

tives, therefore, should be prescribed, which may not only remove the excrementitious matters from the bowels, but cause some evacuation of serum, and thereby produce all the advantage of a local abstraction of blood. Aperients should be most freely given in inflammations of the brain, and next in those of the abdomen, because they have a great power in deriving the fluids from these parts, but particularly from the brain, so that the face of a person under the full operation of a purgative is usually pale. In inflammations of the brain, the saline purgatives upon the whole are the best, as they elicit a more copious discharge of serum, but they should generally be premised by calomel, for when the brain is inflamed the functions of the liver will usually be much disturbed at the same time. When the bowels are actually inflamed or threatened with inflammation, it is highly important that they should be thoroughly evacuated, as they then are usually loaded with fecal matter; but when they are once thoroughly cleared, the milder purgatives should be preferred, especially the cold-drawn castor oil, which when good mostly operates freely with little or no irritation. As copious and frequent purging has a tendency to diminish expectoration, it should hardly ever be enforced in thoracic inflammation, but more especially when the mucous membrane of the bronchia is the seat of inflammation; because very copious purging then not only checks the expectoration, but it most frequently prevents a perspirable state of the skin, which is always most desirable in affections of the bronchia. Yet the bowels should be moderately moved even in thoracic inflammations, particularly when the brain and liver are implicated, as often occurs in typhus; and in this combination of disease, the preparations of antimony sometimes have an excellent effect, when so managed as to arrest the heart's action, and to promote a certain degree of nausea, which is favourable for expectoration, as well as for a moist condition of the skin. When the trachea is inflamed, or when the bronchia are ex-

der Dr. Miner's observation. For more ample details, see Miner and Tully on Fevers passim.

ceedingly loaded with phlegm, an antimonial emetic is sometimes extremely useful, both by expelling the collected mucus, and influencing the state of the whole vascular system, particularly the capillaries of the affected membrane, and those of the surface; but when the brain is embarrassed by any degree of inflammation in such cases, it will generally be necessary either to premise general or local bleeding in the beginning, with the cautions before inculcated as to this combination of symptoms. In slight catarrhal affections, the temperature may be kept low in typhus, so long as the skin shall remain hot and dry; but when the tracheal or bronchial lining is at all seriously involved, the temperature of the apartment should be carefully regulated; for if it be too low, it will aggravate the tracheal or bronchial affection, as well by its direct stimulus on the part, as by operating unfavourably on the skin. Those who carefully attend to affections of the trachea and bronchia, will find it a point of the first importance, that patients should breathe and be surrounded by an atmosphere of a mild temperature.

In the chronic species of the tracheal affection before described, which is now and then the attendant of typhus, early emetics of antimony, leeches and blisters successively applied near the larynx, laxatives, small doses of calomel and opium, and moderate ones of the balsam of copaiva, with an occasional tepid bath, free ventilation, and an abstemious regimen, are the best means (24). In the advanced stages, however, of this modification of the disease, I have not seen any thing available; although Mr. Croudace, whose case was formerly alluded to, recovered when extremely emaciated, on being removed to an airy situation in the country. The first articles which stayed upon his stomach were light hasty pud-

(24) In addition to the means recommended by Dr. Armstrong, may be mentioned the Polygala Seneka. In the epidemic pneumonia typhoides which prevailed in 1814—15 to so great an extent in this country, this article was found to be an admirable expectorant. From its stimulating nature, it is evident, however, that its use can only be admissible in the secondary stages of the disease, and where inflammatory symptoms have been previously subdued.

ding, and a little milk, to which, and the influence of a pure atmosphere, he chiefly attributed his recovery.

