pain in the right arm, and mainly in the deltoid, who wept night and day from the agony, which even the actual cautery failed to relieve. She so greatly excited my pity that I took unusual pains to discover something to give relief, but in vain. Slowly the distress abated;

and when she could bear to be examined fully, it was discovered that all the muscles on the right half of the body were withered. Yet there had only been anguish in the shoulder and aching in the arm. Since then I have had other cases under my notice, where the fleshy parts of the muscles have almost disappeared, but there has not been any physical suffering attendant upon the change. In the complaint herein referred to, there is, microscopically, no appreciable difference between the flesh of the failing and that of a sound muscle; nor can we detect any difference in colour, although we certainly can in consistence, or tenacity.

But though these difficulties seem insurmountable, they do not prevent us gaining a moderately clear insight into some parts of the subject, and establishing certain points which occur with sufficient regularity to deserve the name of laws. Let us record the most prominent.

1. The use of a muscle, in excess of its power, induces pain in one part or another of its structure, and generally tenderness in the suprajacent skin.

2. The continuous daily excessive use of a muscle is followed, in some cases, by an increase of its bulk and power, but more frequently by persistent pain, atrophy, or actual inflammation. The first is most common in the young and healthy, and is of rare occurrence in the phthisical, or those of feeble constitution; the second is common amongst the ill-fed, those who "indulge" sexually, and in the aged; the third is most common amongst the strumous and those who have "scurvy."

3. A muscle, when preternaturally sensitive, is of soft consistence, often painful upon pressure, deficient in blood or colour, and its fibres are readily broken. When there

has been prolonged or very excessive action, the muscle is almost bloodless, though marked by spots of ecchymosis; and a large proportion of the fibres, with the accompanying capillaries, are broken across. Such a state of things is found in tetanus, and in a hare after it has been "coursed." When this condition is present, many days must elapse ere the injured parts heal sufficiently for active use.

4. Whenever a muscle or set of muscles has been excessively used, it is an exceptional thing to find the whole of one or all equally affected; even the poor hare, when hunted to death, presents a different physical condition in the trunk and in the extremities, the former is black or deep purple about the abdomen, the latter are almost as white as chicken or codfish.

5. The exertion which precedes severe myalgia in some, is followed by cramp in others; and this phenomenon, when it comes after excess, usually occurs during sleep; a remarkable fact, if we consider that sleep arrests the movements of chorea, and the spasms of tetanus.

6. The amount of suffering which follows inordinate exertion is intense, in direct proportion to the constitutional debility. This is an important point to remember, for excessive myalgia is very common amongst our troops in India, and has hitherto been mistaken for severe inflammation of internal organs. I am cognizant of many cases in which soldiers, after a heavy field-day, have been laid up and treated for "hepatitis," when they have merely had muscular pain; many officers have been treated for acute enteritis, splenitis, inflammation of the kidney and liver, when they have been simply suffering from myalgia, following the fatigue of riding on horse- or camel-back. When these facts

shall have been recognised by surgeons practising in hot climates, we shall find a radical change in the diagnosis and treatment of the diseases of Hindostan.

A correspondent of mine in India has thrown much light upon the subject of the so-called hepatitis, and has also satisfactorily shown the cause of pain in the right shoulder, so commonly said to accompany that disease. After seeing a great number of cases, entered by old army surgeons on the books as "inflammation of the liver," and having a number under his own care, he found that the chief victims of the disease were artillery drivers; that the affection was most common after a long field-day; and that those suffered most whose horses were the most difficult to manage. The constant strain on the muscles of the *right side* produced severe myalgia in the hepatic region, and the excessive use of the *whip* with the right arm produced myalgia of the deltoid! Rest in bed effected a cure speedily. In *real* hepatitis—a rare disease—no pain in the right shoulder is present.

7. Excessive muscular exertion frequently eventuates not only in local inflammation of the fleshy element, but occasionally in general fever, which, though apparently sthenic at the commencement, soon becomes typhoid, as the following case will show. When first I entered upon my duties as physician at the Liverpool Royal Infirmary, there was a patient in my ward whose ticket bore the name acute rheumatism. Not caring to act the part of a "new broom," I contented myself with listening to the 'interne,' and continuing his treatment. But after a few visits I doubted the diagnosis. On closer inquiry I found that, although there had been general fever on the woman's admission, there never had been any suffering except in the right forearm—from about

an inch above the elbow-joint to the finger ends. This part of the limb had been acutely painful, and was still exquisitely tender; it was much swelled, but was growing less. Feeling certain that this was a case of pure myositis, I asked the patient, a large made rosy-cheeked lass, æt. about 20, what she had been doing. The replies I may thus describe. For many years she had been in the watchmaking line, having a sedentary time of it, with scarcely any hard work. Trade being bad, she went into service with a butcher, whom she was called upon to help in his business. One day, ere she had had time to harden, she was employed in weighing beef, &c. During three or four hours she had to lift half cwts. in and out of the scale, until, indeed, she could not hold or lift one. That night she was screaming with agony, and it was months ere she was able to resume work. I have had two other similar cases, one of which ended in intramuscular abscess.

8. Myositis (inflammation of muscle) may arise from physical injury, or by extension of disease from neighbouring parts, as well as from excessive action. The diagnosis, therefore, of "myalgia" or myositis, is insufficient for medical purposes in all cases until its cause is ascertained. "Marble leg" is often the result of intrapelvic myositis.

9. The involuntary muscles are, *cæteris paribus*, subject to affections similar to the voluntary.

10. No one who is a present sufferer from myalgia can be said to be in health, for exhaustion in one part of the frame implies weakness in all the rest. Hence, *e.g.*, we have a copious discharge of lithates in the urine after a fatiguing walk, just as we have after an attack of diarrhœa, influenza, a catarrh, or a debauch.

11. The muscles may become preternaturally irritable from deficient quantity, or defective quality of the blood passing through them; thus we have cramps in cholera, and convulsions from hæmorrhage, as well as from such poisons as urea and strychnia circulating with the blood. A badly nourished muscle is either very excitable, or else nearly paralysed.

These considerations form the basis of our therapeutics.

1. If the muscles are overworked, we must give them rest in the first place, diminish the work which they have to do in the second, and, if that be impracticable, we should endeavour to increase their power to do it.

It is a difficult thing to increase muscular power, and all our means are indirect.

The most important point is to secure rest for an adequate time. I have repeatedly noticed much-withered arms and legs increase in size, firmness and strength by a prolonged indulgence in bed. In one case, six weeks elapsed ere recovery was effected.

2. Next to rest come warmth, local and general; and such an amount of shampooing, with stimulants like turpentine or mustard, as shall bring an increased amount of blood into the weakened parts.

3. If the muscles are unusually sensitive, we must endeavour to deaden sensation in them by the introduction of anodynes. This may be effected by means of the general circulation, or by the local introduction of a drug, by inunction, by the endermic method, or by Wood's syringe. The last is the most useful, and the material best suited for it is a solution of morphia; aconite and atropia are both uncertain and dangerous. But as this plan often entails sickness

and other distress, I generally employ inunction, and direct that a grain of muriate of morphia shall be mixed with scented lard, and be well rubbed upon the unbroken skin.

In those cases in which myalgia is accompanied by excessive cutaneous soreness, an aqueous solution of morphia, used soakingly, answers better than an oleaginous preparation. I have found this especially useful in those forms that are dependent upon the comparatively trifling amount of exertion which children use in sitting up, talking, laughing, or coughing during the convalescence from scarlatina, measles, or other exhausting disease. In all these cases, however, time and rest are the most important elements in the cure; but the morphia does something, if it only helps to quiet the patient's mind.

4. There is, however, a numerous division of cases, in which the remedies above mentioned prove useless, or, at most, of transient value, and we are thrown back upon pure empiricism. As in practice we ought always to begin with the least severe means, so let us now, when reviewing these, commence with one which is often of great utility, and has no other objection against it than its stiffness. Bandaging or strapping will occasionally cure, when other means have failed. The late Mr. Shaw, of Cheltenham, whose "forte" was sciatica (a severe form of myalgia), cured his patients by strapping the whole extremity, from the toe to the crest of the ilium, with a plaister composed of colchicum, belladonna, opium, and resin, spread upon an elastic material. The case of myalgia in the triceps extensor, to which I have before alluded, was cured instantaneously by bandaging the arm, after all other means which I adopted had failed. I have repeatedly stopped lateral and abdominal myalgia by strapping

under similar circumstances, and I have noticed with interest that one fold of plaister failed to effect that which three folds did readily.

The advantage of a well fitting corset, or an elastic belt round the body, is of great service in abdominal myalgia; but in these cases, it is advisable for some support to be continued when the patient is in bed, as the muscular parietes are not firm enough to keep their shape. We must remember that in health the abdominal muscles keep the abdomen rotund, and the diaphragm concave. If, however, they are feeble, the intestines make the muscles "swag;" and, as they no longer antagonise the diaphragm, this daggles too. With it the heart and lungs also fall towards the pelvis. Hence there is a drag upon the sternum and lower ribs, and this, again, makes the work of respiration harder than usual. Our patients describe this state of things when they simultaneously speak of "a sinking at the pit of the stomach," and "an oppression" or "load on the chest," which almost prevents them breathing. I have repeatedly cured this by the application of a simple "binder." But I now find that a well cut pair of trousers, made like those which equestrian ladies wear under their riding habits, answers better than the old-fashioned roller towel; and I have often made my female clients laugh, by my orders that they were literally "to wear the breeches." I scarcely need enter into all particulars how these should be fashioned. All that is necessary to remark is, that I have found them very well made by milliners; and that it is far better to have them closed in front, by the use of a lacing, than by hooks and eyes, buttons and holes. Many persons,—indeed, every patient for whom I have ordered the garment,—speak most highly of its value. The empirical

remedy next in value to strapping is a strengthening plaister; this is especially serviceable in dorsal myalgia, in which it seems to act like an artificial skin or ligament, and to take off a considerable strain from the tendinous structures about the spine.

Sinapisms and rubefacients I never saw nor heard of as being serviceable. Blisters do good so rarely that I rarely try them until all other means have failed; and where I do use them, the proportion of cases in which they seem to cure is not greater than one in five.

After other remedies have been tried, the actual cautery occasionally asserts its superiority; I have not myself seen it used more than once, and it then did no good. A friend, however, has told me of one case of myalgia of the tendon of the triceps extensor cubiti which was benefited by nothing else; and so severe was the pain, and so marked the relief produced, that the patient, a young lad, solicited the use of the hot iron on each return of the complaint. In the myalgia and tendon pain, so common in gouty subjects, nothing has done more good than the moxa; but a cure so severe is seldom recommended by the physician, and still less often adopted by the patient.

Some speak highly of acupuncture, but I have no reliable details of my own to offer. Others laud galvanism or electricity; but, after trying them extensively, I have come to the conclusion that they do little good to the complaint, and are themselves so disagreeable to the patient that he prefers enduring the disease rather than the cure which the physician prescribes. Shampooing steadily is far better in every way than any form of the Voltaic circle, and is by no means unbearable. It has wonderful power, as we have remarked

in the chapter on paralysis, in restoring the tone and substance of the muscles.

Of internal remedies, those only are admissible which serve to give warmth, and tone, and strength; and I may add in passing that I have cured very severe night cramps in the legs, which had troubled a young lady for a long period, by giving a course of steel, all other common plans having been previously used in vain.

This array of therapeutic agents seems very meagre, and we acknowledge the fact with regret, for, with increased knowledge of muscular disease, we much hoped to have proportionally advanced in curing it. Yet such failures abound in medicine, and it is in the nature of things that it should be so; for to be able to cure all the ills that flesh is heir to, is to discover once again that tree of life which, after being first shown to the eyes of man, was for ever secluded. We all long for it; as men we wish it for ourselves, as physicians we actively seek it; but, alas, the nearest approach we can make is the point of that sword which turns ever us-ward, and tells us, "Hitherto shalt thou come and no farther." The waves of therapeutic progress have a limit as sure, and almost as defined, as those of the ocean when it beats upon the rock.

Since the preceding essay was penned, I have had many opportunities of hearing about Myalgia in hot climates, and am convinced that the subject is not understood by the generality of medical men in the army, and probably in the navy too. My belief is, that what may be called tropical therapeusis, is only just emerging from a fœtal—if *bienséance* did not prevent me, another word would have been used—condition. But as I believe the new comer is the offspring of earnestness and science, my hopes for its growth are great. The impression on my mind is, that a student of Indian, &c., disease will find:—

(1.) That a hot climate debilitates the muscles and all the vital powers.

(2.) That what could be borne with impunity in Great Britain, produces suffering in Hindostan.

(3.) That every Commander ought to have orders to vary his drill, parades, &c., according to the heat, &c., prevailing at the time, and to report the result.

(4.) That every field-day, involving hard physical exercise, ought to be followed by two days' laziness.

(5.) That men who are thus treated can "spurt" on an occasion, better than those out of whom "the shine" has been taken by frequent heavy drill.

(6.) Men should be treated with more consideration than horses. Both, if they are to be hard worked, must be well fed.

(7.) Whenever a General has knocked up his charger, he may be sure that his men have done as much as they can do for the nonce.

(8.) When fighting is meant, men ought not to carry *impedimenta* or baggage. It is silly to expend in human work that which horses or cattle can do better.

(9.) Exercise in hot climates enervates, it does not strengthen.

(10.) What fatigues the muscles, or otherwise deteriorates them, carries off heart power; a tired man cannot be a hero during a prolonged battle.

Lastly, it is always better to rest a tired muscle than an inflamed one. The first is restored in a week, the second requires nearly three months for its cure.

CHAPTER XXXII.

ON NEURALGIA.

A review of disease—Cases of neuralgia—Vesication—Iodide of potassium—Fear and neuralgia—Study and tic—Pain and nerves—Considerations thereupon—Effect of cold—Neuralgia and paralysis—Cases in point—Periodicity—Analogies—Points in the natural history of the disease—Treatment suggested thereby—Warmth—Anodynes—Tonics—Quinine and opium—Iodide of potassium—Bromide of the same base—Counter-irritants—Wood's syringe.

WHENEVER a physician has a case of unusual difficulty to manage, he very naturally reviews his knowledge of the subject generally; he recals the various instances in which he has before had to combat with the complaint, the remedies which he tried, both with success and without good results; he studies carefully the different causes upon which the phenomena may depend, the means that he has at command, for discovering what is the cause to which the symptoms may be traced, the possibility of a cure, and the best means of attaining it. He will also probably have recourse to books, to satisfy himself that his memory has not treacherously ignored something that he ought to know. Such a process has recently been going on in my own mind, for I have had, in the Royal Infirmary here, a patient who has had an exceedingly severe attack of neuralgia, and who has tried my

skill to the utmost. I have had four very severe cases in the course of my practice, and the first left my hands not one whit better than when she first entered the hospital. In her case I was wholly unable to discover the the cause of the disease, which had then incapacitated her for some years; nor could I find any single medicament that seemed in the smallest degree to mitigate her sufferings; even opium was powerless for good.

The next case was an American seaman, who entered the Liverpool Northern Hospital some thirteen years ago, for whom I prescribed in succession every single drug that had ever been vaunted, but without avail. The man then urged me to use blisters to his scalp, and, indulging him in what I took to be a whim, he soon taught me a part of my profession hitherto unknown—for I then found that vesication would in one case at least cure neuralgia. My next client was also an American, an actor by profession, who had visited all parts of the world, and had twice been laid upon the shelf from severe neuralgia. He had recently come to Liverpool to join one of our theatres, but was again *hors de combat* from intense agony. I did for him everything that I could think of, but all, including blisters, seemed powerless. The man then urgently entreated me to give him large doses of iodide of potassium, assuring me that he had already found benefit from the drug. I consented to his desire, and the effect was immediate. A week's use of the remedy sufficed to cure him.

Another patient came in subsequently with symptoms of almost equal severity, and I applied blisters to the scalp, and gave moderate doses of bromide of potassium. Each vesicant did good, but they only "started" the pain—they did not

drive it away. The iodide of potassium was then given in half drachm doses, and the pain was relieved after the second had been taken. A continuance of the remedy cured the man completely. During the exercitation of my memory, I have recalled the very first case of neuralgia that I was asked to prescribe for, and the extraordinary success which attended my prescription; I have passed in review the case of one near relative, whom I could only relieve from time to time, and who was finally cured by a dentist; of a young woman whom the extraction of bad teeth had made worse, but who was healed in two days by quinine and opium; of another dear relative, over whom for two years I expended fruitlessly all the resources of the medical art, without producing a good result, until I at last extracted a tooth, that looked perfect, but which proved to be perforated at the back by a carious hole, whose polished appearance might have given the idea that it had been made by a drill.

At this portion of my essay I was interrupted by a gentleman who came to be examined for life insurance; and on making the necessary inquiries as to family history, he informed me that his mother's death was due to neuralgia, in this wise: she, being strong-minded and kind-hearted, had attended three lady friends during the performance of operations for the removal of cancerous or other tumours, and consequently knew the horrors of surgery. By some misfortune she feared that she herself was the victim of scirrhus, and this produced intense fear and neuralgia. The pain from the last was so excessive, that she was unable to sleep for a week. To give relief, very strong opiates were prescribed, and these, it is supposed, were the cause of death. At the same time, the gentlemen informed me of a case, in

which a lady had been suffering for years, wandering from capital to capital in search of a cure, but always in vain.

As I write, there flashes across my mind the case of a young lad, in whom frightful tic doloureux was brought on by over-study, or, perhaps we might say, by a horror at having to learn Latin, and by the stuffing of two teeth with gold. A removal of the metal cured the pain, but the impression made upon the nervous system was not removed for many months.

These cases, and many others recorded in books, show us that sometimes neuralgia completely baffles the doctor, and that occasionally it is amenable to treatment. Before we attempt to understand it, we must endeavour to ascertain the cause upon which it depends.

The word neuralgia simply signifies pain in a nerve; and we are met *in limine* by the question, Can there be pain in anything else but nerves? The inquiry is important, and we will devote a few lines to it. We know, as a fact, that very severe pain exists in tendons, ligaments, and other white fibrous tissues, whenever they are stretched, and yet no nerves can be found in these tissues; again, ligature of arteries is painful, yet we cannot prove the existence in them of sensitive nerve fibrils. There is severe pain in inflammation of bone and periosteum, wherein no nerves can be traced. There is no unusual pain felt when a nerve is cut, at the spot where the injury is inflicted, but in the part to which the nerve is distributed. There is no pain produced by slicing the brain, nor by injury to the spinal marrow. Cutting away the nerve, moreover, does not always cure tic. On the other hand, there is always pain produced in parts wherein the process of death is beginning. For example, a decaying

tooth is painful, yet the microscope shows that the diseased part is not in contact with the nerve in the pulp cavity. Freezing and heat alike produce suffering and mortification; death by hunger and thirst both produce agony.

On the other hand, we know that an irritant pressing upon a nerve, or anything which inflames it, will produce more or less severe pain in distant parts, and that in neuralgia the suffering is distinctly traced along the course of the nerve itself. For example, an aneurism implicating the brachial plexus will excite frightful neuralgia in the arm; and I have seen an aneurism of the aorta diagnosed from the existence of severe pain in the part supplied by the intercostal nerves. A familiar illustration of this is met with when the ulnar nerve, or 'funny bone,' is hurt, for in this case the pain is chiefly felt in the little, and one side of the ring finger, both of which are supplied from that branch.

Granting, then, that neuralgia is really due to something in the nerves, we are no nearer an answer to the question, Is the main cause of the suffering in the nervous tissue itself, or in fibrous tissue which surrounds it? And when the suffering is present, we cannot tell what is the physical condition of the one or the other. If we suppose that there is inflammation, we cannot understand why the process should not go through the ordinary stages of that affection, and eventuate in restoration. If we say that there is "irritation," we only escape the difficulty by taking refuge in a word, which gives no definite idea. If on the other hand, we believe that the nerve is threatened with death, we find some analogies. For example, we know that very intense headache arises from bloodlessness in the brain; and that pain everywhere is intensified by starvation, cold, poverty of the blood, &c. But

we have a still more striking analogy in the facts to which we are about to call attention. A. B. is exposed to moist cold for a long period, and becomes a victim to rheumatic pain. C. D., exposed to the same cold, becomes paralytic, and dies from palsy of the muscles of respiration. E. F. is exposed to a biting wind, and finds that he has lost the power over the facial muscles on one side. G. H., exposed to the same influence, loses the power to feel on one side of the countenance. I. J., who is like the former, subjected to local cold, gets neuralgia of the scalp or face; and K. L. contracts a severe ear-ache. Neuralgia, then, strange though it may appear, is allied to paralysis.

