

covering, but the villous coat is frequently involved at the same time ; and when the inflammation exists to any extent in the latter separately, it constitutes the disease usually denominated dysentery, to which some allusions shall now be made.

DYSENTERY.

The cases of dysentery which I have seen mostly originated from the influence of the weather acting on the skin and thence on the abdominal organs, but I have never known any of these to propagate themselves by an inherent principle of contagion, like the genuine typhus (37). Dysentery, under its very mildest aspect, has a resemblance and relation to diarrhoea where no positive inflammation exists ; nevertheless, in all its more distinct and unequivocal forms, it is connected with inflammation or congestion. In the consideration of dysentery, as of every other febrile disease, the progress and tendency of the symptoms should be most assiduously noted at short intervals ; because even when there are no indications of inflammations in the beginning, it may become rapidly or gradually developed during the advancement of the excitement.

The inflammation which is so liable to accompany dysentery is either of the sub-acute or of the acute kind as in typhus, and agreeably to my researches it is seated, for the most part, chiefly in the villous coat of the intestines, and in the liver. Dysentery generally runs a mortal course, if left to itself, within ten days, when the concomitant inflammation is of the acute kind, but when of the sub-acute kind it is considerably more protracted, and often assumes a chronic character, with signs of ulceration in the intestines. Though the sub-acute kind of inflammation commonly appears soon after the oc-

(37) Our own experience, and we believe that of almost every practical physician in this country, is in confirmation of the opinion advanced by the author concerning the non-contagiousness of dysentery.

currence of the general excitement, yet it sometimes arises, at a late period, out of the mildest forms, a circumstance which does not so often obtain with the acute kind, as it most frequently occurs where the symptoms are strongly marked from the commencement. Yet in forms of dysentery apparently the mildest at their onset, an insidious inflammation may begin and proceed, especially in the villous coat of the bowels, with little or no *permanent* uneasiness ; and therefore the greatest attention is requisite to unmask such secret attacks, and to prevent them from undermining the vital works within. If there be, in any case of dysentery, a great desire for cold drinks, attended with a sense of heat in the belly, nausea, flatulence, short breathing, and quick pulse, inflammation may be confidently suspected, even though all the other pathognomonic symptoms of abdominal inflammation should be absent.

When a marked stage of oppression, with a cool or cold skin, ushers in dysentery, an acute or sub-acute inflammation of some abdominal viscus will mostly be developed by the general excitement which follows that stage ; and in fact the degree of the inflammation then developed seems to be proportionate to the degree of the general excitement, inasmuch as if the latter run high, the inflammation will be acute, and if it be more moderate, the inflammation will be sub-acute. This pathological view makes the concomitant inflammation rather an effect of the general excitement, than the original cause of the dysentery, and a strict survey of facts will verify this opinion : for in the first stage of oppression when the surface is cool, so far from there ever being any unquestionable sign of inflammation, a diminution of arterial tone exists every where ; and the substantial evidences of inflammation only emerge with the excitement of the heart and arteries, which succeeds the first stage of oppression. If it should be asked why in dysentery the force of the general excitement should be spent or concentrated upon some of the abdominal organs, it may be answered, because those organs were more predisposed to disease than others before the attack. Indeed in many cases, this predisposition can be satisfactorily ascertain-

ed, from the influence of damp ground, of bad water, and of unwholesome food; so that the abdominal organs having been once rendered susceptible, when any general shock occurs, the principal effects of that shock will be seated in the weakest parts. If any topical affections should exist in the first obscure stage of dysentery, they are denoted by a deficiency of heat, and by an oppressed state of the heart and arteries; and therefore they cannot be fairly called inflammatory, for they are strictly venous congestions, and are removed by that increased action of the heart which generally follows them, and which produces both the constitutional fever and the topical inflammations.

All the cases of true dysentery which I have attended, originated from the influence of cold, under whatever form applied to the body. The first effect of this influence was an abstraction of caloric from the skin, and a consequent recoil of blood from the superficial vessels: an accumulation of blood succeeded in the internal veins, by which the heart was finally roused into a preternatural action; and in this manner the train of morbid phenomena generally proceeded, until the disease was completely established, or until the indications of an acute or of a sub-acute inflammation became apparent.

If to the symptoms, already enumerated in the abdominal inflammations of typhus, be superadded the frequent slimy, bloody discharges by stool, the griping, and the tenesmus, we may have a tolerably correct notion of the severer forms of dysentery; except that as the villous coat of the intestines and the liver are the parts most liable to be inflamed, we must never fail to look to them for some of the chief peculiarities in the characters of this disease, when it has once been fully developed. And as inflammation both of the liver and of the villous coat of the intestines may be most obscure in their onset and advancement, so practitioners should always be upon the watch in every case of dysentery; because with whatever appearances of debility this affection may be accompanied, dissection will always shew, that abdominal inflammation or congestion was directly or indirectly the cause

of death. It occasionally happens in dysentery, as in typhus, that death takes place before the excitement has had time to emerge; and in such cases, considerable congestions are found after death about the internal organs, but particularly in the veins of the liver. Again, in other cases of dysentery, the fever puts on a distinctly remittent type, or it has a resemblance to the irregular forms of the congestive typhus; and in both examples of this description, an accurate inquiry will detect some degree of venous congestion about the liver or spleen, with a variable state of the surface. The more the pathology of febrile diseases is investigated, the more plainly will it appear, that the leading effects on the great viscera are few and uniform, how various soever may be the external phenomena and the primary causes; and in conducting the treatment, these effects must always be strictly regarded from the first to the last, otherwise we shall be left without any fixed principles to guide us to successful results of practice.

