

circumstances, a recovery is possible. But that recovery can be effected only by the steadfast determination of the physician not to desert his post until the vital spark has actually fled; and, if you commit an error in holding on—in hoping against hope—at all events it is an error on the right side.

### LECTURE XXIX.

STIMULANTS IN FEVER, *continued*—Case of Hardcastle, continued—Treatment by food and stimulants in extreme cases—Presence of cerebral symptoms to a great extent unfavourable to the exhibition of stimulants—Necessity for daily observation of the effects of the treatment in each case—Signs of disagreement of stimulants—Routine practice is in every instance to be deprecated—Fallacies of the numerical system in therapeutics—History of *routinism*—Its results—Description of *routinism* in the treatment of fever.

WITH reference to the case of Hardcastle, with which we were occupied at our last lecture, we may hope that the symptoms have at last yielded. The great interest of this case consists in its having been an example of a fever in which the patient was scarcely maculated, yet in which the stimulating treatment had to be pursued with an activity as great or greater than that which we are called on to employ in the worst cases of spotted typhus.

On looking over my notes I find that on his admission, which was on or about the seventh day, he had a few scattered maculæ on the abdomen, of a large size, and of a leaden gray colour. He then had diarrhœa, abdominal tenderness, and ileo-cæcal gurgling; and the sounds of the heart, though weak, preserved their natural mutual relations as to force and duration. Doubtless the patient at this period might have been well described as labouring under typhoid and not typhus fever, according to the distinctions now in vogue; but on the 14th, or the 21st, or the 24th day, he would be a bold man who would declare that the case was not typhus of the worst description.

He is now at the 28th or 30th day of his illness, and we have every reason to believe that all will now go well. Since the eruption of gangrenous vesicles or pustules, which occurred on the 21st day, there have been no new appearances of this form of disease, there has been no new bed-sore, nor have the gangrenous patches spread, as might have been expected; two of them are in the form of sinuous cavities, but even these show signs of healing.

These sores were treated first, you will remember, by the simple, and afterwards by the fermenting, poultice; but as the latter gave considerable pain, the nurse returned to the simple poulticing, and now we have changed our plan, and are using stimulating dressings to the ulcerated surfaces.

In the management of these sores, whether they be the ordinary bed-sores or examples of the gangrenous pustules, both of which appear to be of the nature of the secondary affections of typhus under the law of periodicity, it sometimes happens that we have to deal with extensive sinuses. I have seen them at times of not less than six inches in length. In most cases the best treatment for them will be stimulating injections, using the vulcanized India-rubber bottle with a long and slender ivory pipe. It is generally requisite at first to wash out the sinus with tepid water, and afterwards to inject some of the metallic solutions—diluted solutions of sulphate of copper, nitrate of silver, or sulphate of zinc—and when the discharge is very fetid, you may use the decoction of bark, or solutions of chloride of lime or soda. An excellent dressing when the sore is open is the Canada balsam combined with oil, or a mixture of equal parts of castor oil and balsam of copaiba. You will derive advantage, also, from the employment of pressure by means of flat compresses of lint, and a roller when it is possible to apply it, or in other cases you may employ strapping with adhesive plaster. When the sinus is in a depending position, and matter accumulates in its lower portions, it is sometimes necessary to make a counter opening; but this operation should rather be delayed until the system has improved; the case is then to be treated as an ordinary surgical one.

Now let me draw your attention to the diligence with which the administration of wine has been pursued in this case. We began its exhibition on the 2d of November, which was the eighth day of the disease; on that and the next four days, the quantity administered was six ounces daily. The wine used all through was port, of an excellent quality. From the 6th to the 11th he had twelve ounces daily, and from the 11th to the 18th his daily allowance was twenty-four ounces. During the next three days it was reduced to eighteen ounces; and from the 21st to the 25th, to twelve ounces per diem. On the 26th and succeeding days he had ten ounces; on the 28th the quantity was reduced to eight; on the 4th of December he had but four ounces; and the wine was omitted altogether on the 5th. Besides all this, a tumbler of hot brandy-punch, containing two ounces of the best brandy, was administered whenever the patient's state seemed to require it. In this way we used about twenty-four ounces



of brandy, seven bottles of porter, and 432 ounces of wine, while, in addition, bark, musk, and ammonia were freely exhibited.