Again, experience tells us that tic doloureux is very generally periodical in its attacks: it will occur at one certain hour, and go off at another. It is common in aguish districts, and one who lives in such a spot, and suffers from neuralgia, will be cured if he or she goes to a more healthy locality. Moreover, it is by no means an uncommon circumstance for tic to last for a certain time, and to be attended with considerable swelling of the face, on the occurrence of which the pain abates. This phenomenon may be compared to the cold and hot stage of intermittent fever. Nor is the analogy weakened by the discovery that the medicines which are beneficial in ague are very valuable in tic.*

* Since I have had the opportunity of examining Dr. Oldham's views upon the subject of malaria, I am disposed to refer the form of neuralgia which has been called "malarious" to moist cold, occurring after the heat of a summer or autumn day. Few can have any doubt, who have once experienced the difference between the effect of a frigid dew and a crisp frost, of the rapidity with which the normal heat is taken from the face, hands, or other exposed parts during the few last hours of day in a fenny district. I have attended archery gatherings, which have been held in July and August, from six to nine in the evening; and have often been surprised

These facts, and another, viz., that neuralgia is not produced by gum boils, by the occurrence of erysipelas in the face and head, by scarlatina, small-pox, and other diseases in which there is unquestionably inflammation of the tissues surrounding the nerves, and even of the nerves themselves, demonstrate the improbability of neuralgia being due to inflammatory action. We may indeed say that tic is analogous to painfully cold feet.

We are thus led by a chain of analogies to believe that the condition present in tic douloureux is one similar to that existent in a part beginning to die. If this be so in reality, we may strengthen the position by noticing some points in the natural history of the disease. 1. Neuralgia is more common in delicate women and men than in robust individuals; it is more common in the bloodless than in those who live generously; it is produced by such enervating diseases as influenza and catarrh, by residence in climates which tend to impoverish the system, and by profuse discharges. 2. Tic is benefited by good living, by powerful tonics, by local and general stimuli, by the inhalation of chloroform and the use of opium, both of which are supposed to operate by checking the oxidation, or the destruction of the tissue. 3. We have seen neuralgia benefited by vesicants, by local irritants, by iodide of potassium, which, when taken internally, goes to every part of the body with the blood, and acts as a stimulant upon all. Heat, moreover,

to find, on clear nights, that the grass of the lawn trodden by the bowmen has been coated by a thick dew long before sundown. I have also found competitors complaining at such times of cold, which they are too proud to talk about except when asked. My belief is that such a chill will, in many, produce neuralgia. If an enlightened experience proves this surmise to be correct, doctors will be able to add more than one article to their repertory of knowledge.

locally applied, will frequently allay the pain of neuralgia as if it were as potent a charm as the fabulous weapon salve. Thus guided, the physician may deduce a definite plan of treatment, which, though not universally successful, may prove to be so in the majority of cases. That plan is essentially a roborant one, and may be thus described.

1. In obstinate cases, every known irritant that is removable must be taken away; in milder forms, the plague may remain, and yet the pain be cured for months. In cases where there are many bad teeth, but which are nevertheless valuable from their position, this point is important. Amongst the provocants, tape worm must be included; and an examination must be made of the nostrils and the ear passages. Lads who have thoughtlessly stuffed things into the latter places in youth, and forgotten them in age, may have cause to remember them from the neuralgia to which they have given rise.

2. The patient must endeavour as far as possible to shun cold air, and to dwell in warm localities. The sufferer should have a nice bedroom, a comfortable bed, and heated night gear. I have known tic come on as soon as ever a patient has placed her chilled body between icy sheets. It is possible, as my friend Dr. Oldham, of the Indian army, ingeniously suggests, that tic is common in aguish districts in consequence of the great coldness of the night air in those localities compared with the heat of the day; the transition is extremely trying to the nervous system, and we have already seen that agues and intermittents are no very distant relations of each other.

Any one who has already suffered from tic should certainly avoid frigidity as far as possible. An open window in a

carriage, a biting wind whilst stopping to chat with a friend, a chilly railway station, a chamber starved by the prevalent mania for ventilation and misery, a cold shower bath, washing the face in cold water, or taking ice as a luxury, are to be shunned; for these, and a host of other things which are very little thought about, will determine an attack of neuralgia.

3. The diet must be as generous as the stomach and the pocket will allow, care, of course, being taken to avoid intoxication. The cry so commonly raised, that all alcoholic liquors are bad, because some folks take too much, is so senseless that I scarcely like to trust myself to speak about it. Wine, beer, &c., are as much food as mutton, quite as necessary as tea, and, as medicines, equal to quinine. For example, let me quote once more the following lines from Sir S. Baker's *Albert Nyanza*, vol. ii. p. 231. After long journeys, and long after the expenditure of their quinine, the explorers were thin and haggard, and suffering severely from fever; but Baker knew how to make whisky from sweet potatoes, and made some, and then he says:—"I found an extraordinary change in my health from the time that I commenced drinking the potatoe whisky. Every day I drank hot toddy. I became strong; and from that time to the present day my fever left me, occurring only once or twice during the first six months, and then quitting me entirely. Not having tasted either wine or spirits for nearly two years, the sudden change from total abstinence to a moderate allowance of stimulant produced a marvellous effect." Indeed, any one who reads the whole book with care, will see that the whisky alone did infinitely more good than the quinine, which was taken as long as it lasted. Hear this, ye teeto-

tallers, and ye delicate women, who think wine a poison; learn hence to appreciate it in neuralgia—which, as we have said before, is allied to ague—as it deserves! I affirm that, in my own experience, quinine, without alcohol being mixed with it, is not half so efficacious as when it is combined with a tincture. Cinchona infusion is good for nothing; port wine and bark together are a valuable remedy, both in fevers and in nervous disease.

4. In mild cases, quinine and opium in pills, well washed down with a glass of warm sherry, suffices for a cure. Three grains of the first and one of the second, taken every six hours, has cured many a patient in a day or two. Iron, in the form of the carbonate, or the tincture of the sesquichloride,—indeed, any powerful tonic,—is of great service in the majority of cases. But these are comparatively useless unless attention is paid to warmth and comfort. In severe cases, such as I have already described, more cogent medicines are indicated. These, for the most part, should be selected from those which are absorbed, unchanged by the stomach, and which are evacuated again from the system in the same condition as that in which they were taken. Amongst such we may reckon the balsams, turpentine, arsenic, nitrate of potash, &c., but none of these have as yet proved themselves to be serviceable. On the other hand, iodide of potassium has proved its own utility; and the only objection to its indiscriminate use is the effect which it sometimes occasions. I have known half a grain produce so much inflammation about the fauces that, for a time, death seemed imminent; again, a five-grain dose has been followed by such distressing inflammation of eyes, nose, ears, throat, stomach, bladder, bowels, &c., that nothing but an anterior knowledge

of the possible effects would have induced my patient to believe that she had not been really poisoned. Whenever, therefore, the drug seems to be indicated, it is judicious to ascertain, in the first place, whether the patient can bear a full dose.

The bromide of potassium, from its value in epilepsy, and as a nervine tonic, promises much, but as yet it has not proved equal to the iodide. Hydrate of chloral has a hopeful future.

5. In the next place, the affected nerves may be stimulated locally. It would take too long to summarise here the observations which I have before made in *Foundation for a New Theory and Practice of Medicine*, respecting the value and *modus operandi* of what are called "counter-irritants;" suffice it, therefore, to say that I regard applications to the skin as one of the means by which medicaments can be introduced to the parts below. If, then, I want to provoke more blood to come to some spot below the *cutis*, I apply something which irritates, reddens, and perhaps vesicates the skin. If I put on a common blister, the "cantharadine" which it contains passes through the *cutis*, and irritates the part below. That it does so, I see; for if I put it too near the eye it will inflame that organ. I presume that it effects, for parts where I cannot trace its operation, the same, or something similar, to that which it does where I can observe them. With the view, then, of bringing more blood to painful nerves, we use blisters, mustard poultices, turpentine stupes, chloroform, eau de cologne, or, simply, very hot stuff to the skin; nor is the application useless, for the pain abates in the majority of cases as soon as the drug has had time to permeate the tissues. But there is this difficulty in the

adoption of the plan here sketched, viz., that neither man nor woman like to run the risk of disfiguring their face and vesicating its surface to relieve a pain which is endurable. Unfortunately, the objection is a valid one in many cases, for we cannot find a remedy which will do good, as a stimulant, below the skin, without making the *cutis* disagreeably inflamed; consequently there is a limit to the value of rubefacients or blisters.

6. To obviate the preceding objection, doctors have sought to find remedies which shall deaden sensibility. They consider that as a nerve steeped in a solution of morphia loses much, if not all, its peculiar power as such, so, by surrounding it with the atmosphere, so to speak, of an anodyne it would cease to give pain. This idea is carried out by the introduction of morphia—through the skin by Wood's syringe, or by applying the drug to a blistered surface, or by prolonged inunction. By any of these plans, morphia, belladonna, aconite, or any other substance may be introduced. I have seen all do good—and often cure—but each has some drawback. I have known aconite painted on the temple cure tic, yet produce ophthalmia, which was almost as bad.

Where there are so many matters to be weighed, it is difficult—certainly puzzling—for a physician to know what to do first. However anxious he may be to cure his patient, he feels that there is a prior duty involved—viz., not to kill, or otherwise do mischief. Urged by this feeling, he advances from the comparatively mild to the more severe remedies, only stopping where he firmly believes the cure, or the means of cure, to be worse than the disease itself. That he is sure to be baffled sometimes, every doctor with a pretension to

experience must allow; nor ought any one to feel shame at acknowledging the fact. To assert that medicine can cure everybody, who can afford large fees to a doctor who is fashionable, and supposed to be clever, is to proclaim a belief that art is equal to the creative power. A physician can do much; how much he is always striving to ascertain, yet he recognises a voice within which says, "Misery, man, and death are inseparable. What God has joined together, man cannot put asunder." Yet all misery does not come at once, and much of it is removable; whether it is so in the case before him is the physician's aim to discover.

CHAPTER XXXIII.

ON GOUT.

Book knowledge and real—A student's career—Case—Author podagrous—Progress of his experiences—Gout at last—Doctor his own patient—Pressure tried—Strapping—Debility—Fatigue—Relapse—Teetotalism—Wine—Notes compared—Diet—Exercise—Lavelle—Water—Aconite—Opium—Results of inquiry—Queer symptoms—Sydenham—Leave gout alone—Details of treatment proposed—Last experiences.

When first I left "the Hall and College" behind me, and, still farther, when I had gone through the studies which enabled me to write M.D. (Lond.) after my name, I had the idea that I knew all about the disease called gout, its history, its pathology, and the best means of curing it. I had read every treatise extant, had seen very many cases in hospital practice, and had listened to numerous clinical lectures upon the subject. But when I stood by the bedside of my first patient, in an hotel in Switzerland, I began to doubt whether I really did know much about podagra, after all. It seemed to me as if all my supposed learning could be rolled into two ideas—viz., gout is the result of good living generally, and colchicum in particular is the best drug known for its cure. When I attended the next patient, my own father, the doubts respecting my knowledge became intensified, and once more I perused the old treatises, and some more recent productions.

In the absence of cases, it appeared to me that I had become more learned than ever, but the very next patient floored me at once. There was scarcely a received opinion that he did not falsify. He did not inherit gout; he had always been singularly temperate; being a civil engineer, he was much in the open air, active alike in body and in mind, yet almost crippled by podagra. He had used colchicum, but never found good from it, and expected much from my treatment, for—God help the mark!—he had heard that I was very clever in gout. I did my best, but bad it was, and I retired with a profound feeling of discomfiture, and a desire that I might never again have to treat a patient who had so common, but so perverse a complaint.

At length, I began to suffer from queer symptoms; I had a bad pain in my elbow, apparently the result of excessive use of the pen—which increased so greatly as to incapacitate me from writing more than a few lines at a time. I could neither see nor feel anything peculiar on the aching spot, and could press it, rub, or otherwise punish it without any aggravation, but nothing that I could do either relieved or cured it. One day, however, from a concatenation of causes, I nearly fainted right away during a consultation, and for a few days was so subject to the sensation of impending syncope that I had to consider myself an invalid; but, at the end of the week, "Richard was himself again;" and the elbow pain had gone. This, after a time, became replaced by a pain near the knee, confined, like the preceding, to a spot the size of a shilling, sometimes so severe as to make me stop whilst walking, yet unaffected by a pedestrian trip where twenty miles a day was the average. Month after month rolled on, even a year or two was reckoned, and still the pain fluctuated

between a common ache and acute suffering for a minute or two. No local application which I used relieved it, and I began to think that doctors were not altogether the fine fellows they thought themselves.

At length, to this trouble was added a strange sensation in the left instep: there was pain, but curiously indefinite. I could walk as usual; the parts were unchanged, except that they were unusually white — looking, indeed, like well-bleached wax. I went to a dinner party, and walked home — two miles — and the pain had gone. Yet it came back the next day, and the day after gradually increased in severity. I might, indeed, compare its increment to the sensations possibly felt by a live lobster placed in a pan of water to be slowly boiled to death; first came a queer sensation, then, very slowly, a suspicion of pain, then the certainty of suffering, then a gradual increase of intensity, until — well — until I understood something of the agony of gout.

When in this condition the foot still looked much as usual, but was exquisitely tender to the touch: there was no visible inflammation, and it was abundantly clear that the pain in gout was not due to inflammation of any set of tissues. Indeed, the signs of inflammation — some redness, there was never much, some heat, and some swelling — all came on as the suffering began to subside.

Being now fairly in for a fit of podagra, I resolved to study the disease closely, and tried colchicum; it was useless; then, being anxious for sleep, I took opium in frequent doses; the result was that the drug made me feel drowsy, but every time I closed my eyes in forced oblivion an agonising start, or twitch, or spasm came on in the foot and ankle, and woke me up with a twinge of horrible agony. To such

an extent did the contest between sleeping and rousing extend that it made me partially delirious, and then, withal, I registered a vow that I would not again try laudanum. Well, for three days and two nights the paroxysm lasted, without a minute's interval, and at length abated. During all that period my mind was unusually active, save when influenced by opium, and I endeavoured to lull my sensibilities by writing Latin verses for my son, a task which I had never succeeded in when at school, or subsequently. As I lay, moreover, all the treatises on gout presented themselves for review, and the question arose,—"What would you say or do to, or think of, a doctor who ordered for you a smart aperient? For you, who can scarcely stir, would a movement of the bowels be pleasant?" No, thought I, it would be a curse.

At length the pain went, sleep came, and I was for getting up; yet the instant the foot was on a lower level than the rest of the body the suffering returned. When thus forced to lie in bed, without feeling anything more than the dread of having to put my foot down, I naturally began to ruminate, medically. I found that I could rub or squeeze the affected part with comfort; it was clear that there was no active disease, and that something was required to assist the once distended vessels to resume their wonted tone or calibre. Movement was still painful, but when absolutely still there was no pain whatever. After passing many plans in review, and discarding them in succession, it occurred to me that strapping would answer all the indications. I sent, therefore, for three yards of adhesive plaister, cut a sufficient number of strips, and then — being my own surgeon — enveloped the foot from the toe to mid-leg with a substantial coating of plaister. This done, I could immediately walk about.

When once out of bed, I became conscious of extreme debility, and recognised, for the first time, the now familiar fact that a fit of the gout is followed by a period of weakness similar to that following typhus or other fever. A few days' comparative activity made the strapping uncomfortable, and I had to replace it; in doing so I discovered that the foot, without any support, was still extremely tender. Again being able to go about, and rejoicing in recovered liberty, I soon required a fresh strapping, and as the processes of removal and renewing were tedious, and somewhat painful, I endeavoured to supplant them by the use of an elastic web. It answered, apparently, well for the first day; but on the second the pressure brought on a relapse.* At last, by dint of grinning and bearing, I got well, and set myself resolutely to earn daily fatigue by bodily labour; bought a high trotting horse, and rode, and walked, and delved right manfully. As a result, I got gout in both feet a few months thereafter.

Under the smart of this double grievance, I resolved to try teetotalism, and kept my resolution for some hours; at the end of which the pain was so increasingly severe, that I felt that I must either cry like a big baby, or take something stronger than tea. Three glasses of Moselle were selected, and in ten minutes after I had swallowed them the pain had gone, the fit of gout was over, and I could go about.

An experience like this was not to be despised, so the "occasion was improved" by endeavouring to ascertain the observations of other sufferers. A. B., himself a doctor, took nothing stronger than buttermilk, and was martyr to gout. C. D., who was remarkably regular and abstemious,

* I do not now attribute this relapse to pressure, for I have found that in every fit, no matter how severe, a second succeeds the first after a short interval, and sometimes is the worst of the two.

though not a teetotaller, was equally persecuted; whilst E. F., who had been a teetotaller for twenty years, and almost always on his feet, was almost crippled by *podagra*. Then, again, the winebibbers of Germany, Bordeaux, and Burgundy drink much, but know little of gout; and the whisky-drinking Scotch enjoy an almost complete immunity. England, moveover, and Ireland, Sweden, too, and other countries, have a far greater reputation for drunkenness than for gout. As a rule, gout is not an appanage of habits of intoxication. I knew, for example, a man who inherited the disease in question from his father, and whose habits of drunkenness began at the age of fifteen, and lasted until his death, at fifty-three. During the last dozen years of his life he never was sober, except for an hour or two after getting up, yet he never had a gouty symptom.

Still farther, exercise will not prevent gout; indeed, each attack my father had was distinctly traceable to pedestrianism carried to fatigue. All these considerations point to the fact that indulgence in strong liquors is only one of the parents of gout, and that there must be some other potency in addition.

Whilst endeavouring to ascertain what this could be, a very remarkable fact presented itself for notice; viz., that the diet which seems to encourage podagra is one which is compatible with apparently the highest health. Gouty patients, as a rule, feel, and seem to others to be, in the best possible condition until the fit occurs.

Leaving speculation out of the question, I resolved to ascertain what would be the result of abandoning all fermented liquors except Moselle, or some other thin white wine, and to live in all other respects like other people.

Things went on well for a time, and then I began to have what appeared to be threatenings of the complaint. Remembering, now, the case of a Cambridge Professor, who had found a cure in the waters of Wiesbaden, it occurred to me that a steady course of water drinking—but not to the exclusion of wine at meal times—might do good, and I dosed myself with a tumblerful every ten minutes between ten or twelve. Fancy said the precaution was good; one attack did indeed come on, but was too slight to confine me to bed. By-and-bye it became inconvenient to take the water, and I had recourse to Dr. Lavelle's medicines. At first they seemed to be useful; but being anxious to determine their real value I resolved to omit them during the next threatenings, and then ascertained that the disappearance of symptoms would take place whether the medicine was taken or not.

Three years now elapsed between one serious fit and another, and when a renewed paroxysm obtruded itself, I farther experimented upon the local use of aconite, chestnut oil, and very hot water; in fact, I endeavoured to ascertain the real value of everything which has, hitherto, been recommended. The result arrived at was, that each individual's experience of gout is peculiar to himself; and that what is most highly lauded by some is of no value to others; that, upon the whole, it is better to grin, bear, and let the gout expend itself, than to try to cure it by active remedies; that total abstinence from alcoholic beverages is not to be encouraged during the attack, except when there is much fever; that every fit of podagra is followed by excessive, sometimes very prolonged, prostration of strength; and that if colchicum, Lavelle's fluid, or any brisk aperient calculated to produce exhaustion is used, the amount of weakness may be

increased until it becomes fatal. Many well-known men have killed themselves by taking colchicum to cure the gout.

