

disease is referrible to constitutional irritation combined with constitutional relaxation; and no species of evacuation is in general well sustained, except that procured by purgatives from the intestines. In his range of observation, the medical man should perpetually examine and weigh all the circumstances which bear directly and indirectly upon the cases in which he is consulted; for unless he constantly accustom himself to such minute and comprehensive surveys, his practice will be little better than a series of experiments upon human health and human life. The causes of disease, the circumstances under which they are applied, the age, habits, and other peculiarities of the sick, with the nature of symptoms and their seats, are all worthy of the most serious consideration; and where the issue of the opinion delivered is the life or the death of the confiding patient, the practitioner should inquire and reflect till his conscience tells him that he has done his duty. It is not the hurried glance of a few minutes which can penetrate the nature of an intricate disorder, and the plan fittest for its removal; but it is the deliberate investigation which discovers data, and from these deduces appropriate methods of cure. Having so frequently had occasion to insist on the decisive employment of the lancet and of other powerful agents at the outset of certain acute cases, I have felt exceedingly anxious to warn others against their abuse; because unless the depletory practice be carefully regulated by right principles, it is more likely to be a bane than a benefit to society, especially in the hands of the young and experienced, who are so apt to be led astray by daring and unqualified appeals to their decision.

The third variety of fever is that where the excitement is not simple but complicated, where an increase in the action of the heart and of the animal heat is co-existent with the arterial disturbance termed inflammation, which it has been shown is far more frequently a consequence than a cause of the constitutional change called fever, and which signally disorders the functions, and threatens the structure of the affected organ. When this inflammation occurs at an early period, while the general powers are yet unimpaired, it should at once be decisively met by active measures until the signs of it be

removed; but where it exists or occurs at a sort of middle point between the first and the last periods of excitement, the treatment must be accordingly graduated, because to a certain extent the constitution is the less capable of bearing evacuations of blood; and where the inflammation has been allowed to pass on until real exhaustion actually approaches, the opportunity for blood-letting is completely past, and then the combined influences of calomel and opium, with blisters, occasional laxatives, and light support, are the most suitable means. In what are denominated symptomatic fevers, such as ordinary enteritis from cold, the inflammation is a prominent feature almost from the very first occurrence of the excitement; whereas in what are denominated idiopathic fevers, the inflammation frequently is not clearly manifested so early, and this constitutes the great practical difference between them; for in both the inflammation in most instances being the product of the fever, they might in such be considered pathologically similar. This is a difference, however, which ought often to influence our conduct, because the capability of sustaining the shock of a powerful treatment is much greater in an inflammation which occurs at the beginning of the excitement, than in one which takes place some days later, when the strength has suffered from the continuance of that excitement; and hence evacuations, but especially by the lancet, may often be much more boldly and advantageously pursued in those fevers where the inflammation occurs on the first or second day, than in those where it occurs some days after, and hence also it is often more indistinctly denoted in the latter, because the sensibility of the nervous system is mostly somewhat diminished before the occurrence of the inflammation. The nature of the exciting cause, too, frequently has a strong claim to our attention, as far as the measure of depletion is concerned in the inflammatory forms of fever. For example, the common continued fever generally proceeds from the influence of the weather, and during the greater part of its progress is accompanied with much less muscular prostration than typhus: though in the beginning of both these fevers, bleeding is often highly beneficial when inflammation is present, yet even at the middle



period of both, the same degree of depletion could not be used with the same effect; for in the common continued fever, the pulse would then mostly be tense and resisting, whereas in typhus it would be soft and very compressible, and a comparison of all the symptoms would show considerably more relaxation in the latter. Besides, typhus being fully established at that time, it would hold a determinate course even if the inflammation should be removed, so that the evacuations should be regulated not only according to the degree of the inflammation and of constitutional power, but likewise according to the probable struggle that the patient would have to make afterwards with a fever which must still go on for a certain number of days.\* On the contrary, in the common continued fever, if the bleeding removed the local inflammation for which it was used, the fever probably would be cut short at once; but even if the fever should not be wholly removed with the inflammation, still the bleeding would occasion less diminution of strength. If the parallel were extended to the last stage of the common continued fever and of typhus, still upon the whole the treatment would require to be more cautiously conducted in the last; though at that critical conjuncture, indeed, seldom any evacuation is justifiable except that procured by the mildest laxatives. Many patients have been lost by pushing purgatives too far in the advanced stages of fever, and that practitioner will be most successful in the main, who, rather relying upon nature than upon art at this period, contributes every thing in his power to the comforts