From what has previously been said, it is scarcely necessary to add, that the strictly antiphlogistic regimen should be adopted in the inflammatory typhus, at least till the urgent symptoms be overcome. And even when the remission has been obtained, the practitioner should still direct a light, cooling diet; for it is well known, that when any part has once been inflamed, it is for some time afterwards very susceptible of the same disturbance. Moreover, in almost every case in which the system has been much depleted, a reaction of the heart and arteries takes place during convalescence, which may be readily pushed on, by too stimulating food, to re-produce fever and inflammation. For want of attending to this, not only open and palpable inflammations may be occasioned by errors of diet, but insidious and concealed affections of the viscera or their membranes, which lead to dropsies in the cavities, or to actual disorganization. Other powerful auxiliaries are not needed when bleeding and purging rapidly remove visceral inflammation, and the typhus either at once ceases with the inflammation, or assumes a simple character, and requires a correspondent treatment, due allowances being always made for the previous evacuations, and the constitutional state of the patient. Because bleeding and purging are thus successful in certain cases, some would go so far as to contend, that in acute inflammation they invariably preclude other measures, with the exception of local bleeding and blistering; but it is well known, that bleeding and purging sometimes entirely fail to arrest the inflammation, and at other times to leave subdued degrees of it, and are we then to suppose that nothing efficient can be done in such instances? Where the impressions of bleeding and purging have not been decisive, it has been my common practice to prescribe calomel so as to ensure its specific as well as its aperient action; and when pain or irritation existed at the same time, I have almost always conjoined opium with it, except where the brain was obviously embarrassed. Yet meaning to enter fully into the consideration of the effects of this

combination, under the head of the common continued fever, it would be superfluous to dilate upon the subject here.

It sometimes happens in the inflammatory typhus, as in other complaints of a similar character, that the inflammation relapses after it had been apparently subdued, and this is more especially the case, when the lungs are the seat of the inflammation. When the constitution is not exhausted, we ought not to be deterred from the use of the lancet on the recurrence of the urgent symptoms: and local bleeding, with blisters to the chest, will be particularly serviceable as secondary means, on account of the influence of small abstractions of blood by leeches over the heart's action, and of the free anastomoses of vessels between the external and internal parts of the thorax. It is a remarkable fact, that I have seldom seen relapses of inflammatory diseases where the bowels were kept regular, where the mouth was affected by mercury, and where the diet was antiphlogistic at the same time; and I cannot but believe, from the consideration of many cases, that relapses would be much less frequent in vital inflammations, if these circumstances were more generally regarded.

Sometimes when local inflammation has been subdued in typhus, a state of great mental and bodily irritation succeeds in peculiarly susceptible habits. After a remission of two or three days, the skin again becomes pungently hot, the pulse quicker, the tongue drier; and, particularly towards the evening, there is a bright hectic flush upon the cheek, while the countenance has an expression of suffering. The patient is fretful, complains of fugitive pains in different parts of his body, and often sighs, as if he were labouring under some serious affliction. His sleeps are at first short and agitated, attended with mutterings or startings, and he awakes unrefreshed and anxious as before. In a short time he becomes watchful and delirious at nights, and has a rough, parched tongue, trembling hands, ferretty eyes, and is impatient of light and noise. If opportunely employed, the warm bath, active purgatives, and small repeated opiates, are often remedies of great power in this secondary fever of irritation. The even-

ing exacerbation is the best time for using the bath, in which the patient should be immersed for about fifteen minutes; and immediately after his removal to bed, he should take about twenty-five drops of the tincture of opium, and, being thinly covered, ought to be kept in a still, dark chamber. If the first opiate should not induce rest, the same dose may be repeated in about six hours; one great object in the beginning of this disorder being to procure long and tranquil sleep, which is frequently the best restorative. If the skin should continue hot and dry throughout the day, the warm affusions may occasionally be applied, and fresh cool air liberally admitted. Milk is perhaps the best general diet, but when animal broths do not stimulate too much, they may also be given in moderate quantities. This kind of fever sometimes passes on to hectic, without the formation of matter any where, and sometimes imperceptibly leads to slow organic affections, circumstances which much more commonly arise out of the inflammatory, than the simple variety of typhus.

When the first edition of these illustrations had passed nearly through the press, some highly valuable remarks were published by my friend Dr. Dickson, respecting a contagious fever which prevailed in the Russian fleet. Circumstances conspired to prevent me from seeing that paper at the time, otherwise it should have been noticed, on account of its merits and of the strong corroborations which it afforded to the pathology and treatment which I had laid down in the inflammatory typhus; and as the observations and experience of that enlightened physician were personal and independent as my own, the coincidences of opinion and practice are peculiarly gratifying to me, in now referring to his excellent paper.* Dr. Dickson observes, that the appearances on dissection were strongly illustrative of the frequency of visceral inflammation, in the fever which he saw and described; for the brain, lungs, and contents of the abdomen were severally found to have been attacked, among those who were the victims of this disease. From reflection on numerous facts, it