The learned reader will probably recognise, ere this, that I have not expressed any opinion upon what is called the lithic acid theory of gout; upon the questions, whether the phenomena of the disease are to be regarded as the effect of some poison in the blood, whether the affection is one of the nervous system, and whether it is influenced by mental activity, wealth, or poverty—I have, indeed, intentionally passed by them all. In my opinion, doctors do not know anything of the originating causes of gout, any more than they can demonstrate the condition of the blood induced by the introduction thereinto of the saliva of an angry, fasting, or diseased dog. We know, as a general rule, that podagra does not exist among savages, and temperate hard-working men; we do know that it is common in polished communities, and that it seems generally to be associated with good living. Strong wines, strong spirits, and sometimes strong ales, seem particularly to favour its advent. But why they do so we cannot tell. Amongst the curiosities, so to speak, of gout, we may mention that — as a rule — it seems to be a disease jealous of a rival. It tortures its victim severely, but it guarantees him from other diseases. There are, of course, many exceptions to this rule, nevertheless it is true in the main.

Now, if we distrust all theories about gout, it follows that we must equally disregard all treatment based upon hypothesis alone. We certainly do so; but our opinion of the theories has arisen from our observation of the practice which they entail, and not our distrust of the treatment from our opinion of the theories.

We can easily understand that our readers, tired of seeing nothing but cold water thrown upon current ideas respecting podagra, may naturally inquire what the author is driving at, and what theory he is himself about to propound. The truth is I have no theory whatever to advocate, and the treatment which I propose is one that is based entirely upon empiricism, possibly, we may add, common sense. I believe that it is better in the long run to allow a fit of the gout to run its course, than to try and stop it by any medicine whatever. Yet that should not preclude any man or woman from testing in their own case the value of any remedy specially recommended. I am sure that everything which would tend to increase the debility produced by the disease itself must be avoided. I believe that the individual's own stomach will inform him better than a doctor would do, what he should take. I think that weak wines, or alcohol, &c., diluted, are the most appropriate beverages. I know that in many cases a total abstinence from stimulants protracts the convalescence. I fancy that a gouty subject may so treat himself, or be managed by others, that the cure is worse than the complaint. As a rule, I feel certain that the general diet should be simple, the habits regularly correct, and the drink taken of a weak order. There is no advantage in prohibiting alcohol to those accustomed to its use.

Let me bring, at length, this very egotistical essay to a close, by the statement that, during its committal to paper, and for some weeks previously, I have been suffering from a pain in the right wrist, resembling those before spoken of as occurring in the right elbow and the right knee. It is sometimes so severe as to prevent my writing at all; occasionally it is associated with a twitch, which jerks the pen from my

fingers. That it presages more gout I doubt not; yet with that belief my experience has told me that it is injudicious to take medicine. Once I should have flooded myself with plain water; but that, I find, now interferes with my digestion. To give up my usual diet would seem to me to be absurd until I could find a better.

The conclusions hitherto drawn may, to many, appear to be based rather upon my own personal experience than upon a multitude of cases. That they are so I do not deny. Yet, on the other hand, we may affirm that a doctor never can so thoroughly watch, mark, learn, and inwardly digest the diseases of another as he can his own. In like manner he can more closely observe the effect of remedies on himself, a body with whom he is ever present, than upon a patient whom he sees only for a few minutes once in twenty-four hours. Hence, as a general rule, a physician who has himself been ill with any complaint, and has watched it closely, can recognise it in all its phases, and understand his clients' sensations, and symptoms, more minutely than any one who has never been ill. He who has once felt the acute agony of podagra would never use roughness with the limb of another sufferer; and one who knows how great is the intense prostration following the fit would never prescribe for its cure abundant exercise. But I have had still another end in view in giving this chapter of medical autobiography, viz., a desire to support, perhaps to emulate, the learned and thoughtful Sydenham. He who is often styled the modern Hippocrates, and the father of English medicine, was himself a sufferer from the disease in question, and he left it as his opinion that the best treatment for it is patience and flannel. Surely, when such a man condescends to use his own case as a text for a medical

sermon, and demonstrates his belief by his practice, lesser lights, following in his wake, may imitate his example, and demonstrate the justice of his views by recording their own experience.

In fine, I would say that, however inartistic it may seem, I would leave gout very much to itself. When the fit is on, the foot, or other part affected, should be kept as quiet as possible, lying upon very fine linen, cotton, fur, or other material. Coolness is generally pleasant in the early stage, and this may be secured by a roomy bed-guard, arch-shaped; if nothing else is at hand, it may be placed in a bandbox. At first the diet should be light, for there is little appetite, and a full meal induces an aggravation of the pain. Good tea is a pleasant beverage, but any thin wine or weak spirit and water may be used. As soon as the acute stage is over, rubbing with rubefacients is of service, and, if the patient can bear it, the use of strapping sufficient to keep the foot and ancle rigid will enable him to hobble about. At this period tonic medicines are appropriate, and such wines as hock, moselle, white hermitage, champagne, &c., are useful. It is doubtful whether the dark wines of Bordeaux and Burgundy, and the strong ports and sherries, are not prejudicial. As a rule, the white wines are slightly aperient, the reds are astringent. If any wine turns acid on the stomach, it should never again be used unwarmed. Ice, and cold food of all kinds, are to be avoided in gout, and, as a rule, uncooked vegetables should be eschewed, until the stomach has regained its powers. The gouty, as a rule, should avoid cold; its depressing influence does much to determine an attack. Teetotalism may be tried by any one who is disposed to do so, but there is great doubt whether it will stave off the disease or prevent

its recurrence. I have lately corresponded with a man who has been a total abstainer for twenty-two years, and, so far as I can learn, he suffers more, and for a longer period at a time, than those who live somewhat freely. I scarcely need add that all excess should be avoided, debauchery with wine, excessive mental labour, or great anxiety, with little vinous indulgence, are equally bad. Nor must it be forgotten that the worst cases of gout that are seen in the London hospitals are in ballast-heavers, or other labourers, whose bodily toil is excessive, and who drink largely of thin stout or beer to enable them to get through their day's work.

Respecting such accidents as gout in the stomach, all I can say is, that they are better treated by warm water than by brandy, by patience rather than by violence; but as it is quite incompatible with my purpose to go into the details of treatment, I will refer anybody who is interested in such matters to Dr. Gairdner's work on gout, which is, in my opinion, the best book upon the subject that is extant.

Since the above was written the painful infliction has visited me again, after a series of distressing mental emotions, which not only preceded but also accompanied the paroxysm. I had fourteen days and nights of incessant suffering, only broken by one good sleep, produced by Chloral Hydrate. After recovering sufficiently to hobble about, a second edition occurred in both feet, ancles, and knees. The peculiarity of this invasion was that it was all but painless. This second attack produced sleeplessness, and a most complete absence of appetite and digestive power, from which I did not got well until I had taken a three weeks' trip to the South of England. This restored me apparently perfectly, but I had

not returned to Liverpool a day before I discovered that I was "in" for indigestion, diarrhœa, and debility. These continued without any amelioration until ten weary months had passed away, and I resolved to winter in Italy. I started in September, and when I did so, my knees were still swollen, and so weak that I could get up stairs easier than come down. The ancles were much in the same way, and the feet were also enlarged and tender. Appetite I had none; the abdomen was distended with flatus, and the tendency to diarrhœa constant. It is unnecessary to give details of my journey, except to say that I took as much exercise as I could, shunned cold, made no difference in my diet. The limbs slowly recovered their normal size, but not until six months had passed away. My usual vigour has returned, but I have never any appetite, and eat little. The yelks of two eggs suffice for breakfast; a basin of soup and about four ounces of meat serve for dinner. I rarely ever eat bread. Teetotalism has been fairly, but uselessly, tried. Nevertheless, I can now do heavy pedestrian work, and walk upwards of thirty miles in a day. This treatment has been effective and pleasant, but how few patients can adopt it!

CHAPTER XXXIV.

ON THE PATHOLOGY OF SCIATICA.

Sciatica, what is it? rheumatism? neuralgia?—Want of precise knowledge—Inquiries proposed—The actual locality of affection—In tendons, not in nerves—Sometimes in muscles—Those most subject to sciatica—Circumstances which determine an attack—Cramp—Movement—Pins and needles—Effect of prolonged sitting—Case—Physical condition of limbs in sciatica—Debility—Symptoms that are generally absent—The current theory dissected—Evidence from—Empirical means used as remedies—Summary of arguments—Dr. Roberts on muscular atrophy—Roberts and Copland—Inquiry into muscular weakness—Deductions.

I THINK that I shall be expressing the opinion of many thoughtful men, when I say that the pathology of sciatica is in an unsatisfactory state at the present time. If we turn to Dr. Mayne's *Dictionary* for the meaning of the word, we find it given thus:—"Term for a *rheumatic* affection of the hip-joint; applied likewise to a *neuralgic* affection of the sacro-sciatic nerve." If we consult Dr. Copland's *Cyclopædia*, we find no separate article on sciatica, but the complaint is treated of under the head of Sciatic Neuralgia; and the author remarks: "This form of neuralgia was formerly confounded with all painful affections of the hip and adjoining parts . . . . and the pain was referred to the joint, to the

muscles, to the bones, to the tendons, to the nerves, &c., according to the views of the writers." Under the head of *nerves*, he says, "Sciatica is a proof of this want of precise knowledge; for information is still required as to the state of the nerve in this affection." Dr. Watson writes, "Sciatica, or pain radiating from the sciatic notch, and following the course of the sciatic nerve, is sometimes an inflammatory complaint, and yields to the remedies of inflammation, bleeding and blistering; sometimes it is plainly a part of rheumatism, and then may be relieved by calomel and opium, or by colchicum; sometimes, again, it results from irritation within the pelvis . . . . sometimes it is a purely nervous and neuralgic pain, and then the treatment of facial neuralgia will, *mutatis mutandis*, be applicable to it." (3rd edit., pp. 7–8.) If we put all this into plain English, it means that "sciatic," is a name given to pain about the hip and thigh, respecting which our knowledge is not precise.

Can anything like precision be attained? Many things combine to induce us, at the present period, to answer this question in the negative; but we see no reason why a greater amount of certainty shall not be attainable hereafter.

Our current difficulties arise from the one word being employed to express many very different phenomena, and from the insufficiency with which many cases are reported. To have definite notions of a disease and its causes, we must classify the symptoms so far as we can; examine into their concomitants, the condition of individual sufferers, the alliances (so to speak) of the complaint, and the means by which improvement seems to have been secured. These will afford us data, which may serve as a starting point for subsequent

observations. Perhaps I ought to crave indulgence, because I profess to call attention to the "scent," rather than to be an infallible guide to the object sought. I do not so, however; for the keen-nosed hound does not incur censure, though his quest be unsuccessful; the knowledge that there is something to be hunted up, and the pleasure of seeking it, often proves to be the sportsman's only pleasure.

I propose to inquire: 1. What is the actual locality of the disease; 2. What classes of persons are most subject to it; 3. Under what circumstances it comes on; 4. What are the symptoms which attend it; 5. What are the most successful empirical modes of treatment. We may then deduce its probable nature, and the philosophical line of treatment indicated.

1. The actual locality of the disease varies in different individuals. In none of the cases which I have seen, about twenty-five, has it been referred to the exact locality of the sciatic nerve, or any of its branches; but the patients, while describing it, have nvariably mapped out the origin, course, or insertion, of on or more of the gluteal muscles, and with these the "biceps cruris" and the "fascia lata" are frequently included. The "semi-tendinosus" is rarely complained of; but it is by no means uncommon to find the outer origin of the "gastrocnemius" implicated when the "biceps" is affected severely. In these latter cases the tendinous structures seem to be the chief, if not the only seat of suffering. This was conspicuously the case in a patient once under my care at the Liverpool Royal Infirmary, who referred his pain almost entirely to the strongest part of the "fascia lata," and acknowledged to none in the course of the nerve. This at once takes sciatica out of the list of pure neuralgias, and

approximates it to that other class, to which the name "myalgia" has been given.*

2. If we examine those who are most subject to the disease, we find them to be the old, the gouty, the dyspeptic, those who are of a consumptive family, or who have been exposed to vicissitudes of temperature, or have been reduced in vigour from any depressing agency. In these individuals we find the muscles to be flabby, irritable, diminished much in contractile power, occasionally withered or semi-palsied, and frequently the seats of pure myalgia.

3. The circumstances inducing an attack of sciatica seem very significant of its seat. In the cases which have come under my notice, it has apparently been brought on by frequent stooping and rising again. Thus, in the case of a lady, it arose from her dusting and polishing the whole of her drawing-room furniture; the pain in this instance came on suddenly, whilst she was walking out, and was so intense that

* The *Medical Quarterly* remarks that I "put too much into the background the frequency with which pain on pressure may be traced home to the issue of the nerve trunks, from their bony covering." Unquestionably I do so, because I deny the assertion to be a fact. Examiners, who, in digging their fingers or their fists into the gluteal or crural regions, have no thought beyond nerves in their mind, very naturally imagine that they are tracing the great ischiatic or other branches of the spinal system, and very naturally when they reach the region of the great 'notch,' do not investigate farther. But if they will allow their patients to describe the seat of the suffering complained of, a very different conclusion will be drawn. In different cases I have seen such persons map out as accurately the course of the "gluteus minimus," the "gluteus medius," and the "gluteus maximus," as if each was an accomplished anatomist. On the other hand, I have never yet seen a sufferer point to the course of the sciatic or other nerve. I have recently had many patients under my notice in the Liverpool Infirmary, and in all of them the chief seat of pain is in the "fascia lata" covering the "vastus externus." Nor is it to be passed by that the pain in sciatica is aggravated by the contraction of the muscle or muscles, which the patient in his demonstration of the seat of the pain, maps out with his finger or hand.

she was almost unable to move the limb for four hours. After one buttock got well, the other was attacked. In the case of an elderly gentleman, the complaint was determined by his standing for many hours in the cold, superintending workmen, himself staking out certain boundaries, and frequently using the pick-axe. He was at the time recovering from a severe illness, during which he had an acute attack of myalgia in the right groin. In former years he had experienced some severe fits of gout. Of four cases present under my care when this essay was penned, one was a fireman, another a dockgateman, another an ostler, and another a foundryman and moulder; and in all the attack can be referred to the excessive use of the gluteal and crural muscles.

So far as I have seen, patients appear to get well by remaining quiet; but they tell you they are not cured, for the pain returns *as soon as they begin to walk*. This at once seems to imply that there is some connection between the pain and *motion*, and leads to the inference, either that its seat is in the organs of locomotion, or that when these are exercised they injure neighbouring parts. As the nerve is the part most likely to be affected, we ask ourselves whether it is possible that it can be bruised by the contractions of the "glutæus;" and the answer is in the negative: for if it were, we should have in the foot and leg a sense of pain and tingling, such as we have in the arm and hand when the ulnar nerve is struck. When a man strikes his "funny bone," he tries to relieve the pain produced by squeezing the inner part of the hand; when a man has sciatica, he places his hand on the hip to relieve the pain, and leaves the foot alone. To those familiar with "myalgia" this fact is significant.

Yet we do have sometimes the symptom of "pins and needles" in the foot complained of in sciatica; and this leads us to the belief that the nerve must then be implicated. I was consulted respecting a case of this kind a few days ago, and the history which was elicited is sufficiently interesting to deserve detail. The gentleman is a large-made, healthy-looking, burly man, a captain in the army, and between forty and fifty years of age; but he has seen much hard service in the West Indies, the Bermudas, Gibraltar, and Greece, and has suffered severely from the hardships attending the Crimean war. It was in this campaign that the sciatica first came on, attacking the left buttock, and in the end implicating the whole pelvis, anteriorly and posteriorly. This affection was attended by a swelling of the leg, apparently analogous to phlegmasia dolens.* He recovered from this, but did not regain his usual condition, which, he said, has never been a strong one; notwithstanding his good looks. Latterly, he has been

* I should like greatly to attract the attention of the profession to the phenomena and cause of 'phlegmasia dolens,' or marble leg; but it requires for its explication more time and space than can be given in a note. It would be necessary first to invite my readers to investigate the state of the legs, and especially of the popliteal space in seamen suffering from scurvy — a study which can only be carried on in large seaport towns. Then they would be conducted to the bed-side of many a case of scarlatina, in which the muscles of the neck have been inflamed. After that it would be necessary to call special attention to the phenomena of 'myositis' generally, and the certainty with which the inflammatory process spreads to tissues in the neighbourhood of the affected part. But all this would only be preliminary to the history of 'phlegmasia dolens,' examined from a new stand-point. In this, stress would be laid upon the causes likely to produce myositis in the intra pelvic muscles, and the evidence in favour of or against the existence of such inflammation. After that a comparision would be drawn between the respective value of the old and new hypothesis — first as regards prevention, second in respect to cure. If the skeleton takes us thus long to describe, the perfect body would require infinitely more.

subject to faintness, general *malaise*, indigestion, languid circulation, &c. His duties generally keep him to his desk; but he has been recently obliged to do much active work, which involves a great deal of walking, standing, and stooping to examine 'stores.' This brought on lumbago, and sciatica; the first has subsided, the latter still remains, although his occupation is once again sedentary. This seemed to involve the idea that there must be some cause keeping up the irritability of the gluteal muscles; and, as the foot was affected, I imagined that the nerve was obnoxious to the same thing. On closely questioning the patient, I elicited the fact that, when writing, he always sat on the left buttock exclusively, and thus very effectually squeezed both his muscles and the nerve against the bone; and, as the former were very soft and compressible, it was clear that they could not protect the great ischiatic from external pressure so fully as if they were firm. A careful sifting of the symptoms now proved that the sensations in the foot were general after prolonged sitting; those in the sciatic regions came on after motion. I have, in my own person, often felt what I feared might be the preliminary signs of sciatica; but I have latterly been able to connect them invariably with a prolonged use of the pen, which involves much stooping forward over the edge of my library chair, and pressure of the flexors of the thigh, &c.

It is generally noticed that sciatica is induced by damp and cold weather. In this and some other respects, it seems to be influenced by the same causes which bring on the phenomena described as "muscular rheumatism," or "myalgia."

4. The symptoms accompanying sciatica are not so fully described by writers as could be wished; but we infer that there are generally signs which point to a nervous tempera-

ment, or to a gouty or rheumatic diathesis. Dr. Copland says, "In some cases the accessions of suffering are followed by *convulsive or trembling movements of the limb, by slight numbness or partial palsy, and an attack generally leaves the limb emaciated, flabby, and weakened.* When the attack has been very severe, or of long continuance, lameness, or dragging of the leg, great emaciation of the limb, a weakened, or partially paralysed, state of the muscles and disorder of the digestive organs are experienced, for some time afterwards." (I have italicised a sentence, as I shall have to make special reference to it shortly.) In a subsequent paragraph, a case is recorded where the pulse was quick and irritable; in it the pain was referred to the middle of the "rectus femoris," and spoken of as crural, and not sciatic, neuralgia, *i. e.*, it was seated in the front, and not at the back, of the thigh. In all the cases which have come under my own notice, there have been well-marked symptoms of constitutional debility.

Amongst those symptoms which are *not* generally present, we must include sensations in the leg and foot, similar to those felt in the hand when the ulnar nerve is struck. The absence of these signs seems to be of great importance when we take into consideration the phenomena attending the application of a direct irritant, &c., to a nerve. If we employ simple pressure to the nerve in the hip or ham, as by prolonged sitting in a certain posture, we have—1, powerlessness to move the muscles of the foot, and cutaneous insensibility to external impressions; 2, after the pressure is removed, we have a strange pricking sensation in the foot. The portion of the nerve which we have squeezed is *not* complained of. Again, if a nerve be divided, the act of division produces a

sensation of pain, referred to the parts to which it is distributed, and not to the spot that is cut; and if, after amputation, any inflammatory or other affection implicates the remaining end of the nerve, pain is not referred to that, but to the limb which was removed. Still farther; if we lay bare the sciatic nerve of a frog, and irritate it, we have certain contractile phenomena in the muscles to which it is distributed; and if the frog could speak, we should expect to hear a complaint of pain in the foot and leg only.