Some may suppose that this quantity of wine was excessive. Such is not my opinion, nor will it be yours when you come to treat the typhus of this country in a large hospital. I am sure we might have given him with safety much more, and I doubt if we could have done with less. The result of the case confirms what I have said to you before, that in fever, no matter how terrible the group of symptoms may be, *you are not to despair so long as the patient can swallow*. Bear in mind, too, that Hardcastle has been carefully fed throughout with chicken broth, beef-tea, and jelly; and we have now passed that period when, under the law of periodicity, his terrible disease should subside.

The principal symptoms were extraordinary prostration, coldness of the surface, and feebleness and irregularity of the heart's action; and it was not until the end of the eighth day of the exhibition of stimulants in great quantities that any favourable influence was produced on the circulation. The case strongly illustrates the advantage of persisting in the use of stimulants, although for days together no amendment seems to follow their employment.

I cannot too strongly impress upon you that even under apparently desperate circumstances life may be saved by the repeated introduction of small quantities of food and stimulants. Here we see the advantage of skilled nurse-tending. In the practice of a friend of mine a case occurred in which the power of deglutition was all but lost, the vital powers were sunken to an extreme degree, the action of the heart almost imperceptible, the eyes staring, with contracted pupils; while the symptom of lachrymation, regarded by experienced men as one of the worst in fever, was present. It was thought by all except the physician that the patient should be left to die. He, however, did not utterly despair. A large blister was applied to the occiput and nape of the neck, and a teaspoonful of brandy and beef-tea was administered every ten minutes during many hours. A slight motion of the eyelids was at last perceived. This was followed by deglutition, and after some time reaction had taken place.

Some would say that in this most severe case the recovery was to be attributed to the blistering. It is more probable that it was connected with the action of the periodic laws, favoured by the continued introduction of stimulants. In such a case the use of enemata of beef tea or of milk, containing in addition a small quan-

tity of brandy, and also quinine, as recommended by Dr. Graves, is indicated.

As to the employment of wine in a case seen for the first time, you will remember that in fever those who have been previously of temperate habits are generally the best subjects for the stimulating treatment. In our wards great quantities of wine have produced the best effects in the peasant class. Such men are by no means habitually intemperate. They may exceed now and then on the occasion of a fair or a wake, but their habitual drinks are milk, water, or tea. It is not so with the artisan class, who indulge in ardent spirits. Here I beg of you to remember what we have seen as to the anticipative treatment, and also that having to deal with a case of fever—say, in its first week—you cannot predicate how long it will continue. This is particularly true in the typhoid form, especially when affecting the adult.

It would seem as if the frequent habit of alcoholic stimulation in health rendered the brain less capable of supporting wine under the condition of fever. At all events, you have seen that the use of stimulants where the patient had been a drunkard has by no means the same admirable result observed in men of a different habit.

The freedom from symptoms of cerebral excitement, particularly when attended by heat of the head and increased action of the cerebral arteries, is of course favourable to the use of wine.

But there is another cerebral condition which renders the use of wine in fever less often advantageous. It is met with in those whose occupation has long entailed a close and intense mental labour. Such subjects you will meet more frequently in the middle classes of society than among hospital patients, and in them we find that, while other circumstances indicate the free use of stimulants, their tranquillizing effect is not seen, and they have to be omitted or used only at intervals. This is one out of many reasons why the overworked professional man, especially if he be a physician, is so bad a subject for fever. Indeed, whenever you are called to treat a medical brother in typhus or in typhoid, you may lay your account at having a rock ahead.