\* When typhus is protracted beyond the third week, it will be found, most frequently, that the fever is maintained by some local irritation; and as that local irritation is not always internal, but sometimes caused solely by the formation of an external slough, the surface of the body should always be carefully examined. Sloughs are far more apt to take place in specific than in ordinary fevers, on account of the greater relaxation which occurs towards the termination of the former; and as they at first sometimes give little uneasiness, I have known them overlooked so long, that at last they became truly formidable in typhus. Whenever any fever has run on so as to occasion much irritation, the patient should be laid upon a soft but not a thick bed, for a hard one is then not only liable to induce sloughs, but to give rise to so much irritation as often to prevent the patient from resting well.

of his patient, by directing or performing the nice and important offices of the nurse.

Moreover in determining the treatment of the inflammatory variety of fever, the peculiar conditions of patients should never be disregarded. Thus if a woman in an ordinary state laboured under peritoneal inflammation of an acute kind, and another in a puerperal state laboured under an equally acute inflammation of the part, considerably more promptitude would be necessary in the last than in the first case; because from the peculiar irritability of the constitution in the puerperal state, and from the uterus and adjacent parts being local irritants on account of their tender state and vascular distension, the inflammation would have a more rapid progress.

It is for want of having understood this properly that so many men have lost their patients in the puerperal fever, even when they had considered it as an inflammatory affection of the peritoneum. In common peritonitis, say proceeding from cold when the woman had been previously well, the practitioner may often bleed at bed-time, and wait till the next morning with safety before the operation be repeated, and he may in like manner allow respite between the operations of the purgatives prescribed; but in a highly acute case of the puerperal fever, in which peritonitis is also the essential disease, if he were to proceed in the same manner, he would be almost certain to lose by far the larger proportion of his patients. In the puerperal fever where an acute abdominal inflammation exists, the practitioner must make up his mind to have no truce with the disease, in a word to bleed early till the pain be completely relieved, and to get the bowels effectually opened as rapidly as possible; and if his first efforts should not succeed in subduing the signs of the inflammation, so far from waiting many hours, he should repeat the venesection without the loss of one hour, aye, and shortly have recourse to it again with the same firmness of purpose, if the symptoms render it necessary. In its most acute forms, the puerperal fever is a monster which must be crushed with a giant arm. The puny force of half measures will avail nothing. Exceedingly few instances of the puerperal fever have been fatal in my practice where the patients were com-



mitted to my care from the beginning; and I am confident, that the success has been owing solely to decision and attention, for I have watched them through the day, and through the night till they were in safety. The loss of a single night has often been an omission so mortal in its consequences that no future attention of the anxious practitioner could recall it; and I would here, therefore, caution my professional brethren not to let the night pass over without visiting their patients labouring under such perilous diseases as the puerperal fever. It is frequently best to sit up all night with patients, and nothing can be more gratifying where such attention is successful; and where it fails, it is still consolatory, because we are then conscious that we have left nothing undone on our parts. The responsibility of medical men is awful on many occasions of urgent disease, and they should never allow themselves to be so lost in the degrading rivalry of money-making, as not to devote themselves earnestly to the science of their profession, and to all the required duties of humanity.