Now, if sciatica be an inflammatory affection of the neurilemma, this must be thickened, and, as a necessary result, the nerve must be squeezed; and if the nerve be compressed, partial paralysis and anæsthesia of the foot must ensue, and the sensation of "pins and needles" will be a proof of the pressure being diminished. Or, if sciatica be a real nervous irritation, we should still have, as a symptom, muscular contraction, or modified sensation, in the parts to which the nerve goes, or from which it comes, and not solely in the spot irritated. There is then a *prima facie* difficulty in considering sciatica to be purely a nervous affection dependent on some physical change in the nerve.

5. The empirical means found most successful in the treatment of sciatica are—*a*. Such tonics as quina and steel; *b*. Such warm medicines as spices, guiacum, or turpentine; *c*. Such local stimulants as blisters and rubefacients; *d*. Anodynes used locally; *e*. Firm strapping to preclude motion of the limb; *f*. Colchicum. On the other hand, low diet, purging, and mercury have been proved to be prejudicial.

Two hypotheses have been put forward to explain the phenomena of sciatica—one, that the affection is rheumatic; the other, that it is neuralgic. I will not attempt to discuss

them; for both words are so vague in their signification that they bring us no definite ideas. I propose no new theory, but would call attention to a series of facts, which possess much significance.

a. The locality of the pain is referred by the patient to muscular and fibrous parts.

b. In describing it, the same movements are made as when myalgic pains are complained of elsewhere.

c. The nature of the pain resembles that of certain forms of myalgia.

d. Myalgic pains elsewhere are common when sciatica is present.

e. I have met with affections of the upper extremity which have resembled sciatica in every particular except the locality of the suffering, and these have been instantaneously cured by the pressure of a bandage or "strapping."

All these point to the muscles and tendons or fascias as being very generally, if not invariably, the seat of the pain.

We have next to ask ourselves whether the muscles are ever in other instances the seats of such severe suffering as that which attends sciatica. We first notice the fact, that in the latter the muscles are more or less weakened, withered, or palsied; and we are led to inquire into the symptoms which attend "wasting palsy." I have already recorded one case of muscular paralysis which was attended with acute and persistent pain (*Myalgia*, p. 68). This is by no means a rare occurrence; for Dr. Roberts, in his interesting work on this subject, remarks, "Pain is by far the commonest of the symptoms . . . . it is (sometimes) sharp and lancinating, shooting down in the course of the nerves, having all the character of neuralgia . . . . resembling, and often called,

rheumatic pain . . . . *In several instances it marked the outset of the disease, and passed away as the atrophy set in in good earnest.*" (p. 119.) Compare the two sentences from Dr. Roberts and Dr. Copland *(ante)* which are in italics, and their connection seems to be well marked. Again, we read in the same authority, "that unusual sensitiveness to low temperature is a prominent symptom of wasting muscles; and two cases are mentioned, one where there was a sensible falling off of muscular power in wintry weather; the other where power was partially restored by warmth. In this we see some glimmering of the reason why damp cold so frequently produces sciatica—it makes feeble muscles weaker.* In the second case which Dr. R. details, there was, in addition to other symptoms, a partial palsy of the right leg—great sensitiveness to cold; and Dr. R. remarks, "the only ailment he complains of is *neuralgia of the right sciatic nerve*, which now and then torments him." It is true that other cases of palsy are given in which sciatica did not occur; but this is no more than we should expect; for the palsy, Dr. R. tells us, often runs its course without any pain. It must be

* It is a fact of great interest, and one which materially complicates the difficulty in assigning the pain in sciatica to any one part, that severe cold, which produces facial neuralgia in some, will produce facial palsy in others; that in one it will give rise to sciatica, in another to paraplegia, in a few to tetanus, and in many to muscular and nervous phenomena combined. Thus Dr. Roberts says: "in sixteen cases (of wasting palsy) the atrophy arose from cold." A case is recorded where hand and forearm wasted by plunging the member, when perspiring, into snow; others are referred to; and then he adds: "Cases arising from cold are subject to neuralgia and rheumatic pains in the affected parts (the muscles?), either at the onset of the atrophy, and ceasing when this has fairly set in, or continuing throughout its progress." As might have been expected, in more than one instance the disease, wasting palsy, is alleged to have arisen from "*cold combined with fatigue.*" This last is very frequently indeed the cause of an attack of sciatica.

noticed, however, as a fact of considerable importance, that the effect of galvanism greatly varies; in some patients, says Dr. Roberts, it produces such severe suffering that they cannot endure it; in others it produces scarcely any pain. This distinctly proves, that while some partially withered muscles contract painlessly, others cannot do the like without producing intense suffering.

We next refer to Dr. Copland (*Neuralgia of Muscular and Membranous Structures*, vol. ii. p. 881). We find "in true neuralgia of the muscles, the pain is much more acute than in rheumatism, and it occurs in frequent exacerbations . . . . *In all the cases I have seen, the remissions were attended by weakness or partial palsy of the muscles affected.*" "In two cases, where the muscular pains were most acute in the thighs, and were attended by occasional cramps, irregular action, &c., *amounting to partial paralysis*, extensive organic change was found in the cord." Here, again, we see that semi-paralysed muscles are unquestionably the seats of severe pain.

We now turn our attention to the condition of the muscles in the gouty diathesis, and we find in it that there is a great tendency to irregular muscular contraction, attended with more or less pain. Painful palpitation, and the pain of gout in the stomach, are, perhaps, the best evidences of this. There is one form of this disease often spoken of as "poor" gout, in which the muscles are flabby, weak, and withered; and it is in this state that sciatica is generally found as a symptom. It comes on very suddenly, is very intense whilst it lasts, and speedily goes off. Such an attack may, however, be independent of gout altogether.

Of the rheumatic diathesis, I will only say that an immense number of cases put down under the name of rheumatism are

simply "myalgic," the effect of over-exertion in weak muscles; consequently, there can be no surprise if, with muscular pain elsewhere, it exists in the gluteal region too.

Of rheumatic gout I cannot say much; it certainly is attended with very great irritability of the muscles in the neighbourhood of the affected parts, and their contraction is eminently and acutely painful; yet I doubt whether this fact can be made available for the explanation of the pain of sciatica, when there is no reliable proof of the presence of this rheumatic or gouty affection. Of the probability of sciatica being a pure neuralgia, having its seat in the nerves themselves, or being dependent on some form of pure nervous disease, I will not express an opinion; nor will I say anything of the likelihood of its being a sympathetic pain, excepting to express a doubt whether we have any instance in which such pains are brought on by motion of the part itself, without any appreciable alteration of the condition of the distant organ in sympathetic connexion with it.

The conclusion we have arrived is, then, simply this—that there is good reason to believe that sciatica may be, and very frequently is, dependent upon excessive muscular action (when speaking of the muscles, I consider that their fibrous portions are included) in enfeebled, unusually irritable, or imperfectly palsied muscles, and that the pain is often in direct proportion to the weakness of the muscular fibre.

This being so, theory would dictate what experience confirms; namely, that the most appropriate treatment is rest from motion, warmth, anodynes locally,—and amongst these, as the very best, we may mention the subcutaneous injection of morphia by Wood's syringe, of which we cannot speak too highly,—strapping to give support and encourage

heat, and tonics to improve the constitutional vigour. The late Mr. Shaw, of Cheltenham, had a great reputation for the cure of sciatica. His practice was to have some extract of opium and belladonna mixed with adhesive plaister, and spread upon an elastic web made in strips. With these the affected limb was strapped from the foot to the hip, as high as the haunch bone. He rarely—I believe never—failed to cure. Firm, steady support and pressure may be obtained less expensively, but there are some readily divined reasons why this plan cannot be generally adopted.

The influence of these considerations upon treatment is therefore small—the effect which they have upon our prognosis is far greater. If it be true that the pain may be the first symptom of muscular decay, we can scarcely hope for a speedy and complete cure. If, on the other hand, the muscular decay be a legitimate and certain result of the pain, our prognosis will be guided by the duration and severity of the suffering. In any case, however, of severe and enduring sciatica, especially in delicate or aged individuals, we must be prepared for the probability that it may eventuate in some withering of the muscles of the buttock or the thigh.

CHAPTER XXXV.

ON HYSTERIA.

Middle way between arrogance and neglect—Author finds it with difficulty—Reason why—Nonsense talked about hysteria—Atrocious calumnies by old authors about women—Absurd definitions of nothing which is something—Marriage said to cure miseries!—Marriage a means of diagnosis!—Feigning—Hysteria and myalgia—Boys and girls at work or play—All virgins were liars in the eye of old doctors!—"Hysteria," a refuge for the destitute, of ideas—Layo'erformeddlers—Hysteria and danger—Hysterics—*Saleusis*—Mental aberration—Cerebral disease—Symptoms and uterus—Exhausted brain—A naughty child—Power of strength over feebleness—Hysteria and mania cases in a lady and a boy—Another example—Men hysterical—Under what circumstances—A critic criticised—A lady's opinion of the relation of patient and physician.

It is sometimes difficult for an author, who has a due respect for himself as well as for his readers, to steer his way fairly between arrogance on the one side, and neglect upon the other. If he advances his own opinions upon matters to which he has given special attention, and respecting which he has made valuable discoveries, in a manner consonant with his enthusiasm, he is certain to be accused of egotism; and if, on the other hand, he passes them by entirely, he lays himself open to a charge of improper reticence, for it is supposed that no one can expound the views of a discoverer better than himself. The difficulty of the author is still

farther increased, when he finds that the promulgation of his own opinions brings into greater or less disrepute the writings of those whom he respects, and whom the world still regards as shining lights.

Yet, in a matter like the treatment of hysteria, no half measures can be adopted. It is impossible for one living under the new medical dispensation to act as if he were yet in darkness. For him there is no middle way; he must either cleave to the old notions and fight for them *à l'outrance*, or he must proclaim himself a convert to the new creed. For me there is no place for hesitation, and I proclaim my belief boldly, that there is no such disease as that which was designated "hysteria" by older writers, and is still spoken of as a complaint by many in the present day. To my notion, there is not in all medical history a more melancholy chapter than that which treats of hysteria; and there are still extant in many books examples of reasoning that are simply contemptible. Who, for example, that knows the nature and character of our women, could believe that all of them, from the highest to the lowest, had, without any conspiracy amongst themselves, invented a set of symptoms whose chief characteristics were pain in the individual and mystery for the doctor, and yet which at the same time should be actualities and nonentities — non-existent, yet aggravated by sympathy — and all dependent more or less upon a desire to be married! I can hardly write calmly when I think of the obloquies heaped upon our females in certain medical works; indignities, indeed, unsupported by a tittle of valid evidence, and which ought to have been more than counterbalanced by our general knowledge of the gentleness, patience, endurance, and long-suffering of woman.

But, as often happens, the information given to the senses was overborne by theories inculcated in books, and, the word Hysteria having its origin in the Greek word for "the womb," it was imagined that there was some necessary connection with certain symptoms and femininity.

The general opinion respecting the disease in question, and one still current amongst many physicians of to-day, was and is, that hysteria is a disease in which a patient, necessarily a young unmarried woman, complains of certain queer symptoms for which the doctor cannot adequately account—of pains which, although severe to-day, are gone to-morrow, or which, being sought for, cannot be found. A common locality for these pains is the abdomen, and it was considered a diagnostic mark of these sufferings being 'hysterical,' if the patient winced when the doctor laid his hand upon the part, but evinced no feeling if he made a steady pressure, and at the same time called the patient's attention to something foreign to herself. Sometimes these pains were so severe as to lead to the belief that there might really be peritonitis; and, to put the student upon his guard, 'hysterical peritonitis' was systematically treated of in books. Wherever the pain, however, one essential part of it was that it existed in young unmarried women, who were supposed, under all circumstances, to be desirious of having a husband. To such an extent was this idea carried, that the symptoms which were recognised as indicating "hysterical" peritonitis in a virgin, were regarded as proof of "pure" peritonitis in a wife; whilst other pains, in other localities, called "hysterical" if occurring in the girl, were regarded as "inflammatory" in the matron. I have known, in London Hospitals, women who have been fatally treated for puerperal or other "perito-

nitis," because they had certain severe abdominal pain. All these were married women, widows, or courtesans; had they been virgins, their cases would have been called "hysterical." Thus the possibility of sexual intercourse, or its absence, became a means of diagnosis; and for some, marriage was prescribed as a sort of medicine. Every virgin who suffered from certain symptoms was regarded as if she were a cow in heat. To such a monstrous point did theory and want of observation lead myriads of medical men.

With these ideas were associated in the doctor's mind a belief that hysterical sufferings were feigned, with a view of eliciting sympathy, and deserved to be treated in a rough manner, and by disagreeable medicaments. Upon many a sufferer hard usage was inflicted, where gentle nursing was needed, and a horrible compound of atrocious drugs was ordered as medicine, when all that was really required was such nutritious materials as milk and rum. Well do I recal the unction with which a hospital physician boasted to me of the efficacy of his Mistura Diabolica, or satanic physic, in obstinate cases of hysteria. That he seemed to have reason for his boast I don't deny, but the simple fact was, that the cure was so much worse than the disease that his patients professed to get well that they might be spared the nauseous draught.

The amount of injury inflicted by the false notions of hysteria recently in vogue, both upon sufferers and the science of medicine, was very great. From this cause patients were left to pine for years in misery, in consequence of the inadequate and improper means taken for their restoration to health; and from the same ideas married women and men in general were often supposed to have real disease, when their

pains would have been recognised as "hysterical" had the sufferers been young women. For example, I knew a delicate young lady forced into marriage for the cure of hysteria. After the event, she suffered more than ever, but then her complaints were said to be inflammatory, and she had a great struggle to avoid the death which was threatened by what was then called "antiphlogistic treatment."

The explanation of the symptoms, so long called 'hysterical,' is given in my book entitled *Myalgia*, in which I demonstrate that the so-called hysterical pains are due to over exertion of the muscles in various parts of the body, and are evidence of debility rather than of fancy; and that "painful fatigue" is a more appropriate name for them than that by which they went. I showed, moreover, that men and women, old and young, are all equally obnoxious to them, and that they are often present without any attention being called to them. I showed that these pains are most common in the young, and in the delicate — in growing boys and young girls; and that they are severe or otherwise according to the amount of muscular exertion, relative to the constitutional power. Thus, for example, in a sturdy boy, whose games are rough, whose appetite is strong, and whose thews and sinews are developed by daily exercise, muscular pains are rarely met with, except after a first day's riding, rowing, running, swimming, and the like, and then they are so readily traceable to the unusual fatigue that no doctor is thought necessary for their relief. On the other hand, a delicate girl, cooped up all day in a school, obliged habitually to sit or stand upright, fed upon food probably disgusting — as boiled mutton with abundance of fat, and very little small beer — has feeble muscles, and when they are overworked in her

daily tasks they become the seat of pain, which, not being readily recognised as caused by fatigue, and being gradually increased in severity as each day brings its additional burden of toil, are at length sufficiently severe to demand medical aid. When the physician is called in to such an one, he probably finds her languid; being over-worked, she requires rest; being suffering, she hopes for kindness and sympathy; nothing is more natural; yet all these symptoms were once misunderstood, the patient was accused of shamming, treated harshly — perchance, was punished — and she, who required to be treated as a greenhouse plant, was managed as if she were a hardy thistle.

In those days, every young woman was practically regarded as a liar, and doctors were positively taught to disbelieve them when they complained of certain sufferings. To such an extent was this idea carried, that a distinguished metropolitan physician, whose presumed speciality was "diagnosis," told me upon one occasion that I violated one of the fundamental principles of medical science if I believed what women told me! Well do I remember the indignant observations of a lady who heard that her doctor had called her complaint "hysterical." "What does he mean by it?" she said; "does he fancy that I should consult him if I were not ill? does he fancy that I tell him untruths, when I know that such a plan would defeat my ends? does he really believe that I want a husband, and take this means of letting the world know that I am in the market? Again, how dare he disbelieve me, yet treat my case with medicines as if he credited my statements?" and more to the same effect.

But the word "hysteria" was used to describe other symptoms besides pain. It was employed to designate any

phenomenon that was in the smallest degree strange, in a young woman. It was, indeed, a generic term, which was used to save botheration. In this it resembled a word that long puzzled me during my childhood; being of an enquiring turn of mind, I was constantly asking the servants what this was, and what that was for, and to this, in reply, I was told, "layo'erformeddlers," and when I sought to discover what this was, all the answer was, "layo'erformeddlers." In like manner, if a doctor was puzzled by a queer symptom in a young woman, it was hysteria; and if he were asked what hysteria was, the reply came, "It's hysteria, you know."

Thus, for example, if a woman contracted a habit of eating chalk or ashes, she was hysterical; perhaps she amused herself by blacking her eyelids, by seeming to vomit blood, by remaining taciturn, &c., again she was said to be hysterical. The believers in this existent nonentity, moreover, described hysterical palsy, hysterical aphonia, hysterical sore throat, hysterical vomiting, and even hysterical fasting.

With these notions — or rather, when this absence of definite ideas prevailed — there was a general belief that hysteria could not be dangerous. As it was vaguely supposed that the symptoms called hysterical were "put on," they could readily be thrown off again; consequently, the presence of any symptom supposed to be of that nature was held to be incompatible with danger; and I well remember the surprise evinced by a physician, who was attending a patient for hysteria and found her dead one morning. What he thought was a disease of fancy, or a bit of waywardness, was really a cerebral affection, which ended in sudden apoplexy.

But though we insist on the word "hysteria," as it is generally understood, being expunged from the medical

vocabulary, we are disposed to retain the word "hysterics," as indicative of a peculiar form of affection to which many delicate women and men are subject, until the profession adopts some better word. Lest, upon this point, we should be thought to shirk a duty, we propose the word *saleusis*, from σάλευσις, "unsteady movement, or constant motion," which aptly describes what is now called an hysterical fit. We may best explain our meaning if we affirm that all mankind are liable to affections of the brain, of greater or less intensity; that these affections are sometimes comparatively trifling, giving rise to eccentricities of manner, queerness in thought, impropriety in morals, monomania, moral insanity, or dementia; that these affections are sometimes paroxysmal, coming on in fits, like the gout; that they are encouraged by everything calculated to exhaust the nervous system, by prolonged anxiety, by long endurance of mental or bodily pain, by loss of blood, by famine, by fright, by sudden shocks, or by direct accident. The phenomena of mental aberration in man go by various names. Now we say that such an one is "flighty," now that he is "exalted," now that he is "a malingerer," now he has "delirium tremens," now he perhaps, is "intoxicated," now "maudlin," now "roaring drunk." In none of these instances do we call him downright "mad," nor even "insane," but we believe that at any period his affection may become developed into "mania" or "dementia." A similar set of causes operating on youth may produce in one case chorea, in another epilepsy, in another a passion of tears. Water in the head will make a young child odd in manner, liable to do curious things in a strange way, and to laugh, cry, or scream without apparent cause. In some persons the presence of a tapeworm produces headache,

queer fits, voicelessness, and other anomalous symptoms. Yet to none of these do we give the word hysteria, or hysterics, nor do we call the affection an hysterical one, that is to say, if we recognise the true cause.

But when a woman, whose nervous system is not nearly so robust as that of man, is affected by any cause, whether of an hereditary nature, or by such debilitating influences as deep emotion, prolonged anxiety, sleeplessness, overwork, impaired digestion, loss of blood, want of appropriate food, or any other exhausting influence, and she suffers from paroxysms of crying, alternating with laughter, or from faintness, or from voicelessness, or any strangeness, she is said to be hysterical. Let us rather now call her *saleutic*.*

Such affections, however, when they do arise, have no more to do with the womb, than they have to do with a woman's curls. It is true that certain diseases of the uterus may sometimes determine a saleutic attack, just as a tape-worm in the bowels of a boy may produce epilepsy; but in neither case can the phenomenon be said to be due to the womb as a feminine organ, or the bowels as a masculine appendage. All that can be said upon the matter is, that women, having one organ which man has not, may suffer from disease therein, just as a man may suffer from an organ peculiar to him. In other words, what is called hysteria

* For the benefit of those who have not a Greek Lexicon at hand, I quote the following from Liddell and Scott's. "σάλος, *salos*, any unsteady tossing motion, a roadstead or anchorage, distemper, restlessness, perplexity. σαλεύω, *saleuo*, to rock, to move to and fro, roll and toss, like ships at sea. σάλευσις, *saleusis*, a moving constantly." Any one who is familiar with the excessive jactitation of body, arms, legs, and even the head, which is seen in an 'hysterical' fit, will, I think, allow that the word proposed is appropriate, without being theoretical.

no more depends upon the uterus than gout does upon the whiskers.