In the course of a case of typhus or the more prolonged examples of severe typhoid, in which you are giving wine, you must every day be on the look-out for symptoms that the stimulant is no longer necessary or is disagreeing. Such a change is common, showing that the period has arrived when the stimulant is beginning to have the intoxicating effect which it would have were the patient not in fever. It is not easy to describe accurately this state, and you must learn it



by observation. There is an undefined general excitement, sometimes with heaviness and even a degree of delirium, often of a novel kind, together with loss of sleep. Symptoms not unlike many of those in the earlier stages of the case appear, while the pulse is more resisting and the patient complains of thirst and general *malaise*. Now, some of you have seen this group of symptoms in the advanced stages of fever where stimulants had been employed at first with great advantage, and you will remember the benefit which followed their disuse or diminution. This is a most important point of practice. Coincident with the use of wine or other stimulants you may have observed a gradual subsidence of the symptoms of fever, the re-establishment of the heart's action, the coming down of the pulse, the cleaning of the tongue, and an improvement in the nervous symptoms. Under these circumstances the wine may be diminished gradually.

But where there are indications that it is beginning to disagree, and that, in place of having a calming, it has a disturbing, effect on the brain and heart, *although at first the opposite state had been induced*—then the omission of the stimulant may take place at once, and the patient be supported on bland and unstimulating nourishment. You must have seen examples in our wards of the happy effects which followed the disuse of stimulants.

When, in a protracted fever in which stimulants had been clearly indicated and had manifestly agreed in full quantity, symptoms of a more general disturbance of the system supervene, you must consider whether this condition is owing to an exacerbation of the essential disease or to the influence of stimulants; in other words, whether the time has not arrived when their sanative action has given place to an opposite effect. Under such circumstances your course may be often, and safely, a tentative one. Such a course is recommended by Dr. Murchison when there is a question as to the giving of stimulants in the early stages of fever; and here likewise you may feel your way in an opposite direction and watch the effect of a certain diminution of the remedy.

Now, gentlemen, before concluding this lecture, I wish to say to the junior members of the class, and indeed to you all, that physicians are to be met with who boast that they do not give stimulants in fever, while, on the other hand, there are men in whose practice their use is a matter of routine. In either of these categories you may meet those who refer to and compare the numerical results of their practice. But these men have not learned how inconsequential are such comparisons. They have not learned how fallacious the results of

the numerical system are in indicating a line of practice to be adopted *in all cases*. They have not perceived that life may be saved or lost by the adoption of this or that system—the advocates of stimulation saving those cases which required it, and their opponents those where it was injurious or unnecessary.

It is true that the observations of the numerical school have been directed to determine what treatment in a certain disease will be followed with success in the greatest out of a given number. But this is not what the practical physician wants to know. Is it not rather what is best for him to do in the case of A, B, or C? A certain treatment may have been successful in 75 per cent. of a group of cases, but he knows that this will not justify him in adopting it exclusively in all or in any of the remaining 25 per cent.

He has learned that fever, in the general acceptation of the term, is a condition with laws of periodicity, and that, therefore, all therapeutic conclusions as regards it will have to be estimated by a reference to this characteristic; and, lastly, that fever is a varying condition, its cases—although capable of being arranged into groups—having certain similarities, but also infinite varieties, in local and essential symptoms; in amount, period, and degree of complications; in the influence of remedies and in the epidemic character. Therefore in its treatment, and with reference to therapeutics, each case must be considered *by itself*.

It is plain that dependence on the numerical system will encourage routinism—a line of conduct so opposed to the proper dealing with disease; for to adopt a practice deduced from the results of comparison of numbers is but to justify routinism under the show of authority.

It is hardly necessary to observe to the senior members of this class that the use of wine and other stimulants in our wards is in no way a practice of routine. Gentlemen, you have seen many cases during the last year in which wine was sparingly or not at all used in the course of the fever, simply because it was not required. Food was regularly given, while careful watching was practised, so as to detect early any sign of failure of the energy of the brain or circulation.