But if there be some peculiarities of patients in which such determinated deviations from the common mode of evacuation are necessary, there are others which require much gentler expedients than ordinarily employed; and having particularly pointed out some of these in considering what methods of cure were appropriate to the emaciated subjects of secondary fever, it will only be necessary to repeat how cautiously evacuations should always be pursued where inflammation exists in a body really debilitated. Nay, even in robust habits we should no longer repeat the venesection than the symptoms of inflammation clearly justify, for I have seen patients so profusely and indiscriminately bled that they died from sheer exhaustion; and on examination of the bodies no trace of the original disease could be discovered, though it had been confidently anticipated, that the wreck from inflammation would be fully declared. Even when evacuations of blood have been judiciously made in inflammatory diseases, it is useful to pause, and ask ourselves how much of the remaining disorder of the system may be fairly referrible to irritation; for sometimes the seasonable use of full doses of opium, after a large

depletion, will save the patient, who would otherwise have perished from the irritation previously established in the nervous system. In making some dissections after the termination of inflammatory diseases, I have been much struck with the exceedingly slight vestiges of inflammation which remained, and on reviewing the history of the cases could not but be convinced that the patients had not died of inflammation but from irritation, from that increased and continued labour which is, by some change in the nervous system, thrown upon the heart till it is at last exhausted; and since I was well assured of this fact I think that I have contributed to save the life of several patients by administering opium, when the irritation ran high after copious depletion, until the quick quivering pulse became slow, or until sleep was procured. In alluding to peculiarities, it may be worthy of remark, that the seat of the inflammation sometimes renders a selection of measures highly expedient. Thus though an antimonial emetic might be useful in an inflammation of the larynx, it would be quite the contrary in common gastritis; and thus though a full dose of opium might be useful in a painful inflammation of the bowels, it would be prejudicial in the beginning of inflammation of the brain. In the consideration of the inflammatory variety of fever, then, these and other circumstances will not be forgotten by those who are fully aware, that success is often founded upon an attention to minute things. It will be found no unimportant part in the code of medical wariness, for a man to see his orders in critical cases carried fully into effect, for if he trust to others he may be grievously disappointed; and thus, to give an example in point, I have known nurses to fail in the application of leeches, or assistants in the operation of venesection, by which the most painful embarrassment was produced from the consequent loss of time.

There are some particulars respecting the animal heat which appertain to excitement when simple, and when complicated with inflammation. In every fever where the animal heat remains preternaturally augmented, the fluids undergo some alterations, as is manifestly set forth in the changes of all or most of the secretions. These alterations, however, are



more remarkable in fevers which proceed from specific, than in those which proceed from ordinary causes. In modern times we have been far too much disposed to ridicule the humoral pathology, but the truth is, that all specific fevers may be considered as humoral diseases, so signally and so peculiarly are the fluids affected, and there are many other affections to which this doctrine is in part applicable. If the advancing state of knowledge has revealed to us the incorrectness of the phraseology and reasoning of some older writers, yet we are not thereby authorized surely to despise their communicated facts; and who can peruse the admirable writings of Sydenham without being assured, that the fluids did undergo changes in the fevers which he has described, and who can at this day watch the progress of typhus at the bed-side, and not be convinced that they still undergo similar changes? In fevers, the morbid secretions do not so much arise from a fault in this or in that organ, as from some general state of the body influencing the particular secretions; and it has assuredly been one of the most frequent mistakes in modern pathology to infer, that a particular organ is decidedly diseased merely because its secretions are disordered. It is from a fallacy of this nature, that the liver has been converted into the sink of so many diseases. Let any temporary irritation be set up in the nervous system, from a meal of indigestible food, from mental anxiety, or from a debauch of wine, so as to disturb the heart's action and raise the animal heat, the alvine evacuations will soon become unnatural; but here the morbid condition of the bile is not the effect of a disease in the liver, but immediately results from a general state, which being removed, the stools become of a natural appearance. It is precisely the same in most febrile complaints, where the organs do not betray signs of inflammation, and the morbid stools in that case no more indicate a disease of the liver, than the morbid secretions of the mouth indicate a disease of the tongue and salivary glands. A similar mode of reasoning might with equal truth be extended to many chronic diseases, in which the secretions of the liver are disordered, not from an actual disease of that organ, but from an existing irritation in the nervous system; and that irritation in some instances I have

known to be created and maintained by the unnecessary employment of mercury, so that the changes of the biliary secretions were first occasioned by this preparation, which was afterwards continued, upon a mistaken principle, to restore those secretions to a natural state. In the process of making common ale, brewers know very well what great changes will be produced in the colour and taste of that liquor, by very slight changes in the continuance and degrees of the heat applied; and so it is, to a certain extent, in the chemical operations going on in the human body, very slight changes in the continuance and degree of morbid temperature affecting the qualities of the secretions.