When once we recognise that the nervous affection of women for which we propose the name of saleusis, is due to a delicate state of the brain or spinal cord, or both, we shall see that the complaint is to be treated as if it were a real disease, rather than a play of fancy.

When we have got thus far, and endeavour to ascertain in what manner we can operate upon an exhausted brain, we find, amongst other things, that it can be influenced for good through the mind itself. Look, for example, at yonder child; it has been very naughty, has been in fear of discovery, has been found out, scolded, and whipped; proud of his sex, he is determined not to cry, but at length, overborne by pain, he gives way, and roars like a wounded tiger. Nor does he stop — his accumulated ills overbear him; it may be, too, that he is fasting, perhaps naturally weak; his cries subside into tears, and sob follows sob. He wants to check these, but cannot. Then comes the rod once more, and the fear of a second whipping enables him to regain command over himself. So it is with many an adult — the man who is tyrannical, silly, and malignant with his wife and children, does not act as if he were so when he is amongst a set of men who are equally bad with himself, for if he then should indulge his foul temper he knows that he will be punished; and the woman who, overborne by anxiety, is apt to become hysterical when she is among sympathising friends, can control herself when she feels that giving way to the paroxysm is sure to be followed by something unusually disagreeable.

We may still further illustrate our meaning by referring

to a case like the following, almost typical of a class. A. B., a remarkably fine young woman, undergoes a fearful trial in being spectator of a horrible railway accident, and afterwards has much domestic trouble for months. This over, she becomes what is called hysterical ;* as time passes on she becomes worse, and at length an attack of acute mania supervenes. Whilst at home amongst her relatives, there is no one whose moral influence is overpowering. Yet when she is removed, and amongst strangers who understand the management of such cases, she soon recovers the mental balance, mania subsiding into hysterics, as the former had originally followed the latter. If, then, any physician hopes to be successful in his management of hysteria, he must regard the mental as well as the physical condition of his patient. Moral control is as essential as medical treatment, and often more so, as the two following cases will prove. They suit my purpose the better, inasmuch as they were of opposite sexes.

C. D., a lad about twelve years old, had severe tic, arising from teeth badly stopped, after much suffering the stuffing was removed, and the pain ceased. But the boy did not mend. He became intolerant of light, insisted not only upon being kept in a dark room, but contrived equally to avoid all noises, conversation, powerful smells, and everything else making a strong impression upon the senses. Months rolled past, and the lad became as it were dumb ; various doctors tried their hands in vain ; all "pathies" known were tried, one after another, and dismissed in turn. At length, when

* In this case the word *saleutical* would have been particularly appropriate, for the mania was nothing more than an increase in the violence of the *saleusis*.

the case seemed hopeless, an old doctor was called in who was conspicuous for knowledge, for a well-digested experience, for queerness in manner and speech, and for strong good sense. He soon discarded the dark curtains, pooh-poohed the capriciousness of the appetite, and, by a judicious threat of sending the patient to a deaf and dumb school, overcame the propensity to silence. The lad was cured, not by medicine, but by management; yet no one would allege that the lad's indisposition was "fancy," that it was simply "hysterical," and to be cured by roughness. I honour the doctor who effected the cure, and not the less so because I had myself, six months before, regarded the case as one of hopeless brain disease.

The second case to which I refer did not differ very materially in its cause from the first; the one was traced to the mental agitation, worry, and fatigue implied in learning Latin—the tooth-stuffing being the straw which broke the camel's back; the other was due to general scholastic work.

E. F., a young lady about 16, who had recently begun, under the influence of a very energetic governess, to study closely the mysteries of language in general, foreign languages in particular, and composition or essay writing as well, found that feeding the body interfered with the activity of the mind. As a natural consequence, the body was starved that the intellect might flourish; what was at first a casual observation, became in time a rule of action, and abstinence from food became a dominant idea. When this strange notion became recognised, it was combated very judiciously by such hygienic contrivances as were calculated to distract the patient's attention from herself to the world

outside; yet every plan adopted was unsuccessful, and the lady was threatened with death from famine. I have seen many descriptions of storm-tossed mariners half dead from privation, but never realised them until I saw the young lady referred to. It would be considered "sensational" were I to describe the progress of the case, and how matters gradually grew worse until not a single teaspoonful of milk was taken in twelve hours; it seemed as if the throat refused to swallow. Yet at this crisis a few seconds of earnest conversation, certainly not lasting one minute, changed the aspect of affairs. After this chat, as much was taken in two minutes as had previously been taken in thrice as many days, and all danger was over.

Now the cases of the male and the female were here precisely analogous, and it would be not only illogical, but absolutely absurd, to allege that the one was a nervous and the other an hysterical affection, the two being different solely because of the sex of the patients. I care not what explanation any one chooses to give of the symptoms and of the cure, but I must insist upon the necessity of applying the same remedies to both. It will not do to say that E. F. was "hysterical" and C. D. "overworked." Both cases are to be explained on the same plan; both individuals had their brains exhausted, and for a time the nervous system broke down. "They 'were not themselves,' for 'nature, being afflict, commanded the mind to suffer with the body.'" Hence we should learn a lesson, to the effect that what many people call "hysteria" is nothing more than the indications of a tired brain, which is bordering upon insanity, and is to be cured by absolute mental repose or judicious nursing, rather than by harshness or scolding. I must not omit to

notice, that the lady whose case I first recorded resembled, for a time, many men whose brains have been temporarily affected from exhaustion of the cerebral organ. In all such cases, sleep is of vast importance, and proper doses of the hydrate of chloral act like a charm, and will quiet the saleusis more effectually than any other plan of treatment.

Let me, in conclusion, do penance as a man, and confess that I have myself been to the full as "hysterical" as any woman for whom I ever prescribed. Let me still farther implicate many a doctor in the same confession. Like others, after a day's work involving the usual amount of exercise, anxiety, and fatigue, I have taken my place as watcher at the bedside of a darling child; sometimes I have reached that spot after a day's pleasure and a night's fatigue, and have found myself the parent, the doctor, and the nurse. On such occasions, a word from another has the force of a cannon shot, and to have to frame a response seems analogous to opening the floodgates of despair. If under such circumstances, I break down and cry like a baby, I may be disgusted with myself, but I should be infinitely more savage with any one who would call me a silly fool. In like manner it is my belief, that he who would reproach a woman for giving way to natural, prolonged, or overwhelming emotion, and treat her "simply hysterical," scarcely deserves the title of man. Grief and emotion may be managed, and sometimes may be controlled; but, if they are too strong for suppression, to ridicule either is, to say the least, in very bad taste.

I am disappointed with the criticisms of the *Medical Quarterly* upon the foregoing chapter — nor can I account for them, except upon the supposition that, the chapter being

near the end of the book, the reader was fatigued, and paid little attention to the subject. I will not reproduce the Reviewer's remarks, one of which, the last on page 385, is incomprehensible from careless composition, but will content myself with the assertion that the writer referred to has wholly misunderstood the gist of my observations.

Without writing a treatise, and recording cases each of which illustrates a particular point, it is difficult to speak so precisely as to be clear, yet I will endeavour to sum up the meaning which I meant to convey in the fewest possible words.

As soon as a Physician sees a patient, said by others and thought by himself to be "hysterical," his first business must be to define inwardly what he or others mean by the word. In doing so he may find the sufferer overborne by grief — possibly a hidden sorrow, tired from bodily fatigue, in a strange condition that tells of threatened lunacy — or of the feminine form of delirium tremens — there may be the propensity to feign disease — to say or do strange things — or there may be *saleusis* more or less excessive — or some other unusual phenomenon.

We hold that in each case the doctor must act as a sensible man, and never as a bully. If his manner shows that he is in earnest, he may be rough. He should aye remember the adage, *suaviter in modo, fortiter in re.* I have myself dashed a large volume of cold water into a patient's face almost every minute for nearly an hour, been thanked for my pains, and installed as a good friend. In every case, the physician should be penetrated with the idea that he is a man, and his client a woman; he should take much the same stand as a judicious parent does with a child; if tender

hearted he encourages him, if wayward he manages him, and if in grief he comforts him. If a lad is in the lowest depths of distress from having had his christmas sovereign stolen at the pantomime, or a daughter is crying convulsively because Polly has smashed her new doll, I do not imagine that a loving Paterfamilias would abuse the first for 'snivelling' and the second for "giving way."

To explain myself still further, I reproduce here one of the most valuable letters from a patient to a doctor that I have ever read.

"One great good that you have done me — and I think that if I could know that I had done that for anyone I could be thankful to have lived such a suffering life as mine has been, *only for that* — I mean that you first sowed in my mind the seeds of that strength which has been my preservative against insanity. For when a lonely invalid sees that those who belong to her most nearly consider her facts as fiction, the first effect is to produce a physical sensation of giddiness, like a person trying to walk upon a cloud might feel; and afterwards what but insanity can happen to one who is told to disbelieve the natural laws of evidence." Then follows an expression of regret that full confidence was not given to her doctor, and that she did not inform him that, in addition to an affection in the rectum, there was another in the uterus; adding, "but I am sure that, if I had been your patient six months instead of six weeks, you would have got it out of me." When, after the operation had cured the bowel, she complained to her surgeon of severe pains, she was then told "that they were hysterical;" "but the recollection of your belief in me helped me to answer back, I don't care what name you give my pain, nor whether you say it is real or imaginary, only *cure* it; if it is in my imagination, invent some means of getting it out; for, as long as it hurts me, it is a real evil." Disgusted with the surgeons whom she saw at her then residence, because they persisted in regarding the pains which remained after the rectum had been cured as hysterical fancies, she went abroad, and told her sufferings to an intelligent Swiss practitioner, who found that her symptoms proceeded from anteversion of the uterus — the womb being actually bent double — an affection which from the great lapse of time which had ensued proved to be incurable, and the source of a perpetual burning pain which makes both day and night all but intolerable, and death to be regarded as a long delaying friend. To this affection others have been added, and the only relief to be found is in large doses of opiates. The next paragraph of the letter is so very illustrative of what is called *trance*, that

it deserves to be quoted literally. "Naturally I am and always have been excitable, and have high spirits, and as the morphia slightly *sobers* these, I have always the same motive for *not* taking morphia that other people have for taking champagne, since the omission of a dose of morphia *exhilarates* in spite of pain. But if I indulge too long, an old ailment, which I suffered much from in youth, and to a fearful extent these last nineteen years, returns, *i. e.*, stupor. This comes on with convulsive twitchings after the exhilaration. If I do not take care, I fall into a state in which my consciousness is perfect, but my powers of motion *nil*. In vain I know that help is close to my hand, that I have but to take medicine to be cured. I can neither raise my hand to ring my bell, nor open my eyes. At last I suppose nature somewhat recovers through the enforced stillness, and a time comes when I can, with intense effort, break the spell and ring for help. I don't think any one has a greater horror than myself of an agent for curing pain; but which influences the mind or weakens the will. But when I tell you that, in the old days when I took no opium, no stimulants, nor even meat, I used to pass weeks subject to these attacks for the greater part of every day; besides being always in a state which, though caused by abstinence, was as true and *degrading an intoxication* as any wine or opium could cause, I think I am right to look upon anything which leaves me to be my natural self, not as medicine but meat." (We may well pause here to notice how completely this poor lady's words afford us an explanation of those "ecstasies," "absorption for a time into the bosom of the Virgin," which are so commonly recorded in the lives of abstemious women whom the Roman Church have elevated to the position of Saints.) The writer then goes on to say, after remarking upon the duty of the doctor, duly to apportion the dose, &c., of an opiate, "If Doctor Inman is going to write again about the 'Restoration of Health,' I wish he would fight the battle of many a chronic invalid, who, feeling a doctor necessary as a preventative to evil, has to submit to his being an *active evil* in himself. A doctor once told me that he had a patient so fond of chloroform she was always inventing ailments to get it, and he laughed at the idea because it 'answered.' If I thought that chloroform was needful, I should ask for it direct, without inventing a reason. Now I have tried to carry this into practice with my doctors, and have lost one in consequence; and the one I have is, I see, often troubled with a morbid conscience, because he does not always write a prescription when he comes. What I said, was, 'I am too ill to be left unwatched, and somebody ought always to know how much opium I take, to be there to prevent me by his *influence* from taking anything else. You tell me, Do not take anything for sickness, it is not really bilious; that is well. I *believe*, and take no aperient, but the *next* attack *seems* to me — alone and suffering — *different*, and yet I know you will say, it is the same, and that you will ask (if I call you in), 'Why have you sent for me?' and if I don't call you in, it is nearly

certain that my enfeebled nerves will get the better of my brain, and that I shall *try* to gain some modicum of relief, however small, from the terrible suffering which I am undergoing, by taking some form of aperient. Do you not see that, by *preventing* me from doing any injury to myself, you are acting far more nobly than you do when you determine to let me alone, to physic myself in any way I may fancy, and thus make myself ill, and *then* attend upon me to cure me, by giving me a drug, which, to effect a certain amount of good, must do some harm also? But in vain I used to urge this, for the doctor used to say, I am too busy to make visits where there is nothing for me to *do; preventing* evil being, in his opinion, *nothing;* and yet how many, both male and female patients, have I known, who have seriously injured themselves by some preparation of mercury, who might have been kept from the practice of taking that drug by regular visits from a doctor, who would come to influence them, instead of to prescribe doubtful medicines. My present doctor has far too much good sense, and his visits, in which he tries to interest me in books, politics, and medical reviews, &c., are too like your visits, for him to take this erroneous and morbid view, were he a rich man. But where too many doctors *are* what you describe them, it is harder even (for a doctor depending on his practice) to pay what his enemies might call needless visits to one class of patients, than to tell the truth, and so be dismissed, by another class of patients. I hope then that Dr. I. will write a chapter in his next book on the use of a doctor to a chronic invalid,— though my doctor being Swiss won't be able to read it,— and make it clear that, whatever else that use may be, it is not to give drugs, or *propose little operations* (which are the worst of all, being morally as well as physically harmful). If a doctor comes across some poor sufferer whose need for sympathy and support is as great and real as another's need of his daily bread; and if, being weak in intellect and mind, (and therefore doubly an object of sympathy) she yields to the pressure of things as they are, and to secure help asks for operations, &c., let a doctor, instead of harshly, as too often is the case, showing such an one that she is *found out*, show her that he can give her in other ways, by books, &c., *true* help and more *real* sympathy than the momentary relief which a *kind surgeon* gives when he must cut or burn; and the same instinctive desire of sympathy which led her *downwards*, will lead her to a higher state and better frame of mind, one far more likely to lead to self-conquest of nerves, than the bitter despairing humiliation of the shammer who is found out. I cannot remember the deep debt I owe to those who have given such real help to me, without grieving over the many who *deeply need such help, and have it not.* I have often thought that if I am truthful it is because, as a child, no one doubted my word, and have often to my doctors quoted some words of yours which struck me. One visit, when you had been talking, not of illness, but entirely of various higher interests, you observed, 'I do you more good by

this than I should by any medicine,' and I needed no reflection to give a hearty assent . . . . and when my doctor comes to see me now, I need sometimes to quote your words, and tell him that, when he administers relief in the way of conversation, he has no need to prescribe a drug in addition."

CHAPTER XXXVI.

ON THE EXANTHEMATA, OR ERUPTIVE DISEASES.

Certain diseases difficult to understand—Reason why—Characters of the exanthemata—Presence of a poison assumed—Analogies with fertilization of female flowers—Advantage of comparison—Various poisons—Antidotes—Idea of elimination—Subject discussed—Nursing—Details avoided—Selecting a way when no path known.

The diseases to which this generic name is given have long been known, but as yet they are imperfectly understood. There is mystery respecting their origin, the way in which they are propagated, their operation on the human body, and a variety of other particulars. The essential characteristics of these affections are fever and an eruption on the skin; but, in some instances, death takes place before any fever declares itself, and in some few others no eruption of the skin is to be seen. Both these exceptions occur in scarlatina, in every epidemic of which there are some who die in a few hours without either shivering or heat, and others in whom the throat or the kidneys, or both, are affected without the skin being even reddened. Amongst the exanthemata, the following varieties are generally recognised:—Small-pox, chicken-pox, scarlatina, measles, erysipelas of the head and face, some add typhus, and, perhaps, rose rash. All are more or less contagious and infectious, spreading both by

contact and by the air. All have a period in which they lie dormant, another in which they produce their effects, and a third in which they leave the body. When they have so left, the system is usually free from their attacks a second time; but this is by no means a constant fact, for instances repeatedly occur in which an individual has the same kind of fever and eruptive disease twice or thrice over.

As yet we know absolutely nothing of the way by which these complaints have originated, and how, when once produced, they spread. There is no problem in medicine that has received more attention than this; yet it remains unsolved. All which we think that we know is this. That each disease does not now arise spontaneously, that the infection is of human origin, that each is frequently epidemic and far more severe at some time than at another, that children are more susceptible than adults, and that some people escape altogether, whilst others suffer every time they are exposed to fresh infection.

By way of grouping the set of symptoms which are noticed in each disease, the doctors have assumed the existence of a separate poison in each case, and for the benefit of the learner the arrangement is good, yet it must be borne in mind that there is no absolute proof that any real virus exists. We naturally associate in our own minds with the idea of poison an entity, which is solid, liquid, or gaseous, a something which we can mix with another lethal or other substance, an entity which may be so diluted as to be innocuous, or so concentrated that it may be made apparent to the senses. But supposing that a fever poison exists, we cannot mix it with another, for the poison of scarlatina does not mingle with that of small-pox to produce new effects.

We cannot so concentrate any such poison as to make it visible or demonstrable to any of the senses, nor can we so dilute it as to deprive it of its virulence. We cannot even form an idea of its nature. Analogy would lead us to suppose that it is made up of certain solid particles, not much unlike the pollen dust of plants, which, borne by the winds, may produce results at incredible distances. For example, let us imagine some desert island to which the seeds of female dicœcious plants have been borne by birds, and another to which seeds producing male dicœcious plants of the same classes have been transported by the same agency. A flowering season occurs yearly in both, yet all are barren year after year. At length, during flowering time, a gale springs up and carries the dust of the male anthers on its wings until this reaches the female pistil; fecundation then ensues. In spite of apparent dilution of the dust, one grain has reached its destination and produces its result. Still farther, it is certain that any commingling of the pollen dust will not change the nature of the resulting seed, except within certain limits, for each pollen granule will only fructify its appropriate pistil. Our analogy may be carried still farther, for we know that creatures such as flies may carry the pollen of one plant to the pistil of another, and thus bring about fructification against the prevailing wind. Again, as soon as impregnation occurs in the pistil, there is an immediate change in the whole plant, and phenomena are to be noticed which never were seen before except in plants of a similar kind. Nor are we simply indulging in futile fancy when we compare seeds and pods, resulting from fructification in dicœcious trees, to the pustule and matter in small-pox. I believe, myself, that there is a greater approach

to perfection in the granular and pollen theory than in the poison hypothesis. Yet both are theories, nevertheless. We cannot demonstrate the existence of solid granules emanating from diseased bodies, like sporules from ferns and fungi; and it is perhaps more consonant with sound sense to believe in the existence of something which is to us unknown, than to distort facts to make them square with fancies.