It will be well to look at the various illustrations of routinism in the treatment of fever which we have known in this country. The Irish physicians of the last century might be called routinists in one respect—namely, that they employed wine and tonics in most cases liberally, if not indiscriminately. Like the old English physicians, however, they were eclectic, and so did not fall into many of the



errors of their successors. Their doctrine of putrescence merely implied prostration of the system—in other words, debility was the condition to be guarded against and met; and doubtless, in the whole class of adynamic and essential diseases, if they erred, the error in practice was one on the right side. Drs. Quin, Plunket, and Harvey, all used wine freely in maculated typhus. Indeed, a bottle of Madeira daily was commonly ordered by them. To a certain extent they used it anticipatively, for they did not wait for the advent of extreme prostration.

The next phase of routinism was of a different and opposite nature. The doctrines of Broussais, which taught that the essential disease was symptomatic of local inflammation, while the reverse was true, turned the minds of men into a wrong direction. The idea of inflammation was opposed to the exhibition of stimulants and tonics, and the practice of medicine was reduced to using direct or indirect depletion.

The theories of Clutterbuck and of Armstrong supplemented those of Broussais as to inflammatory action being the cause of fevers, and so that new routinism in practice was generated, of which the leading characters were starvation and evacuation. The laws of periodicity in fevers were ignored, as was also the great fact in medicine that symptoms diagnostic of local disease when the patient has not essential fever cease to be so when he has.

Thus was established the routine practice of the adoption of evacuants, of bleeding, of diaphoresis, and even of purgatives. The system was pertinaciously reduced through every outlet, while little or nothing was introduced to supply the deficiency. The disciples of Broussais by applying leeches to the abdomen and by starvation reduced the patient to a state of inanition. Those of Clutterbuck did the same by depletion of the head for imagined cerebritis, and those of Armstrong operated similarly for the reduction of a supposed inflammatory diathesis. The depleting effect of acute disease, the reduction of the volume of blood by the fever itself, the waste of tissue—were overlooked, while every new interference with the powers of nature more and more impaired the *vis medicatrix*.

We may attribute to the same cause that timidity in the use of wine in fever which is still observable in the practice of some of our brethren, especially those who during their student lives have not been brought into daily bedside contact with the disease. I remember some few years ago receiving an urgent call to see a lady in fever. I was entreated to lose no time in going, as the patient was so low, so far gone, that she had actually been ordered wine! I

found the lady at about the fourteenth day of a low enteric or typhoid fever. She was extremely weak, and suffering under great mental depression and physical exhaustion, which had been present from the commencement of the attack. I recommended the immediate use of wine. "Oh," was the answer, "she has been ordered wine, and is now taking it." On inquiry it turned out that what had been ordered was light claret, the quantity being *one or two teaspoonfuls in cold water twice or thrice a day*. Now, this was the treatment of a physician whose opinion was in general not to be despised, but who had, like many of his contemporaries, been brought up not only in ignorance of the use of wine, but in a terror as to its effects on the supposed inflammatory condition of fever. My advice as to the quantity and quality of the wine was looked on as daring and innovating, but was nevertheless followed, and with full success.

Closely following on the routine local and general antiphlogistic treatment in fever was a method which seemed to spring from the adoption of the views of Abernethy as to the influence of derangement of the chylopoietic viscera in introducing disease. A patient might or might not have a continued essential fever, but the intestinal and renal secretions showed derangement. Here the treatment recommended itself by its simplicity—a mercurial pill at night, followed in the morning by doses of infusion of senna, with rhubarb and gentian and Epsom salts, the care of the attendant being mainly directed to the appearance of the tongue and the inspection of the evacuations. This practice would be continued for days, the digestive organs obstinately refusing to right themselves, notwithstanding the treatment, until the patient began to sink, and was perhaps attacked with peritonitis, the result of perforation. Let me tell you a case of this kind.