But though it may be the variations, which the animal heat undergoes in ordinary fevers, by which the secretions are so much influenced in them, yet no doubt something is superadded in specific fevers. The subtle essences of contagion work many changes, as we may see in the peculiar appearances of the tongue and in other secretions, to say nothing of the special assimilation by which their existence is maintained; and these changes having been once fairly established, I believe with Sydenham, that the blood must undergo some purifying process, before recovery can take place, an opinion which appears to be confirmed, by the gradual improvement in the secretions as convalescence approaches.\* Nothing could have been more morbid than the intestinal and biliary secretions which I have seen in some cases of typhus so far advanced as to render much medical interference more dangerous than useful; and yet as the excitement abated, as the heart's action and the animal heat became natural, the se-

\* Many years ago, I saw typhus treated from an early period upon the cordial plan. It then not only always ran a certain course, but was accompanied with malignant symptoms towards the close; and I observed, that the attendants and visitors of the sick were very liable to be infected. But on the contrary, in those cases which I have had an opportunity of cutting short at the very outset, or so moderating as to make them assume a mild aspect, I have rarely seen the attendants or visitors sicken of typhus. From these facts, perhaps, it might be inferred, when the disease was cut short or moderated in the beginning, that comparatively little contagious matter had been generated, and hence a great advantage may arise to the community from the modern mode of treatment.



cretions assumed a healthy appearance, though nothing but a little cold-drawn castor oil had been exhibited. The blood is always blacker in typhus than natural. In severe cases it is remarkably so where the excitement has fully emerged, and at last the solids are most decidedly affected, as any one may perceive who marks the dark hue of the muscles on dissection. This state of the blood in typhus, if I mistake not, is connected with that peculiar depression of strength, and with the peculiar condition of the sensorium, which attend the rise and progress of this disease. Nor may the influence of this state be confined to some chemical change in the constitution of the blood, by which the nervous system and the heart are affected, but possibly some mechanical alteration may thereby take place in the red particles, so that the natural relation between them and the capillary vessels may be more or less disturbed. But the nature of this change in the blood, I do not pretend to determine, and only meant to point to it as an object worthy of far more attention than it has yet received.

As it is of great consequence in the congestive forms of fever, to raise and equalize the animal heat to the natural standard, so it is also highly important in the excitive forms of fever, whether simple or complicated, to reduce the animal heat as nearly as possible to the natural standard all over the surface of the body. This is a practice more especially useful in those fevers which have an idiopathic character at the commencement, and in which the topical affections are the gradual products of the continued excitement. The efficacy of the cold and tepid affusions at the outset of excitive fevers was proved to be considerable by the late Dr. Currie, and perhaps they would have been more so, if he had combined them with those evacuations, which have been found so useful since the first promulgation of his enlightened views. Though when an excitive fever has gone on for several days, the prostration of the system precludes the shock of the cold effusions, yet much benefit may often accrue by lessening the animal heat day after day, and night after night by the occasional use of ablutions, partially or generally on the surface, according to the predominance of the heat, and to the strength of the patient. In particular, the greatest relief may be fre-

quently obtained from the head-ache and general distress attendant on typhus, merely by shaving the head, and preventing the accumulation of heat about the scalp; nay, I am fully convinced, that by this simple procedure the organization of the brain may often be preserved from the most serious mischief in the progress of typhus, and similar fevers. In referring to my notes, where I had ordered the head to be shaved, and kept cool in typhus, the pain, aching, giddiness, or other prominent symptom for which it was adopted, has so often been reported much easier or entirely removed on the next day, that there are few cases in which I should not now strongly recommend the measure. The heat is often highly accumulated about the head, and when it is diminished by shaving and washing the scalp, it is probable, on the known law of caloric equalizing itself, that the internal heat of the brain is also lessened; and thus the cerebral vessels may become much less distended than they were before, by the abstraction of super-abundant caloric from the scalp. But whatever may be the rationale, the benefit is certain. It is to little attentions of this kind, that life may be sometimes saved in fever, however trifling they seem to the theorist.