The advantage of adopting the poison theory arises from our being able to compare one thing with another. Thus, when we give a dose of opium, of strychnine, of hemlock, of digitalis, of mercury, or of arsenic, and find the brain, the heart, the large intestine, or the whole frame affected, we say that one poison affects one special part of the body more than other. Again, when we notice that a large dose of alcohol is recovered from in twenty-four hours, and a large dose of lead, mercury, or arsenic affects the system for many days, we say that the action of this one is more lasting than that of another. In like manner we can affirm that the poison of scarlatina affects the skin, throat, and kidneys; that of measles the skin, eyes and air passages; that the poison of small-pox is more enduring in its effects than that of erysipelas of the head, and that of scarlet fever more persistent than measles.

As the doctor does not know the real nature of the presumed poison, it is clear that he cannot oppose to it a direct antidote, as he can neutralise an acid by an alkali. There is no royal road to a cure.

But though the doctor cannot give any medicine which will directly annihilate the disease, he, nevertheless, studies each complaint deeply, with a view to ascertain what are the conditions most favourable to the patient. Believing that he

has to conduct, rather than to drive the sufferer to health, he inquires whether he must do so in warmth or in cold, in starvation or in plenty; and whether peculiar symptoms are to be encouraged or opposed. Whilst cogitating over these matters, he has to pass in review many theories, but amongst them all none are more important than that which passes current as the "eliminative" one. This is based upon the facts that the symptoms of small-pox abate when the eruption appears, and that they become worse again at the maturation of the pustules; also upon the belief that because any discharge from a patient in an exanthematous disease can propagate the complaint, nature must cure the individual by dismissing the morbid material from the body through various outlets.

This theory, although very plausible, is opposed, however, by one or two considerations which cannot be ignored, viz., that small-pox is dangerous in direct proportion to the extent and severity of the eruption, whilst excessive discharges from the eyes, nostrils, and bowels in measles and scarlatina aggravate the patient's danger. In typhus, a disease in which the fæcal excreta are more charged with the morbid material than is any other discharge, purging is a bad,and constipation a good, symptom. Moreover, in cases where small-pox has been imparted by means of inoculation, those cases are always the mildest in which the patient has been kept cool and low, with a view to prevent a copious eruption, whilst those have proved to be very dangerous where, by warmth and generous living, the crop of pustules has been large.

When we have come to the conclusion that it is unadvisable to aggravate any existing symptoms, we next inquire whether it is good for the patient to repel them. Here,

again, experience forces us to the conclusion that it is not judicious to do anything seriously to interfere with the natural processes. An eruption of measles being repelled by cold causes often a fatal result; not because what was outside has gone within, but because the same power or influence that so modified the circulation through the skin as to leave it bloodless, or to load the vessels with venous blood, has modified the nervous and cardiac centres. Many attempts have been made to force the pustules of the face in small-pox to wither, but in no case has general mischief ensued. In like manner, scarlatina has been treated by drenching the skin with cold water with absolutely good effect.

From the combined results of observation and experiment, physicians have come to the conclusion that judicious nursing is more important in the exanthemata than an active medication. Comfortable rooms, warmish ventilation, and appropriate diet are all that is necessary. When fever abates, there is great necessity for close observation; at one time, starvation being preferable to repletion, at another repletion and alcoholic stimuli being necessary. But few writers can enter fully into the symptoms which require one or other practice.

Into the details of the treatment most appropriate to each exanthematous disease I do not desire to go. They are to be found in every medical work, and it would be useless to repeat what has been already ably written. My aim is chiefly to lay down the broad principles which, in my opinion, should guide the doctor in his management of any complaint, or any group of diseases. It is my impression that medicine as an art or science has not progressed as it ought to have done, in consequence of attention being withdrawn from principles

to details. For example, many a patient says to a physician or druggist, "What is good for a cold, for a cough, for sickness, for purging, for a sprain?" &c. Many a doctor equally has not, and seeks not, for further information than that "antimony is the best thing for pneumonia," "ether for heart disease," "opium for diabetes," and "mercury for syphilis." In scarlatina, one man swears by ammonia, and another by muriatic acid; yet both must be aware, not only that the patients in this disease will get well without any medicine, but that, in many instances, the throat is so bad that nothing whatever can be taken. A doctor who does not know the principles upon which he ought to act is like a man upon a mountain upland in a dense fog without a map or compass. He desires to reach a valley before night, but cannot tell where it lies. He knows that it is good to jump over pools, and does so, but this does not help him. If, on the other hand, he walks straight on until he meets with running water, his way is certain, the stream is a sure guide. He may, in following it, have to leap, climb, or go around obstacles; yet his way is sure. When once this clue is found, everything seems simple. It may be that the stream leaps down a precipice where he cannot judiciously follow. In like manner we may follow a right track in medicine, yet not reach the goal of safety. But even this is better than having to wander indefinitely in an everlasting haze. If we cannot command success, we should do our best to deserve it, and never flag on the road to certainty until we meet that impenetrable barrier beyond which human knowledge cannot go.

CHAPTER XXXVII.

ON THE TREATMENT OF SIMPLE DEBILITY.

Debility, how to be met—Power of physician limited—Positive and negative treatment—Youth and age—David and Abishag—Marshal Lannes and a sheepskin—Influence of heat—Companionship.

We have already said so much upon the subject of improving the condition of the system generally, that we have left ourselves very little to say upon this head. When we treated of consumption, then of oil-rubbing, and descanted upon the value of cod-oil, milk and alcohol, rest, warmth, comfort, and the like, we said about as much as we could. The fact is, that for every hundred medicaments intended to impair the strength of the patient, there is scarcely one which has an opposite tendency. Certain vegetables, and the alkaloids that are extracted from them, steel, bismuth, and perhaps some other metals, go by the name of tonics, and are supposed to impart strength; yet their action is limited, and they are powerless to make a weakly individual a powerful man. When fever or any other disease has impaired the frame, tonics unquestionably seem to have an influence in raising it up again. I can well recollect, for example, the effect of a solution of quinine in enabling me to regain strength, after I had been pulled down by a severe attack of erysipelas: each dose seemed to give me something

that I wanted, and either the thought or the sight of my bottle induced me to take a dose. Yet, after a certain time, when I had recovered completely, I loathed the medicine; and when I did force myself to take the usual quantity, the stomach rejected it. I have heard a lady make corresponding remarks about cod-liver oil; yet in neither case was the patient otherwise than "restored," they were in no sense of the word better in health than they had originally been.

The physician ought not to feel depressed in mind, or disgusted with his art, because he cannot give constitutional vigour. If he could do so, he would indeed have, to a certain extent, the power of the Creator. If doctors could really impart vitality, no man probably who could afford to pay for their advice would die. Life, or the power of living, as we have before remarked, is like the mainspring of a watch, which, when wound up, will run down, quickly or otherwise, according to circumstances; each individual watch, like each individual man, has a separate mainspring power. The artificer may put a new spring into an old watch, and replace a broken one, but the physician cannot do the like for man. All that art can effect is, to teach to each sufferer how he can put himself in the best attainable position to live comfortably and long. This art may be summed up in a few words, viz., the individual must husband what strength he has, and do his best to increase it after it has been impaired.

Hence we see that the treatment of simple debility is partly negative and partly positive. Every depressing influence has to be avoided, every exalting agency has to be encouraged. These we have already abundantly referred to, both in this volume and in our preceding one, entitled the *Preservation of Health*, especially in the chapters on Heat,

Cold, and Exercise; and it only now remains to us to notice a few plans that have been adopted, or recommended from time to time, as having a direct tendency to restore decayed vigour.

One, which appears to have been thought much of in ancient times, was to place some one who is young and strong by the side of any one who is feeble, old, or decrepit. To those familiar with the Bible, I need scarcely recal the story of David and Abishag. The last is described as a young virgin, fair and lovely, and her business was to stand before the king by day, and to cherish him and lie in his bosom by night. But we must not omit to state, for this is all-important, why such a damsel was sought for—the reason given is, that David was old and stricken in years, and was so starved that, although his attendants covered him with clothes, he got no heat. To anyone familiar with the effects of old age, his coldness will readily be recognised, and some who are curious will know that the young are much warmer in bed than the aged. If, therefore, two lie together who may be designated as May and December, the former will be expending force in producing caloric, the latter will be husbanding force from the diminished necessity for making heat. Hence we see that there is some foundation, in reason and experience, for affirming that children and young people who sleep with aged ones are frequently impaired in health. They would be far worse were they put to sleep with a statue of marble.

Again, there are cases on record in which individuals whose life has been despaired of have been enveloped in the reeking skin just taken from a freshly killed sheep or other animal. Marshal Lannes, of the French revolutionary

army, was, if my memory may be depended on, so treated when almost dead from a severe wound and consequent hæmorrhage. I have also read of a French soldier who, in the Russian war, was wounded whilst retreating, but who was able to crawl into the body of a horse, that had been gutted by a round shot, and hence was able to survive the cold, his residence giving both shelter and food.

All the cases of which I am cognizant may be explained by the simple fact, that heat has been imparted to those whose age, &c., required it; consequently, it is to be inferred that heat imparted in any other way would be of equal service.

But amongst living beings who are feeble, whether with disease or age, there is generally a feeling of want when they are alone. Companionship is craved after, solitude is dreadful, and fear is a near relation to exhaustion. Hence it follows that a warm-bodied companion in bed is more sought after than simply a heated room. In the tedious watches of the night, during which the invalid is unable to sleep, it is far pleasanter to hear the breathing of a child, and feel its limbs in motion, than to listen to the ticking of a clock. With such a bed-fellow, the queer noises made by mice or insects, when all around is silent, do not terrify as they would do if the sufferer were alone. The luxury, then, of warmth and company is superior to that of warmth alone. With this light, we can easily see how it is that the ideas, promulgated in the story of the King of Jerusalem and the Shunamite, have become popular among those with whom a bedroom fire has been an impossible, or, perhaps, too costly a luxury.

The value of warmth in the restoration and preservation of health has not yet been fairly appreciated. Heat has

indeed been maligned, and cold has been unduly exalted. The man ill from a residence in the tropics assigns all his ailments to the burning sun of India, and hopes to find health in the humid cold of England, and is often disappointed when he finds it not. To such an one, warmth is as necessary a part of the restoration of health, as rest and good food. In conclusion, let us finish as we begun, with a "horsey" simile, and ask our friend, who loves the equine tribe like a mother does her child, "What he would do with a favourite animal who was weak, from overwork, from such a disease as influenza, or from old age?" His answer doubtless would be, "Give him a warm stable, a good groom, plenty of food, a fair share of pure air, very gentle exercise, and no labour." So we would say should a feeble man be treated—he should have a warm house, a warm bed, a nice companionable woman for wife or nurse, good and generous food, sufficiently pure warm air, no work, and only such exercise as is craved for. This plan will often restore a poor horse to energy and life; it certainly will restore many a man who, upon an opposite plan, would succumb.

[ADDENDUM.]

REWIEW OF A BOOK

ENTITLED

"WHAT IS MALARIA?"

BY DR. OLDHAM.

*** When I planned this book of Essays, I contemplated writing a chapter upon agues, &c., but ere I had begun to write it, it came to my knowledge that Dr. Oldham, who was once my clinical clerk and pupil, was engaged upon the subject. I could not use his private information until he published his views, and his book was not launched until the first edition of this work was printed. When his treatise appeared, it seemed to me more correct to give the following review, than to write an essay embodying all his work.

REVIEW.

Review of Dr. Oldham's work on Malaria—The author's theory stated—His evidence, negative and positive—Old ideas on marsh-poison—Modern ones—Author's experience of nights passed in a swamp—Influence of trees—Their real value—Malaria independent of water—Gaseous theory unhorsed—Real malaria is "chill"—Proofs—Cases in point—Rule of thumb—Influence of seasons—Of rains—Peculiarities of Malaria explained—A remarkable Indian tribe—How they escape agues—Livingstone's experience—Effect of heat—Comparative cold—Cases in point—Sir S. Baker—Summary.

We regard this unpretending little volume* as one of the most important which has yet been written upon the subject of which it treats, and we cordially recommend its perusal by every commander entrusted with the management of men in hot climates. The book professes to give, and in our opinion it really does so, a reliable account of the causes which produce agues, remittent fevers, and dysenteries. So simple is it in its conclusions, that every reader can master them, and so sensible that it is probable that every observant captain, who has had personal experience, will have given an anticipatory assent to them.

We may state in few words the nature of the Author's theory—it is, that there is no such thing as a distinct substantial poison, essence, or emanation from marshes or any other soil which produces fever, and that malaria is simply

* "*What is Malaria*," by Dr. Oldham. London: H. K. Lewis.

chill, or starvation by cold following upon great and long continued heat. The corollary from this is plain, viz., that in hot countries all sources of cold are to be avoided or counteracted, and the attention to be paid to this rule is in direct proportion to the heat of the day, and the frigidity during the night.

The account thus tersely given represents very inadequately the amount of information given by Dr. Oldham to make his book complete and exhaustive; he refers to every theory which has yet been broached, to every fancy which has received support, and to every statement that has been made upon respectable authority. From the beginning to the end the reader finds himself in company with a man who has perused much and thought more; and a sentence in the Author's preface gives the key note of the nature of his mind. Referring to one of his medical instructors, he speaks of him as "one who long ago taught me to take nothing for granted, but to observe and to think, to which lesson is mainly due this enquiry into the nature and cause of malaria."

The first chapters of the work give a succinct account of the views which have been held by physicians from the time of Hippocrates to our own, respecting that agent which proves itself so deadly in marshy, swampy, fenny, or similar districts. They describe the varied localities in which what are called malarious diseases abound, of the intensity of the complaints in some places, and some seasons, and their mildness under other circumstances. There is scarcely a place visited by men who have recorded their experiences that is not tersely mentioned, and every quotation is vouched by careful references. As a natural result of this collocation

of facts, it follows that what is called malaria does not necessarily depend upon water in any form; and here we may notice that Dr. Oldham still retains the name malaria and its derivatives, because they have been so long conventionally used. Nor can we blame him for this, for "bad air" may be used to describe cold air just as well as an atmosphere infected with some aërial hypothetical poison. But though malaria does not necessarily depend upon water, the Author recognises the fact that intermittents are the most common in swampy districts, whether natural, as the Pontine marshes in Italy, or artificial as the rice fields of Rangoon, and elsewhere. The reason for this preference he satisfactorily explains in a subsequent chapter. The belief in what may be called the aqueous origin of the "paludal poison," as many systematic writers designate the cause of agues, &c., has been so strongly held by all recent medical authorities, that Dr. Oldham judiciously considered that it could not be uprooted by reasoning alone; consequently, he tried upon himself a crucial experiment, which he thus describes:—

"In 1861 I was stationed at Googaira, in the Punjab, in a district covered for the most part with jungle, and lying between the rivers Ravee and Sutledge, the inundations from which river spread yearly over the low lands. When this took place, the station which was on a slightly rising ground a few feet above the surrounding country, and some two miles from the Ravee, was almost entirely surrounded by water. In the months of July and August the heat was intense, and the water, which was from a few inches to some feet deep in the jungles around, became putrid, stinking, and covered with a thick green scum of low vegetable forms.

The atmosphere during the day was like that of a vapour bath, and at night it was dank and clammy. Here, I thought, was a favourable opportunity for testing the properties of marsh miasmata; and to do so I slept at night through about four months of the hot, rainy, and autumnal seasons in the open air, less than two feet above the ground, and fully exposed to any exhalations. When rain was actually falling I retreated into the house, but kept all the doors open. During this period I took no quinine, or other febrifuge; my only precaution being the provision of sufficient bedding to preclude all possibility of chill. In the morning I could often shake the dew off my blanket. I was gratified to find that I did not take fever, nor had I an attack from that time till eight years afterwards when in London. As during the year previous to this experiment, I had suffered from several attacks of intermittent, there could, in my case, have been no want of susceptibility to malarious influence." Our Author very properly regards this only as one of a number of links in his chain of evidence.

Dr. Oldham next considers the influence of trees and other vegetation upon malaria, and points out that the clearing of forests and jungle does not necessarily banish fevers, and that intermittents are by no means necessary accompaniments of natural or artificial plantations. He points out that where woods do mischief this is traceable to the dampness of the soil which they favour, and the consequent cold, chilly vapour that overhangs them at night. On the other hand, in India, and elsewhere, trees serve as a protection from fever to those who repose beneath them, inasmuch as they prevent the cooling of the sleeper's body by checking that radiation of its warmth into space which

would otherwise occur on a cloudless night. It appears that the "rule of thumb" has not only taught the savage, but the Hindoo ascetic, the tiger, and the cow, that one of the best means to escape from disease is to keep the body warm during the night, and to protect it where possible from rains which are cold.

The fifth chapter of Dr. Oldham's book is important, for it demonstrates that malaria is quite independent of water. He quotes Hennen, who has enunciated the same opinion thus :—

"Whatever may be the cause, it is certain that in many countries the malaria does not arise until all the surface water has totally disappeared, and left the whole face of the country, including the very courses of the winter streams, an arid desert." And the Author adds, "In India, this is constantly the case, and so it is in most hot climates." Fergusson records that in the valley of the Guadiana our army was almost destroyed by remittent fever, the country being so dry, from want of rain, that the river was only a chain of pools. Again, upon the Agueda, near Ciudad Rodrigo, in a bare, open, hollow country, which, after being flooded, had become dry as a brick ground, the army suffered from fevers, which, from malignity of type, could only be equalled by those on the Guadiana.

The following extract is quite as important as those above. It occurred in the recent Abyssinian expedition.

"A detachment of four European officers and eighty Sepoys, with some thirty or forty servants and artificers, was sent to make a road through the Hadoda pass, which, in the rainy season, becomes the bed of a torrent. The surface was then perfectly dry, and consisted of sand,

boulders, and rock, but water was found on digging some feet below. The detachment encamped upon loose sand about fourteen feet above the bed of the torrent, at a distance from trees or vegetation of any kind. The heat by day reflected from masses of bare rock was intense, and at night there was a great fall of temperature, with very heavy dew. In a short time quotidian fever broke out; every man in camp was laid up with it except one Sepoy. The disease was in some cases complicated with dysentery. A detachment of Indian cavalry, which had previously encamped in the same place, suffered very severely, both in men and horses."

The Author supports this view by sixteen quotations from writers who have described malarious disease occurring in desiccated localities in almost as many different parts of the world.

Dr. Oldham then demolishes the opinion severally held by doctors, from Hippocrates downwards, that fevers, dysentery, liver disease, &c., are due to drinking marsh water, or water contaminated in any particular way. He also successfully combats the opinion held by some to-day, that the paludal poison can be stored up in the ground, and released when this is excavated for any purpose—*a propos* of soil, our Author judiciously remarks,

"When, as frequently happens, on provision of sufficient protection from the weather malarious disease diminishes, some mysterious change is supposed to have taken place in the air or soil. Thus, when troops were first sent to Arracan, the mortality amongst them, whether European or Indian, was very great. Some years afterwards, Dr. J. McPherson, with regard to the same country, observes—

'The experience of recent years has shown that there is nothing very inimical to the health of European officers in the climate of Khyook Phyoo, and the mortality in former years was mainly (Dr. Oldham would say *wholly*) owing to the want of good houses, to unnecessary exposure to the sun.' "

The quotation finishes in our Author's book by a reference to irregular habits amongst the soldiery; but this we omit, because it is subsequently shown that drunkenness, &c., only predisposes to fever by making the votaries to strong drink careless about the place in which they sleep. The sober man will, when cold, seek warmth and shelter; the drunkard will often lie on the cold ground until the insensibility of sleep passes even into that of death.

Dr. Oldham next passes in review the gaseous theory of some, and the germ theory of Dr. Salisbury, of Ohio, over which we need not linger. He quotes an experience of Dr. Livingstone's to show that sulphuretted hydrogen has nothing to do with agues. We can well believe this, for if it had the nymphs of the spring at Harrogate ought to be constantly suffering from intermittents. We need not follow our Author in his remarks upon the cause of that peculiar pallid look and miserable state of health which so commonly attends intermittents; nor upon the frequent impotence of quinine or other drug, either to ward off or to cure the complaint. To the reality of his assertion we can bear testimony, for we have seen individuals ill from the effects of quinine, and in an ague fit at the same time.