* See vol. xii. p. 153, of the Edinburgh Medical and Surgical Journal.

seemed to Dr. Dickson, an inevitable conclusion, that those remedies which arrest inflammation at the commencement, prevent the graver and malignant symptoms, which characterize the last stage of such fevers; and this conclusion was amply borne out by the results of his practice, since bleeding and purging at the beginning were generally successful. Dr. Dickson, too, was convinced, like myself, that bleeding decisively as to effect is preferable in the main run to small repeated bleedings, in the beginning: yet he appears to be fully sensible, that there are cases where the constitutional powers are so extremely weak, or where the inflammation has advanced so far as to have exhausted those powers, in which small occasional bleedings are the best; but in illustration of this particular point, few works can be consulted with more advantage than that of Dr. Mills, which certainly contains many practical observations of the highest importance. At the same time, I am fully confident, that general blood-letting cannot be used so late in the genuine typhus, as in fevers which proceed from causes which are not possessed of a contagious property; and from want of due attention to this distinction, it forcibly strikes me, that many serious mistakes have been committed in some modern publications, where typhus is perpetually confounded with the common continued fever, hereafter to be noticed.

Before concluding my remarks on the inflammatory typhus, I must strongly warn the speculative and the inexperienced from rashly concluding, that inflammation exists in every instance in which the head, chest, or belly are seemingly affected, since opinions deduced with precipitation from a few leading symptoms, may often be extremely deceptive. In a populous district, I have not unfrequently been called to typhous patients in a state of high delirium, with dry, burning skin, parched tongue, flushed face, and red eyes, covered with a load of bed-clothes, confined in close, heated chambers, and allowed the most improper beverage and diet. On freely ventilating the rooms, extinguishing the fires, removing the superfluous coverings, using the tepid affusions, and ordering purgatives and an antiphlogistic regimen, I have seen a most

salutary change induced in a short time, which has been rendered permanent by a perseverance in these very simple means. Other patients again have come under my care, who had been treated, in the first instance, much in the same way as those just noticed, some of whom were troubled with cough and oppression of the chest, and some, whose bowels were loaded from neglect, with uneasiness and tension of the belly;—but on prescribing a blister for the first, and a brisk purgative for the last mentioned, with the cooling regimen in both, all the disagreeable symptoms have given way, and recovery has speedily followed. None but those who have had opportunities of contrasting the cooling, antiphlogistic treatment, with the hot and stimulating, can duly appreciate the superiority of the former; or indeed be aware what a pleasing amendment may be frequently produced, in mismanaged patients, by the abstraction of heat, noise, and diffusible stimuli, and by the substitution of fresh cool air, sub-acid drinks, a spare diet, and remedies which move the bowels, and lessen general excitement, and what are called local determinations.

There is one point of infinite importance in the treatment of typhus which must be distinctly set forth in this place. It has been ingeniously contended, by some recent revivers of the doctrine of Erasistratus, that what is strictly termed fever is always the mere effect of inflammation. If this doctrine were practically true, it would follow, that we should persist in the use of those measures which are the most effectual in inflammation so long as the fever shall remain, since, being the pure result of inflammation, it could only cease to exist with its cause; but however excellent and simple such a practice might appear in the closet, it would often be fatal at the bedside, if fully pursued in typhus, and in other febrile affections proceeding from specific contagions. Not long since I attended a case of typhus from the beginning, where the patient was twice bled to syncope for an inflammation of the brain, and a third time to syncope for a subsequent inflammation of the bowels; but though all appearances of inflammation subsided, the typhus itself maintained a determinate duration, the increased heat, quick pulse, and other