The animal heat is one of those excitants by which nature appears to keep the heart in regular motion, and between the variations of the degree in the one, and of the action in the other, remarkable relations will be found in many diseases. When the animal heat is permitted to remain long preternaturally high it not only keeps up the increased action of the heart and thus endangers the functions and structure of other organs, but it likewise at last exhausts the heart, and the tone of the whole system: on the contrary, when the heat is daily and nightly diminished in continual fevers by tepid ablutions, light clothing and a free circulation of fresh air, the heart's action will be moderated, and the strength proportionably saved. On many occasions, I have seen patients with a burning skin, rapid pulse, and a parched stiff dry tongue, in the advanced stage of typhus, but on sponging the surface over with tepid water, the heat has fallen, the pulse has grown slower, and the tongue comparatively soft and moist; and from a repetition of the same treatment when the pulse again



became higher, the pulse quicker, and the tongue drier, the recovery has been finally insured, through the co-operation of mild laxatives, and light nutriment. The attention of the faculty has been so decidedly directed to the employment of the cold affusions in the early stage of fever, that the partial or general use of tepid ablutions has been far too much neglected in the middle and last stages; but let any man try them in these stages of the ordinary cases of typhus or of the common continued fever, and he will be convinced, that they have a great though a gradual influence on the issue of the disease. Yet there will be less need of their repeated employment, if the bed-clothing be duly regulated, which should nearly always be made somewhat lighter towards the evening and during the night, when there is usually an increase of the heat on the surface. As this temporary increase of the heat often gives a sort of false fulness to the pulse even in the advanced stage, the practitioner should remember this circumstance when he makes his visit at night; for this semblance of strength in the pulse should not betray him into active measures at an advanced time of the fever, and indeed if he wait till the next morning, he will generally find the pulse much smaller and softer. It was once my design to have written a short essay on the treatment of idiopathic fevers arrived at the middle and last stages, but having thrown out so many hints on the superiority of mild measures at those periods, such an undertaking would now perhaps be superfluous; though I must remark in concluding this topic, that if any thing more than another could have shown to me the utility of not extending the active treatment beyond the line of the middle stage, it would have been my experience in the Fever Institution, where patients are so frequently admitted late, and where in that case the general result has been decidedly in favour of a mild treatment.

Little has been said in the preceding pages with respect to those fevers which proceed from marsh and similar effluvia, because my experience in them has been exceedingly limited. It may, however, be observed, that the doctrine of a congestive, a simple, and an inflammatory variety of fever applies to their internal pathology, though they have certainly some

striking peculiarities which depend upon the nature of their exciting cause. It would be easy to show from the writings of experienced authors, that marsh effluvia produces sometimes sudden and great venous congestions, by which the usual and proper series of febrile phenomena is completely interrupted; and indeed I have myself seen a few instances of this nature where instead of the common signs of the cold and the consequent ones of the hot and the sweating stage, the patient was distinctly threatened with apoplexy at the accession of the fit. The ordinary intermittent might be adduced as an example of a simple fever, in which there is a first stage of oppression, a second of excitement, and a third of collapse in every regular paroxysm; and though it is truly marvellous that the fits should come at stated intervals, yet during the apyrexia there are often signs of venous congestion which may possibly be associated with the alternate excitements, and which sometimes lay the foundations of local mischief within. The remitted forms of marsh fever are invariably connected with local irritations, which appear so to modify the operation of the exciting cause as to break through the true intermittent character; and a still higher degree of these local irritations in their turn will break through the remittent character, and produce a continued fever, by maintaining a constant increase of the heart's action and of the animal heat. It is a remark of Sydenham, that when intermittent fevers were rife, continued fevers were liable to be concomitant; and the same cause which produces the former unquestionably also sometimes produces the latter, either from being applied in a more concentrated state, or from operating on a system where local irritations are easily created. The cold stage of a simple ague affords an instance in which although venous congestion exist, yet the lancet cannot be employed on account of the excessive reduction of the temperature of the body; and it likewise affords a beautiful illustration of the production of the hot stage, by the blood retiring into the interior, and at last rousing the heart into an energy which it did not possess before. The common continued fever, typhus, and other acute diseases so far resemble the marsh remittent fever, that they usually have some abatement