In the ninth chapter Dr. Oldham, having thoroughly prepared his reader for it, propounds his view, *that malaria, as a specific poison, does not exist*, but *that the cause of the diseases*

attributed to it is chill, or, in other words, the sudden abstraction of animal heat. He also in another sentence affirms, *that relapses of malarious fever are produced by exposure to chill.* He then proceeds to substantiate his conclusions by a mass of evidence which seems to be amply sufficient for the purpose. He tells of one gentleman who contracted ague in North Devon, from exposure to cold in a part where no such disease had been known before. Of a doctor who established a quotidian attack of fever in himself by bathing for seven days running, at midnight, for fifteen minutes at a time, in the Saone. Dr. Oldham then quotes Gore, to show that fevers are often produced on the West Coast of Africa by persons bathing in the sun; the danger being, in the Author's opinion, due to the chill produced in the water, or after leaving it. He records some instances which have come under his own notice, where fever has been brought on in India by a prolonged stay in a cold bath. To this we may add the account given of the celebrated Alexander, whose biographer tells us that the conqueror nearly lost his life from the effects of a fever contracted by his bathing in the cold water of the river Cyzicus, when he was enervated by great heat and exertion. Nor will the philosopher quarrel with Dr. Oldham for telling us that out of three thousand three hundred and ninety-four cases of disease of all kinds treated in a regimental hospital in the Madras Presidency, no less than one thousand three hundred and seventy-two soldiers attributed their illness to cold, whilst only sixty-two ascribed their disorders to exposure to the sun.

We are bound to say that our Author nowhere claims absolute credit for the discovery of the real injury inflicted by chill. On the contrary, he observes—

"An old Indian officer once observed to me, when we were talking over the sickness in the regiment, 'They say it is caused by dead leaves and vegetation, and malaria; but I know that hot days and cold nights always bring fever.' Again, Lind observes: 'The first proof of an unhealthy country is a sudden and great alteration in the air at sunset, from intolerable heat to chilling cold. This is perceived as soon as the sun is set, and for the most part accompanied by a heavy dew. It shows an unhealthy, swampy soil, the nature of which is such that no sooner are the sunbeams withdrawn than the vapours emitted from it render the air raw, damp, and chilling in the most sultry climates, so that even under the equator, in some unhealthy places, the night air is cold to an European constitution.'"

All that Dr. Oldham claims for himself seems to be the disproof of the existence of a poison—the proof that malaria is due to exposure to cold after great and prolonged heat; and, consequently, he claims to show that the so-called malarious fevers are, to a great extent, preventible, and that their severity may be greatly reduced by a due attention to very simple principles.

The next chapter is taken up with an account of the influence of seasons upon malaria—a name which the Author retains for convenience. Through this we need not follow him closely: it will suffice to say that those periods of the year are always the worst in which very cold nights, or cold rains, alternate with hot days; or when days, weeks, or perhaps months of starving weather follow a long-continuousness of tropical heat. As a short example, he refers to the fever outbreak in Northern India last autumn, where, after a hot season, more severe and protracted than the natives had

ever experienced, heavy rain fell, and remained a long time in the surface soil; and during the continuance of this unusual wintry state, and at a period when the people were dying in numbers, the thermometer at night fell several degrees below freezing point. The Author also mentions how frequently it happens that the poorly-clad Hindoos fall into disease at a time when the well-clad Europeans escape, simply because the first are miserably cold, and the second are comfortably warm.

In the eleventh, twelfth, and thirteenth chapters, Dr. Oldham describes the general characteristics of what are called malarious localities; but it is unnecessary to follow him in these, for everything therein points to the same conclusion, viz., that every place where the heat by day is intense, and the cold by night is excessive, is certainly insalubrious, and that those localities are the worst in which the starving process is assisted by rain, dew, or humidity generally. But it must be understood that an unhealthy spot is not always dangerous, for it is harmless when the temperature is equable.

In the next chapter, Dr. Oldham proceeds to account for certain peculiarities of malaria that have been hitherto regarded as incomprehensible, but which are readily explained on the theory which he propounds. The most interesting portion of this part is the proof which is adduced, that people, whose general information and scientific knowledge are regarded as far inferior to those possessed by modern Europeans, have discovered a means of counteracting the effects of malaria, without probably having any hypothesis at all.

"In all climates the evil influence existing in malarious places, from whatever source this is supposed to arise, is

known to be counteracted by fire. . . . Hippocrates is said, by means of fire and smoke, to have arrested the pestilence at Athens; and Acron is said to have done the same at Agrigentum by turning a cold and damp atmosphere into a dry and warm one. Pliny alludes to the use of fire for the same purpose. . . . In Central Africa no savage thinks of spending the night without a fire. Livingstone refers to the beneficial influence of this powerful antidote to malaria. Lind mentions that the negroes of the Guinea Coast, on the setting in of the rainy and sickly season, retire into well-thatched huts, where they keep fires lighted. In Venezuela, Humboldt found that every Indian had a fire close to his hammock. In India, the natives know well the value of fires at night as a protection against fevers. The Goojur herdsmen huddled together round their fires, to brave the deadly 'awal' of the Terai. . . . Davy says, 'In Ceylon, the natives carefully avoid night air, and in the interior generally have a fire in their sleeping rooms.' He also mentions that in the district of Kuttragama, in one of the most unhealthy districts of the island, where a great number of the pilgrims are swept off annually by disease, the officiating priest has lived for a number of years with impunity; and that the only precaution he took was to sleep in an inner room, with a fire burning in the middle of it."

Dr. Oldham then calls attention to the comparative immunity of large towns, but without dwelling upon this we will quote an illustration which is introduced by the author to account for the immunity from malaria, said to be possessed by some tribes in India. It appears that there is a people in the Punjab called Jeevas,

"A tribe who, employed in fishing and catching wild-fowl,

spend a great part of their lives in wet and marshy spots, constantly passing their nights in the jheebs and swamps. These men are a hardy race, and show no signs of paludal cachexia. . . . These people wear no veil nor respirator, and take no pains to avoid the inhalation of poisonous germs, or miasamata; they do not even avoid drinking marsh water; but their whole energies are directed to the protection of their bodies from nightly chill. The costume of the Jeeva, which he always dons at sunset, is quite different to anything worn by the other people of the country. It consists of a large thick wadded coat, which envelops him from head to foot; wrapped in this garment, and with a smouldering fire in his boat, the Jeeva paddles out towards the centre of the swamp, and there, bending down the tall reeds to form a roof, he spends the night in watching his snares and nets, unharmed in the midst of 'malaria.'"

Again, by taking an example out of its place in the books we may supplement the last observation by an experience recorded by Livingstone:—

"In Loanda," he says, "we braved the rain, and, as I despised being carried in our frequent passage through running water, I was pretty constantly drenched; but now, when we saw a storm coming, we invariably halted. The men soon pulled grass enough to make a shelter for themselves by placing it on a bush, and having got my camp-stool and umbrella, with a little grass under my feet, I kept myself perfectly dry. We also lighted large fires; and the men were not chilled by streams of water running down their persons and abstracting the heat, as they would have been had they been exposed to the rain. When it was over, they warmed themselves by the fires, and then travelled on comfortably.

The effect of this care was, that we had much less sickness than with a smaller party on journeying to Loanda."

Dr. Oldham next has a chapter on the Influence of Heat in connection with Malaria, which is, we think, of great importance. It may be summed up in the statement—exposure to great and long-continued heat makes the system sensitive to very small diminutions of temperature. To ordinary Englishmen, 71° Fahrenheit would be considered as a high temperature; yet Humboldt and other observers regard this as chillingly cold, when the average height of the thermometer is 82° in the shade. The value of this information is pointed out by the following observation:—

"I have frequently known case after case of fever occur in small badly-arranged houses, in which the heat was very great; when more roomy and cooler dwellings in the same neighbourhood, and on similar sites, were free from the disease. At Madhopore, the people living in one or two small houses, which afforded very insufficient protection from the heat, were frequently attacked by fever, sometimes of a very severe type; whilst those inhabiting larger and cooler buildings, some of them within a distance of one or two hundred yards, were perfectly free from it, the sites in each case being precisely similar. Dr. McKinnon, with reference to these fevers, truly observes, "Good house accommodation is a great safeguard." The intense heat, and very great unhealthiness of casemated barracks in tropical climates are proverbial.

Then follow a number of quotations in proof of this statement, all of which go to show that if men are kept very hot they are peculiarly liable to fever, and the more so if the night temperature is sufficient to starve them, and most instructive cases where—

"At Jhansi, in June, 1860, a young officer, of the battery of artillery to which I belonged, was exposed for some time to the sun at midday. He then, in a profuse perspiration, came into the house, through which a hot wind was blowing, as all the woodwork had been burned by the rebels; and the lattices which served for doors and windows, were almost dry. In a few minutes he complained of being chilly, and in a few more he was in the cold stage of a sharp attack of intermittent. This officer had never previously suffered from fever. When he went out a short time before, he was in perfect health, and he had not whilst away been in any malarious locality; in fact, at that season the whole country round was parched and perfectly dry. A year after this, I suffered from a severe attack of the same complaint, which came on during a morning call from sitting under a punkah in a cool room after riding through the sun and hot wind at mid-day in the month of April. I went into the house perfectly well, but had not sat there ten minutes before I felt the sensation of cold water running down my back, and in a few minutes more my friends had to put me to bed shivering with ague."

The sixteenth chapter of the work which we are reviewing, is full of illustrations of the influence of chill in producing fevers. We select the following as most generally interesting:—

"Sir Samuel and Lady Baker, on board their comfortable boat, with plenty of good food, dry clothing, and shelter from the weather, passed through the swamps of the White Hill in safety, though their native boatmen, from being frequently wet, suffered severely from fever, and the people of the country are described as fever-stricken wretches. After-

wards, when exposed to constant rain, without change of clothing, with indifferent shelter, and suffering from hunger and fatigue, these adventurous travellers nearly lost their lives from fever, on a tableland some four thousand feet above the sea. Dr. Livingstone mentions that whilst passing through a country which was damp and partially flooded from heavy rain, after having for some time the thermometer at 98° in the shade, and 138° three inches below the surface of the ground, the natives who travelled with him were all but one attacked with fever, but he himself escaped. It could not be supposed that the doctor was less liable to the action of any poison than the native Africans; but he slept in his waggon sheltered from the nightly chill, the natives camping on the damp ground round a fire. Afterwards, when all were alike exposed to sun and rain, heat and chill, the white man suffered most."

In his concluding chapters, Dr. Oldham speaks of the effect of chill in producing relapses, and of a great many causes of starvation which would not immediately occur to a traveller, a commanding officer, or even to a doctor. He speaks of the insalubrious effects of mountain winds when they sweep nightly over sleepers on the plains or elsewhere; of the effects of movement of the body after or during rain; of wind and wet combined; and enters into some particulars respecting the laws which relate to the radiation and the convection of heat, the great influence of evaporation in reducing temperature, and the like, and he sums up his argument thus:—

"It has been shown (1.) That exposure at night in a malarious locality necessarily involves exposure to chill; (2.) That all the effects produced by so-called 'malarious

influence' may be caused by the rapid abstraction of animal heat without the intervention of any specific poison; (3.) That exposure to chill is admittedly the cause of the diseases which are constantly associated with malarious fevers, as well as of the recurrent attacks, or so-called relapses, of the fevers themselves; (4.) That the effects of continued exposure to a high temperature is at once to diminish the heat-generating powers of the system, and to increase the susceptibility to malarious fever, as well as to aggravate the intensity of the disease. Under all these circumstances it appears impossible to arrive at any other conclusion than that malaria is chill. The nature and cause of 'malarious influence' being determined, the principles to be followed in any measures for the prevention of the diseases resulting from it require but little demonstration, and may be summed up in a few words, viz., (1.) That the predisposing influence of excessive and continuous heat is as much as possible to be avoided; (2.) That the greatest care is to be taken in malarious localities to protect the body from cold; (3.) That when (as so often happens in tropical countries, and from the exigencies of military service) exposure to great heat is unavoidable, its predisposing effects may, and should, be in a considerable degree counteracted by frequent temporary removals to a cooler climate; (4,) That the greater the degree of heat, and the longer and more continuous the exposure to it, the more vitally important does it become that even a slight degree of chill should be avoided. By the observance of these principles, instead of futile precautions against an imaginary poison, much may be done to diminish the great prevalence of disease in all malarious countries, and especially to abate the sickness and mortality which is so

rife amongst white men in tropical regions. It may, perhaps, appear scarcely necessary to add that when men are struggling for life in a climate for which their organisation is wholly unfitted, it is necessary, either for the cure of disease, or for the preservation of such health as remains to them, that every means, medical and hygienic, should be carefully directed to the support of the vital powers, and that all measures which tend to reduce those powers should be studiously avoided."

After mastering this small, but highly interesting book, we fancy that Englishmen might start for a sojourn in tropical countries with a comparatively light heart; if merely going as a fixture in some special locality, he would provide himself with some such light waterproof as the "Siphonia," common here, or the oiled paper capes in use in Japan; if about to explore, and certain to be exposed to all weathers, he would procure a light, but warm blanket, waterproofed on one side, and he would resolve never to sleep during cold or wet nights under the open sky when shelter could be procured. When heated, he would avoid cold bathing, or, at least he would not indulge himself long in the water; he would equally avoid a current of cool air, showers of cold rain; and, if perspiring, he would keep out of a hot blast of wind.

In conclusion, we can only say that the work is well arranged and well written, and that the interest of its readers is kept up from the beginning to the end. It certainly deserves to be known in every locality where "malarious diseases," agues, remittent fevers, dysenteries, inflammation of the liver, &c., are prevalent. Since perusing it I have had a conversation with a very intelligent American, stationed for many years in Sierra Leone, often called "the white man's

grave," yet he never once had fever; and in reply to my question, "To what do you attribute your immunity?" he answered, "I always wore a guernsey next my skin, and used a stove in the house during the rainy season." In other words, he had carefully avoided "chill."

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A Treatise on Myalgia:

Second Edition, 8vo., pp. 307, with six Lithographed Plates. London, Churchill, 1860. Price 9s.

The intention of this work is to show that a vast number of pains which have been considered due to inflammation of internal organs, or to neuralgia, to hysteria, to malingering, &c., are in reality due to an altered condition of certain muscles, fasciæ, or tendons, arising from direct injury or from overwork. It enters into a detailed account of the physiology of the muscular system and its pathological states, and gives directions whereby the nature of myalgia may be recognised, and the sufferings arising therefrom may be modified, relieved, or cured.

Foundation for a New Theory of Medicine:

Second Edition, post 8vo., pp. 528. London, Churchill, 1861., Price 10s.

Of which the following review, that appeared in the *Medical Mirror*, January, 1867, gives an account.

There has been of late years certainly, perhaps always, a dangerous tendency to let the theory and practice of healing separate; so that, instead of mutually aiding one another, they occupy apparently antagonistic positions. Our systematic lecturers administer to their class now a bit of one, now a bit of the other, and feel themselves under no constraint to exhibit their connection. We find even such teachers as the President of the College of Physicians, about a quarter of a century ago, giving to his pupils (and who is not his pupil still?) the lessons in theory which he had received from his precursors, and confessing at the same time that his practice was completely at variance with those lessons, (See Letter of Sir Thomas Watson in "Markham's Gulstonian Lectures on Bleeding, &c.") During that quarter of a century, our schools have been becoming more and more empirical year by year; we shorten the systematic lectures, as if ashamed of them, and multiply and magnify clinical, that is, empirical instruction.

There are those who do not object to this. They say theories have of old led us wrong—down with them then! let them not lead us any more. Ah, my friends, you are aiming at impossibility! They will lead you, and cannot but do so. Only, like link-boys in a London fog, unless you tell them how to guide you right, they will probably guide you wrong. For instance, who can say that he has never been influenced by the fallacious ideas involved in the abstract term "inflammation," with its derivation from "*flamma*?" Have we not all seen the unhappy Latinizing of "frenzy" by "phrenitis," and the mental association between the termination of "itis" and depletion prove most fatal to the patient? Do not the theories implied by the words "stimulant" and "derivative" often incline at all events, if not lead, each one of us to faulty practice?

Among thoughtful men there has been growing up a feeling of shame at the degradation of medicine to a technic art, by the want of any general views of disease at all in accord with the mode of treating it adopted by our acknowledged leaders. There has been going on a fermentation of thought, not dissimilar to that which preceded the great religious Reformation. It has not, indeed, lasted for so long a period, and perhaps some may think us not yet ripe for a Luther to crystallise into dogma the truths seething within us. It is a bold stroke for Dr. Inman—and it always will be a bold stroke for anyone—to come forward and propose to defend against all comers a principle which he considers will be the foundation-stone of the medicine of the future.

He does not, indeed, imitate the great Reformer by nailing his theses on the doors of the College of Physicians; but if he did so, the poster would probably exhibit as a heading in red capitals—

ALL DISEASE IS A DEFICIENCY OF VITAL FORCE.

We believe this formula is a just expression of the idea animating the whole volume now under review, enunciated from time to time in phrases of varied form and length.

The author may fairly claim the merit of being the first of this generation who has put the notion in a tangible shape, and the first of any generation who has been enabled to bring science to its support. Stahl and Brown and Darwin came very near, but physiology was not in those days sufficiently advanced to enable them to defend and perfect their system; and the unfortunate false deduction respecting alcohol, which poor Brown drew, discredited the influence they exerted. It is different now; her scientific handmaids—Chemistry, Physiology, Histology, are in a condition to give as well as receive aid from medicine; and, above all, we are less than our fathers under the dominion of words in estimating the qualities of re-agents and their effects. So that, whatever truth there may be in the generalisation, thus badly and rawly set forth, has a fair chance of standing its ground.

But is it true! And if true, is it true absolutely, as we have put it above? Aye, there's the rub. Some will accept it with certain exceptions, some with a grain of salt, some with a grain of cayenne pepper; a considerable party will qualify it with an epithet very important in a practical point of view, "All *curable* disease;" some will put their own definition to vital force, and then say it is not applicable to that; some will deny the existence of vital force, and to them the expression is meaningless; some will find it a platitude, and so on. But few, we are sure, of those who think while they practise, and practise while they think, will fail to acknowledge that they have of late been yearly more and more illustrating by their acts some principle which may be wrongly, may be imperfectly expressed, yet somehow underlies the formula we have used.

The exact meaning of the term "vital force" does not seriously affect the argument; whether we take it to be, as even Mr. Lewes allows is unobjectionable, "the dynamical condition of the organism;"* or whether, with Dr. Inman and Dr. Beale, we view it as the δύναμις which works through that condition, is of no consequence. In the former case, disease will be "an adynamic condidition of the organism;" in the latter, it may be called, in our expressive tongue, "scant life."

The first five chapters are occupied in discussing this vital force in various aspects, the existence of it, the modifications of it by matter, the influence of the individual nature it is associated with, the action of destructive agents, its definite duration, and its absence from the still organic body, or "death." The sixth chapter enters upon the subject of disease:—

"In health, every part of the body is undergoing change; but new material takes the place of the old with such steady regularity, that no alteration whatever is apparent in the shape, colour, consistency, or composition of any part, beyond such as is proper to growth and decay, such as the development of the testes in birds during spring, and their diminution during autumn and winter, and the same in a man at puberty, and the development of the uterus and mammæ during pregnancy.

"In other words, every organ is perpetually renovated during health, and a certain definite standard condition is habitually sustained.

"But when an individual is out of health, and the vital power is impaired, we cannot expect that the functions will be performed normally, nor the renovation keep up to the standard. The departure from the healthy standard may

* Lewes's Physiology of Common Life. p. 415.

be so small as to be inappreciable, or so great as to be incompatible with life. Between these extremes we have an infinity of degrees.

"Shortly, then, we say, deficient vital power manifests itself by disorder of function and altered nutrition in all our organs."