There can be no doubt that dysentery may be cured by very different methods—by bleeding and purging, by mercurials and opium, or simply by a conjunction of cathartics with sudorifics; and the reason of this will, in some measure, be manifest from what has just been said, since the disease has a variety of character which admits of a variety of treatment. But amidst the numerous plans which have been recommended, it is desirable to know those upon which most confidence may be placed, not only in the mild but likewise in the severe modifications of dysentery. The slightest attacks of dysentery have a close affinity to an ordinary diarrhoea, and as they may become aggravated to a dangerous degree from neglect or delay, they ought always to be attended to at the very beginning. Even in such attacks, there are three parts which claim an especial consideration, the lining of the intestines, the liver, and the skin; for no case of dysentery perhaps exists, however simple, in which the functions of these parts do not in some way participate. A few doses of calomel and castor oil will generally restore both the villous coat of the intestines and the liver to a natural condition: but the warm bath, and the occasional exhibition of the compound powder of ipecacuan

will greatly expedite the cure, by allaying irritation and by inducing a general perspiration. In the commencement of all febrile diseases when the skin is cool or of an irregular heat, the warm bath has generally an excellent effect in contributing to equalize the circulation; and this simple expedient, together with the employment of purgatives and sudorifics, will often at once arrest the symptoms, or at least, by diminishing the venous congestions which then exist, will make the subsequent stage of excitement much milder than it would otherwise have been. Men who have practised in the navy and army must be fully aware of the great advantages which result from having patients immediately under command at the first attack of febrile diseases; and it is truly surprising to find how readily such diseases in general yield, at that early period, to the application of those measures which lessen internal accumulations of blood. In most threatenings of dysentery where appearances indicate venous congestions in the first stage, the lancet should usually be used without hesitation, when the heat has been equalized by the warm bath; for if those venous congestions should not be speedily removed, they will give rise to an impetuous excitement, or endanger the structure of the part principally affected. But in most examples of this nature, where venesection is early required, a dose of calomel and opium ought to be administered after the operation: and if tepid diluents be given at the same time, this dose will commonly excite an universal perspiration, the effect of which is often strikingly efficacious; so that little more is sometimes necessary afterwards, than to keep the bowels soluble by moderate doses of cold-drawn castor oil.

When fully developed with fever, dysentery is attended, under all its severer forms, with an acute, or a sub-acute inflammation of the villous coat of the intestines, and generally with an inflammatory or engorged state of the liver. If the inflammation of the villous coat of the intestines be of the sub-acute kind, and the affection of the liver similar, daily purging by calomel and castor oil, with occasional anodynes and the warm bath, may certainly accomplish the cure in ma-

ny cases, provided these remedies be opportunely adopted. Yet even in such instances, it is invariably much better to bleed moderately at the beginning, and, the bowels having been freely evacuated, to produce ptyalism as rapidly as possible by the administration of calomel, with small portions of opium. It may be said, there are some records to shew that dysentery has often been cured without venesection, and the assertion cannot be denied; but this only proves, that diseases may be arrested by different measures, and the grand question is, what measures are most safe and efficacious in the general run of practice. If my observation be correct, early and sometimes repeated venesection at once diminishes the force of the abdominal affections, renders the system much more susceptible of the action of purgatives and mercury, and not only shortens the duration of the disease, but lessens greatly the chances of chronic affections supervening the primary disorders in the abdomen. This even obtains in dysentery combined with the lowest degrees of inflammation, and those forms combined with an acute inflammation, absolutely require decided blood-letting from the first attack; as they are generally so rapid in their progress, that there is no remedy, with which we are at present acquainted, can operate so speedily as venesection in checking the inflammatory action. Whenever there is much irritability of the stomach in dysentery, it is a certain sign, that some of the abdominal organs are overloaded with blood, and venesection is then particularly indicated; indeed in every case of a threatening aspect, an impression must be made by the lancet soon after the attack, otherwise they will most frequently prove fatal in a short time, or finally assume a chronic character.