A gentleman previously healthy was attacked with symptoms of fever, and attended by two professional men long since dead, one a physician, the other a surgeon. He was treated for many days on the mercurial and purgative plan. I need not say that the fever continued, and as at last there was considerable sinking of the vital powers, a consultation was asked for by the patient's friends, and an eminent consulting physician of Dublin saw the case. He suggested that the treatment had been carried sufficiently far, and recommended chicken broth and a moderate use of wine. A light tonic, consisting of an infusion of cascarilla with a few drops of dilute muriatic acid, was also ordered.

This was in the morning, and within two hours, the consulting physician having to leave town, I was hurriedly summoned to the



case, it being alleged that the patient had been poisoned by the medicine. Violent pain had supervened *just at the moment of swallowing the first dose of medicine*. It was easy to see that perforation and peritonitis from long-continued intestinal disease had taken place. Nothing that I could say would induce the friends to take this view of the case, and to my surprise they were backed up by the medical attendants. I even drank some of the mixture in their presence. The patient sank in the course of some hours, and it was only by my declaring that a coroner's inquest should be held that I got permission to examine the body. The ileum was extensively ulcerated, and complete perforation had occurred in no less than four places. In one, probably that which caused the effusion into the peritoneum, the opening was the size of a fourpenny piece.

The coincidence in time of swallowing the first dose and of the effusion into the peritoneum was singular. It was hardly down when the patient cried out, "I am poisoned! I am poisoned!" and remained in terrible pain until he was moribund.

Here was a case of enteric or typhoid fever in which the intestinal disease was doubtless aggravated by the continued catharsis for many days. In the Report of the Meath Hospital, by Dr. Graves and myself, many cases of intestinal perforation are given where at the commencement of the fever hypercatharsis had been induced by the exhibition of doses of saline purgatives. Looking at the routinism then prevalent, the case I have detailed was probably not an exceptional one, and curiously illustrates that a knowledge of medicine is not necessarily implied in the legal qualification for practice.

But as the principles of right reasoning in medicine are better inculcated and understood, and as larger views of the pathology of fever—such as those taught by John Peter Frank, by the fathers of British medicine, and by modern writers, like Christison, Graves, Watson, Murchison, Jenner, and Tweedie—are more generally known and made use of in medical education, the older as well as the newer forms of routinism will disappear. The time is coming rapidly when routinism in its successive phases will be forgotten, and the state of fever be dealt with in a philosophical spirit.

Before concluding this lecture let me give you an extract from one of the writings of a witty medical satirist, the late Dr. Brennan, of Dublin, commonly called "The Wrestling" and sometimes "The Turpentine Doctor." It is entitled "A Receipt to Make a Fever," and is a picture of the practice of the day three-quarters of a century ago—unhappily, not yet extinct:—

Any patient, when you get him,  
First of all, be sure you sweat him;  
The next day you need not heed him,  
But the third take care to bleed him.  
When he's sweated and he's bled,  
Then, of course, you'll shave his head;  
Clap on five-and-twenty leeches,  
Tho' the first cost a crown each is.

When to sink he does incline,  
Blister legs and give him wine.  
Tell his uncle or his brother  
That you'd like to see another—

Yet let nobody approach  
But a doctor in a coach;  
For a coach does mighty wonders  
In concealing doctors' blunders.

The writer then passes in satirical review the different consulting physicians of Dublin, concluding with himself:—

If they talk of Brennan's knowledge,  
Say, "He is not of the College,"  
Or, to joke if you incline,  
Smiling mention—*Turpentine*—  
And you may throw in—by dad!—  
That you know he's wrestling mad.

The patient dies:—

When with drugs you well have swilled him,  
Tell his friends *the fever* killed him;  
All that could be done was done—  
The worst you ever saw, but one:  
And this is a mighty consolation  
In such an awful visitation.