That the phenomena of disease are the phenomena of a deficiency of vital force, of which death is the absence, is illustrated by what the author calls "a digression," but which seems to us a very essential part of the argument, "upon the phenomena of dying." These are shown to be extreme degrees of the familiar phenomena of disease. If, then,

"We can point out the close connection existing between certain signs during life, and certain appearances after death, and show that whenever there is reason to believe that the body is in a dying or very enfeebled condition, symptoms occur precisely similar to those which occur prior to mortification elsewhere, and if we can show that these symptoms occur, *chiefly* when the vitality of a part is very low, there is at least fair ground for the inference, that wherever they are present, they indicate a great want of power, locally or generally, or both,

"What these signs and symptoms are, it will now be our business to show."

And accordingly, in the next ten chapters he goes through the principal tissues and organs, showing how their various morbid states are essentially manifestations of deficient vital power.

We will take from the first of these chapters—"On Deficiency of Vital Force in the Nervous System"—a specimen of our author's style of argument, and his forcible, trenchant manner.

"When we see in mania, proofs of great mental excitement, surely, it is argued, *that* must involve increased action—the proposition seems self-evident. But, in reply, we ask—What is excitement? What is increased action? Is it not a more than usually rapid expenditure of tissues and of power? Is it not expending in *one* day the material which would otherwise last *two?* and with this excess of expenditure over supply, can there be anything else than impairment of vitality and loss of power?"

The importance of this consideration in the management of lunatics has now been recognised in practice for some years—why should we allow the theory, which looks upon augmented mental excitement as augmented vitality, to hold its ground in our systematic works unsupplanted and unopposed?

The comparison drawn by the author between *post mortem* solution of the brain and morbid softening during life, both local and general, is very graphic and striking. Microscopic observation strongly confirms his views of the true pathology of degeneration of the cerebral vessels. This is a vital matter in the treatment of apoplexy, which Dr. Inman rightly considers of so much importance, that he devotes a great part of a chapter to the citation of cases in support of his opinion, that the "clot" in the brain, which occupied so much the thoughts of our forefathers, is really, in very many cases, the result of venesection; and that it is found less frequently now, and of less size, simply because we bleed our apoplectics less.

It may be observed that the cerebral pathology here indicated applies equally well to hydrocephalus, both chronic and acute. In the succeeding subject—Deficiency of Vital Power in the Lung—striking use is made of the addition to our powers of observation, made by Mr. Hutchinson's invention of the Spiro-

meter. It is remarked how *any* morbid state, not only those which limit the area of the pulmonary expansion, but anything that debilitates, diminishes the vital capacity, or the number of cubic inches of air capable of being retained in and expelled from the chest. This is very important, and strictly true, not only of diseases, but also of habits which lower muscular force without obviously affecting the health. For example, we have found, in examining for insurance, persons apparently robust, that none of those who habitually drink spirits between meals, even in such moderation as to be considered strictly temperate, can blow up the Spirometer to their due figure. And in several instances of really intemperate persons, this mode of observation has led to the detection of their secret.

In the succeeding chapters—"On Deficiency of Vital Power in the Heart" and "in Blood-vessels"—we are made to feel what the accurate modes in use for measuring the respiratory organs have done for us, by the comparative want of force in the author's argument when the circulating system is in question. The deficiency is not in the facts or the impression they leave, but in the reduction of them to weights and figures. We look forward with interest to great use being made of the observations arising out of Mr. Marey's invention of the sphygmograph in the next edition of this volume.

In the chapter on the stomach, the importance of Rest in the treatment of affections of this organ is shown by many pointed cases, shortly and clearly given, without that twaddling off into irrelevant matter, which is so common a failing with the citers of clinical experience. The application of Dr. Inman's principles to these diseases is especially valuable, because no class have suffered more from the still clinging adherence to mediæval asceticism which afflicts our judgment. The fashionable theology of the Middle Ages taught that whatever the body desired was bad for the soul; fashionable medicine went further, and said it was bad for the body too. The notion still survives, and thus is lost the aid to selection of treatment which "the voice of the flesh" (ἡ σάρκος φωνή—*Epictetus*) might give us. The author's remarks on the appetite as a condition of digestion are striking.

The 13th chapter is a bold one, for the author ventures to question the supposed frequency of disorder of the liver as a co-efficient in ill-health. This is a serious blow to the routine practitioner; for at least nine-tenths of his chronic patients, who have got a pain they cannot otherwise account for, together with all their amateur advisers and consolers, are convinced that their livers are out of order, and want to be treated for "biliousness."

"Now, on analysing cases in which ocular or manual examination shows the liver to be really diseased, such as malignant fever, abscess, cancer, atrophy, cirrhosis, &c., of the organ, it will be found, not only that no *hepatic* symptoms, but as a rule, very few symptoms at all, and those vague ones, can be considered the rule. It is not likely, therefore, that, when slightly disordered, it should declare itself by such frequent signs."

"This being then the conclusion to which our investigations have led us, it is advisable to review the principle upon which presumed diseases of the liver are generally treated, and the value of those special medicines, which are most in vogue;" a review which the author undertakes, lance in hand, attacking in a most trenchant manner all cant, calomel, and cholagogues. This chapter is all the bolder, in that it is purely destructive, as Dr. Inman is driven to confess

his inability to supply a true therapeusis of the liver, in the place of the false which he so ruthlessly destroys. He says, "The current physiology of the hepatic function is so limited that no reliable knowledge of its behaviour during debility can be gained."

The specimens which we have quoted will enable our readers to guess at the line of argument adopted in the succeeding chapters on the skin, muscular system, and blood. In the last there are some very shrewd and suggestive remarks on what may be called *post-mortem* changes in secretions; that is to sa , chemical changes which take place in various times after the separation of the secretions from the body. The author considers rapidity of chemical action succeeding to vital as a direct proof of deficient vitality. This is a very important practical point; for if the "foulness" of stools kept for our inspection is an evidence of debility, the conventional purging and grey powder, which they generally suggest to the medical attendant, should be replaced by nutrition and tonics.

To acid fermentation he also attributes the sourness of the sweat in rheumatic fever, and suggests a prognosis to be derived from the rapidity of the alkaline decomposition of the urine.

The next chapter takes up the argument which naturally comes out of these various illustrations, and is apparently a justification of our author's assumption of the title "New," as applied to his theory of therapeutics.

He points out that from the earliest time to the present, the means employed by orthodox physicians to restore health has been designedly such as will make a sound man ill. Drugs have been respected and valued in proportion as they derange the vital force. Let an herb or a mineral cause a mighty physiological disturbance in the human body, and they have taken for granted there must be a therapeutical use for it.* We have seen somewhere a quotation from Van Swieten, in which that philosophical physician expresses the result of his wide-spread review of medical practice in the aphorism, "All that Art can do is to weaken life;" and truly that seems a fair description of the agents which have been handed down to us in the Materia Medica; so that to conduct a cure on exactly opposite principles, that is to say, by strengthening the vital forces which remain sound, instead of weakening those which are acting abnormally, may be fairly called a *new* theory of therapeutics. But we think Dr. Inman is not quite just to his predecessors, when he represents them as using *destructive* remedies, that is, remedies which lower the vital powers by destructive assimilation, or which remove, in a mass, a component of the body, solely with a view of destroying disease. The intention often is to give freer play to the remaining functions, by curbing or removing that which in the existing condition of the body is a temporary impediment to it, and thus to allow those functions to recover force, and act themselves as remedies. Thus we may draw blood in congestion of the lung; not with the design, or even the effect, of diminishing the semi-vital "inflammation" which is going on in the pulmonary tissue; but in order to mechanically set free the obstructed circula-

* The leading idea of the savage mind is to reverence destructive power. Sir Samuel Baker found no medicine so popular in Central Africa as tartar emetic, by reason of the quickness and vigour of its consequences. His patients said there never was such a doctor. "He said I should be sick," they exclaimed, "and sick I was! There was no mistake about it! Wonderful!"

tion, and enable the blood to restore normal nutrition. Or we may purge, even drastically, a patient with dropsy, acknowledging freely that the induced weakness is a risk, while reckoning that the chance of a removal of the absorption compensates the risk. To sacrifice capital for the sake of increasing income, may be a very prudent transaction. We are sure that Dr. Inman often acts in such a manner in his own practice, and he ought not to pass over the fact that much of the treatment registered destructive had such an intention. In this chapter the advocate rather overshadows the philosopher.

Of means for restoring the vital power, it might be expected that the list would be shorter than that grim catalogue of perturbative re-agents, which our forefathers delighted to lengthen, and we, in shortening, have still tried to strengthen. Foremost stand hygienic measures, on which Dr. Inman has many sensible remarks to make, illustrated by anecdotes from his own experience, pointed and purpose-like, but still so much in accordance with the experience of every one of us, that we assent at once, and only wonder we never drew the inference ourselves—they are so good, we think they must be our own. Perhaps the only novelty is the stress laid by the author on the proper regulation of exercise, so as to avoid excess; which, in virtue of being a novelty, is treated of at considerable length. There is no question but what here also mediæval asceticism is at work in the public mind, and leads them to look upon weariness as productive of more health than can be gained by simple relaxation. Dr. Inman's views on the subject ought to be put into the hands of the general public, not only as giving them a piece of useful advice, but as an illustration of sound physiological reasoning. We cannot advise the same treatment of his observations on the use of alcohol. There would be a great danger of their being misunderstood and misused. They would conduce to that great mistake often made in self-management—the substitution of alcohol for a sufficiency of food; indeed, we should like much to see a complete revision of this chapter in the next edition, and a transfer of alcohol from the company of "Foods" into the succeeding category, "Medicines."

Among these latter, we are obliged to Dr. Inman for the attention he draws to two of exceeding value, as direct analeptics, viz., Glycerine and Almonds. Of the former he gives from nine to twelve drachms daily, as a substitute for cod-liver oil. Of the latter he quotes an instance in which a quarter of a pound of blanched almonds and a pint and a half of milk daily, took the place of all other food for eight months, and enabled the patient, a man of thirty, to walk twelve miles every morning. We would commend this portable food to Alpine and other pedestrian travellers, also to the military commissariat.

Among tonics, alcohol occupies the first place, and the remarks upon it in this collocation cannot but meet with the approval of all practical and unprejudiced men. The value of more strictly pharmaceutical tonics taken from the vegetable kingdom is here attributed, in a great measure, to their direct astringent effects on the mucous membrane of the stomach, and, led by this idea, Dr. Inman has habitually substituted for them pure tannin, as a strengthening remedy, and has found it very useful. Upon the use of opium as a tonic, there are some exceedingly suggestive remarks, founded upon experimental observations which every one can make for himself, and most probably will be able to cap from memory. This is an excellent feature, by the way, in Dr. Inman's illustrations; they are, as a rule, drawn from common experience, not from

exceptional instances. True, we have now and then "a strange story" in a note, but it is always quoted on the authority of a named witness, and is never used to established a principle.

The tonic effect of opium is not explained by the author; might we suggest that it seems to us to depend on a temporary restraint of the destructive assimilation caused by nervous action; and that it would consequently be found beneficial in those cases only where nervous action is excessive? If we are right, an indication of the proper cases in which to use it would be established.

The sketch we have given will serve to introduce this very suggestive volume to our reader, and lead him to a pretty just anticipation of the solid food for thought which it affords. It only remains to us to say that this nutritive diet is rendered palatable by an agreeable dressing; the pages are ornamented by anecdote and allusion, sweetened from time to time by touches of human feeling, and occasionally made piquant by what the author must allow us to call a little "sauce."

Spinal Irritation Explained:

Being a Treatise upon Painful and other Muscular Affections, and their bearing upon Hysteria, Spinal Irritation, Inflammation, &c., with Illustrations by Bagg. Published by John Churchill, 11, New Burlington Street, London. Price 6s.

OPINIONS OF THE PRESS.

"Dr. INMAN aims at assigning to their true cause a number of symptoms which are generally thrown together for want of knowing what else to do with them, under the class Hysteria. The conclusions at which the author has arrived are founded on practical observation, and throughout the work we find notices of illustrative cases."—*British Medical Journal.*

"Dr. INMAN adduces evidence which must be allowed by every one whose prejudices will not interfere with the fair exercise of his reasoning powers: at any rate, the evidence appears sufficiently cogent to us."—Rankin's *Abstract*, 1847.

"Dr. INMAN, in nis present line of investigation, has opened much new ground, and his remarks and reasoning demand the candid attention of the profession."—*Medical Times and Gazette.*

"We think that Dr. INMAN deserves the gratitude of the profession for the trouble he has taken, and we shall be much surprised if he do not obtain something more than thanks. The book is very nicely got up, and the different points have been elaborated in a way to which our condensed *resumé* does no adequate justice. Moreover, every step in this investigation is illustrated by cases in point, of great interest, and very well related."—*Dublin Quarterly Journal of Medical Science*, August, 1858.

"Dr. INMAN argues with such force and clearness, that we should be surprised if he does not gain many adherents, and do more to undermine the stronghold of hysteria and spinal irritation than any previous writer.

. . . . . .

"Spinal irritation is merely the call to excite the attention of the passer by; the whole tenour of the book is to show that such a thing has no existence.

"We cannot, however, part from him without cordially acknowledging the high merit of the work before us; the lucid and scientific manner in which the various topics are handled, nor without specially adverting to the evidence that pervades the whole, that it is written by a sound practitioner and a thoroughly enlightened physician."—*British and Foreign Medico-Chirurgical Review*, April, 1858.

On the True Nature of Inflammation and Atheroma in Arteries:

A large portion of which is incorporated in "Foundation for a New Theory of Medicine."

The Results of Microscopic Experience:

Being an account of the information gained by the Microscope, and its bearings on Pathology and Treatment.

Of the two last very few copies remain in the author's hands.

OTHER WORKS BY DR. INMAN.

A Treatise upon Certain Ancient Faiths which have been Embodied in Ancient Names:

Second edition, vols. 1 and 2, demy 8vo., pp. 800 and 1,000, largely illustrated. Price £1 10s. each vol. Trübner and Co. 60, Paternoster Row, London, and Adam Holden, Liverpool.

These books are founded on the fact that in ancient times names were given by priestly authority, and usually contained the title and an attribute of the deity worshipped—or expressed the acknowledgment of dependence of man upon a creator. As examples, we may give Theodorus, Apollodorus, Epaphroditus, amongst the Greeks—which signify respectively the gift of God, the gift of Apollo, and—from Aphrodite.

The cognomens in the Bible and other ancient places are then examined, with the desire to extract from them all the information they contain. This elicits the fact that there was no essential distinction between the faith of the Hebrews, generally, and that entertained by other Shemitic races. It also elicits the fact that, although a short contact between other nations and the Jews sufficed to introduce into Hebrew nomenclature a new set of names, and new theological ideas, the alleged sojourn in Egypt left no evidence of having modified the Israelitish language, nomenclature or faith. In the second volume, this point is discussed at considerable length, and the author expresses his belief that the Bible's own testimony disproves the story of Israel in Egypt.

After having examined all the Hebraic cognomens, more than half of which

are given in the first volume, the author prefaces his account of them with a description, drawn from many sources, of the faith held by ancient Phœnicians, Syrians, Babylonians, Assyrians, Persians, and Hindoos; points out how veneration for an unseen and unknown power has been associated with the use of certain visible emblems. The sun, the moon, and fire, being the symbols usually selected by the most exalted religionists, whilst the parts concerned in the creation of new beings have been given for veneration to the vulgar. Whether the celestial or terrestrial organs have been regarded with respect, worshippers have been divided, much as they are now, into moral and immoral classes. The latter always being the most numerous, impurity in religious rites, &c., has been more prevalent than strict propriety. In moral behaviour, and in their written law, the Jews were not better than their neighbours.

The veneration in which the symbols of generation have been held dates from the remotest antiquity, and is the key with which the majority of ancient and modern myths are to be explained. There was as much mystery in the triple godhead, *plus* the goddess, amongst the ancient Assyrians, as amongst the modern Romanists. The doctrine of the Trinity and of the Virgin current to-day, is based upon the Pagan idea that the mundane emblem of creation being triple, the Creator whom it symbolises must be so too; whilst "The Virgin Mary" is a copy of Isis, Ishtar, Venus, Parvati, Juno, or woman generally.

These ideas and these emblems were never generally explained to the common people. They were taught to reverence the organs, or such signs as typified them, in the first place; but as civilisation extended, coarseness in religious thought and practice gave way to decency, and the grossness of the original emblems of the Creator was veiled. But the veil was thin, and it is still easy, by a study of religious symbols, to ascertain whether the triune father, the single mother, or the fourfold godhead was the object of adoration, in those nations whose history, sculpture, &c., have come down to us.

There is reason to believe that the worship of the Phœnicians, Syrians, Assyrians, and Babylonians, resembled greatly that of the Romanists in the middle ages; that of the Persians was comparatively pure, like that of the modern Parsees; and this influenced to a great degree the religion of the Jews. About the Christian era, the Jewish faith was a compound, developed, like modern Romanism, from many sources. There is reason to believe that amongst the Hebrews at that period there was a sect, the Essenes, of Buddhist origin. Christianity comprised a belief in the Hindoo notion of Avatars, or incarnations of the Almighty, in the absolute truth of certain writings called prophetic, in the idea that man was punished for transgressions committed in former times, and that he should seek salvation by escaping punishment in a future life. The doctrines then current about Hell and Heaven, Angels and Devils, came to the Jews from heathen sources.

Buddhism and Christianity were both antagonistic to priestly pretensions, and were successful, whilst the latter were outrageous. But when the new faith prevailed, a want began to be felt of some symbol for adoration, some ceremony to be gone through, &c. Both Buddhists and Christians adopted these from their predecessors—merely introducing them with new stories, statements, &c.

Modern Christianity does not very materially differ from Buddhism, Hellenism, and certain other forms of faith. What the moderns call angels, the Greeks call gods; the former laugh at Jupiter for being in love, the latter may equally deride those who talk of Jehovah being a jealous God. It is not right to test others by a plan to which we will not ourselves adhere.

Such being the line of thought followed, the author endeavours to test its value in a series of essays—some upon the character of such typical individuals as Abraham, David, Samuel, and Solomon; others upon the peculiarities of individual prophets, the nature of their utterances, and the value of "prophecy" in general. There are others upon such subjects as "inspiration," "infidelity," "miracles," "prophecy," "revelation," "salvation," "theology," "time," &c. In addition to the above, there are others whose object is to throw light upon the real history of the Jews, and to ascertain the probable chronology of various parts of their sacred writings.

Throughout both volumes the author endeavours to establish his own views, rather than ridicule those of persons who think differently. He does not attack real religion, but only seeks to strip from it the unsightly rags with which he thinks that it has been disfigured.

The work is illustrated by many plates and woodcuts—each of which receives a full description in the second volume.

In giving these, the author's intention is to enable persons to understand a large part of the subject much better than they could without pictorial assistance; and they serve to demonstrate that the burden of proof must be laid upon his opponents. When we see that a virgin and child has been adored in ancient Assyria, Hindostan, Phœnicia, Egypt, and Greece, under the same emblem as she is venerated by Romanists now; when we find, moreover, that this virgin is associated with Friday, with the fish, and with certain emblems, whose signification is undoubted; it seems preposterous to say that the adoration of the virgin, current in Papal countries, is anything more than the restoration of a pagan cult. In like manner, when the emblem of the male creator can be traced through many nations, and many centuries before the Christian era, and we find its counterpart still venerated in Christian churches, we cannot doubt that the dogma of the Trinity is based upon a heathen, and, according to our ideas, an impure basis.

Ancient Pagan and Modern Christian Symbolism Exposed and Explained:

8vo. Pp. 68. Sixteen Plates and 172 Additional Figures. Price 5s.
London: Trübner & Co. Liverpool: Adam Holden.

Ancient Pillar-Stones and Cairns:

8vo. Stitched, pp. 34. Holden, Liverpool, 1867. Price 2s. 6d.

In this dissertation the author shows that these are due to the ancient plan of representing the Creator as or by the organ which determines Creation on earth.

Other Works by Dr. Inman.

Also, a Treatise on

Spontaneous Combustion :

Showing the causes which determine the occurrence of fire in certain fabrics, coals, wood, cotton, &c., under certain circumstances.

On the Delights of Travel :

Being an apology for a Physician knowing something beyond his own profession.

Of the last two very few copies remain in the author's hands.

D. MARPLES, PRINTER, LORD STREET, LIVERPOOL.