symptoms of fever continuing for many days afterwards. Now had I taken, in this case, the continuance of the fever as a certain sign of the continuance of the inflammation, the patient, instead of having recovered, would have been inevitably lost; for after the third bleeding the prostration of strength was so great, that it required the utmost care in regulating the bowels properly on the one hand, and in allaying irritation on the other. Here bleeding was employed under the most favourable circumstances, in the beginning of the disease; it was carried far enough to subdue the inflammation, but much milder measures were afterwards necessary for the removal of the remaining typhus. Parallel cases have often fallen in my way, though I have seen many where the fever has been extinguished in the onset by these means; and therefore my own observation leads me alike to differ from those who assert that typhus never can be cut short, and those who pretend that it always may, in the commencement. But it is not so much in the very commencement as in the progress of typhus, that the theory of inflammation would be so pernicious in practice. Indeed were this theory made an invariable rule of conduct to practitioners, its strict application would be destructive in most of those cases which have advanced into the intermediate and last stages. In such, though it may be of the first importance to remove an existing inflammation, yet if that inflammation be made the sole object of consideration, or if the evacuations be indiscriminately enforced day after day, under an idea that the presence of fever proves the presence of inflammation, if these things, I repeat, were done at these times, the issue would most frequently be mortal; for in the intermediate and advanced stages of genuine typhus the removal of inflammation will rarely remove the fever, and if in removing that inflammation the evacuations of blood be not then cautiously induced, the patient will at once sink from their influence, or not have sufficient energy left to sustain him under the subsequent fever. Hence it is that a practitioner might by a bold treatment at the beginning either immediately stop the fever, or so moderate its force as to cause it to assume a

mild and an obedient character; and hence, also, it is, that the same plan might be so perilous in the intermediate stages, whereas one generally consisting in the discreet employment of local bleeding, purging, and blistering, would be so successful at that period of the inflammatory, while purging alone would be sufficient evacuation for the simple typhus. At present there are some ultra-phlebotomists, who think that bleeding is the first and the last remedy in typhus, concentrating almost the whole treatment into the reduction of some real or supposed inflammation; and it has therefore appeared to me necessary to caution the inexperienced respecting a measure, which must either be highly useful or highly injurious, according to the period and manner in which it is used. In different parts of these pages, I have insisted strongly on the utility of evacuations in the early stages of this fever, when varied agreeably to the form of the disease, and the peculiarities of the patient; but I must as strongly insist on the necessity of avoiding evacuations to any thing like the same extent when the disease has existed many days, even in its inflammatory form, particularly where the inflammation is sub-acute. After the removal of a few leeches from the skin, I have often seen in fever something like the old doctrine of revulsion and derivation exemplified, the blood flowing so fast from the adjacent to the punctured parts as to be at last restrained with difficulty; and whenever leeches are therefore directed, but especially to the abdomen where pressure cannot be so effectually applied, the practitioner should witness their operation in the intermediate or more advanced stages, lest too much blood be lost by the punctures continuing to bleed several hours. Excellency in almost every thing consists in an attention to minutiae; and the life of many a patient may be saved, at a critical conjuncture, by carefully regulating the application of an agent according to its effects. If there be one moral rule of conduct more important than another for a medical man, it is, that he should never permit himself to be in a hurry in cases at all serious:—and for my own part I can scarcely imagine any one more criminal than a trading practitioner, who does not allow himself sufficient

time for the thorough consideration of the cases in which he is consulted. But the leading points in the inflammatory typhus having been discussed, the treatment of the congestive remains to be illustrated.

TREATMENT OF THE CONGESTIVE TYPHUS.

In both its simple and inflammatory varieties, typhus is unquestionably a disease of excitement; but this cannot be said of it under its congestive forms, in the most violent of which there is no intermediate stage of re-action; and even in the less urgent, the evidences of re-action are so partial, transient, or irregular, as hardly to deserve that denomination. Almost every fever has a stage of oppression, however brief it may be, but those cases only deserve to be called congestive, in which it is so great as either wholly to suppress the excitement, or to render it very partial and irregular. Sometimes the stage of oppression is apparently pretty strongly marked for a short time, and, gradually or suddenly receding, is followed by one of regular excitement, so that the disease afterwards runs its course under a simple or an inflammatory character, but more frequently under the latter. The following observations, however, are not designed for such cases, though it may be noticed, that their first stage requires the same principles of cure as are suitable to the strictly congestive fever, and that the subsequent stages must be treated according to the rules laid down for the simple and inflammatory typhus.

If the congestive variety of typhus does not comprehend the different characters, of what some authors have been pleased to call the low malignant, contagious fever of this country, I profess myself incompetent to understand their meaning; unless indeed their descriptions be considered as likewise applicable to the last stages of the simple and inflammatory typhus, in which malignant symptoms are often present when those forms of the disease had not been impeded in their progress. The writings of Dr. Cullen are chiefly