Bleeding was used in dysentery by Alexander of Thralles, whose opinions and practices in many respects resemble those of the present times; since he not only bled in many ardent fevers, but was a strenuous contender for purgative medicines, the efficacy of which is now so well established. Sydenham was a great advocate for blood-letting in this disease, and Sir John Pringle frequently employed it in the dysenteries which

appeared in the armies to which he was attached; and since the publication of the first edition of this work, Dr. Somers has shown the utility of this practice, from an extensive observation among the armies which served in the peninsular war. This practice, however, is not yet so highly valued as it ought to be in dysentery, by practitioners in general; and it will be most gratifying to me, if these desultory remarks in its favour should tend to make it more frequently adopted (38). Only let bleeding be once fairly introduced, in the beginning of the severer modifications of dysentery, and there will be fewer fatal as well as chronic cases; for many violent cases of this disease are fatal for want of some measure capable of making a great and an immediate impression, and others become protracted from the inflammation having been lessened, instead of com-

(38) Bleeding has lately been carried to great extent in the treatment of dysentery. The London Medical Repository for September 1824, contains a very interesting account of the disease as it appeared in the 64th Regiment during the year 1818, whilst stationed in Gibraltar. The writer, Thomas O'Halloran, M. D., states that his mode of treatment consisted principally in early, copious, and repeated venesection, with the daily use of sulph. magnesiae. This measure was employed with the view of removing inflammation, and counteracting the spasmodic action of the intestines. The salts were given to open the bowels and restore them to their natural and healthy function. The practice was attended with signal success. The detail of the treatment is not uninteresting. On admission the patient was well washed with soap and water, and put to bed. He was then bled in a recumbent posture; the quantity of blood taken being proportioned to the age and strength of the patient, and the urgency of the symptoms. From thirty-two to sixty-four ounces of blood were usually taken at the first bleeding. Faintness was always advantageous. It caused an instantaneous interruption of the inflammatory action, by the temporary cessation of the action of the heart and arteries, the spasmodic constriction of the intestines was suspended, if not removed, profuse perspiration broke out, and copious feculent discharges frequently followed. After bleeding, a dose of salts was given, and in the afternoon, if the patient was not completely relieved, the bleeding was repeated to considerable extent. On the second day some fever generally continued with tormina, &c. The patient was again bled to the extent of twenty, thirty-two, or forty-eight ounces, the salts were repeated, and barley or rice water copiously administered. On the third day the patient was generally better, and it was rarely necessary to repeat venesection. The sulph. magnes. was continued till the stools were free from slime and the tenesmus entirely removed.

pletely removed, in the first instance. But before quitting the subject of general venesection, I must caution the practitioner to be prompt and decisive in its use at the onset, and most circumspect when the disease has continued for some time. In the beginning of urgent instances of dysentery, the strength of the system is overpowered, not really exhausted; and one or two bleedings, carried so far as unequivocally to make the pulse a mere flutter beneath the finger, will generally be very beneficial. It is still a common practice to bleed repeatedly in inflammatory diseases, day after day; but so far as I have remarked, the second bleeding should promptly follow the first, where the first has not given the intended relief. And if this method be pursued, with the means hereafter to be mentioned, repeated blood-lettings will seldom be necessary, even in the early stages of dysentery, and of similar affections. As for the protracted cases of dysentery, the bleedings should always be small, whenever they are deemed requisite at that period; for the continued irritation of the disease has then so reduced the strength, as to render all powerful applications doubtful and even dangerous.

It is perhaps one of the most remarkable defects in the practice of most men who have distinguished themselves in physic, that they rely far too much upon one remedy, or upon one plan of treatment (39). By limiting ourselves to one re-

(39) There is one circumstance which more especially modifies the character of dysentery in various years, and which, as it is not adverted to by our author, it may be proper to state. We refer to the epidemic constitution of the year in which the disease makes its appearance. This was much insisted on by the illustrious Sydenham, and justly considered by him as of the greatest importance in the treatment of the peculiar forms which dysentery assumes. Thus in different years, the disease required different, nay, even opposite modes of treatment; so that bleeding, opium, &c. however advantageous at one time, were positively injurious at another. It is to this circumstance we apprehend that much of the discrepancy of opinion in relation to the practice proper to be pursued in dysentery is to be attributed. At the same time we believe the opinion of some highly respectable writers to the contrary, notwithstanding, that there is one remedy which promises, *under judicious management*, to be applicable to almost every form and variety of this disease, viz. mercury.

medy or to one plan of treatment, we are in great danger of leaving unemployed agents which are really serviceable; and as we ought to be careful not to confine our pathology within some narrow and favourite limit, so we ought also to endeavour to make our therapeutics comprehend, not one measure only, but all those measures, the conjoint operation of which is more salutary than the operation of any of them singly used. It were easy to show from the history of medicine, that too much reliance has frequently been placed on blood-letting, to the exclusion of other expedients of great power. Even if the illustrious Sydenham, equal to Hippocrates as a practical observer, had employed purgatives more freely with the lancet, there cannot be a doubt, that the results of his experience would have been far more favourable; but as in deviating from the prejudices of his own times, he had to create a practice for himself, it is pleasing to reflect how much his genius anticipated of a future age, how far he sprang before his persecuting cotemporaries.

Though general bleeding, in my opinion, is incomparably the best first remedy in the more violent forms of dysentery, yet there are other auxiliaries which should be brought promptly into action, but particularly purgatives, with calomel and opium (40). The most intense attacks of dysentery may be cured by the decisive employment of bleeding and purging at the beginning; and the same might be asserted of the bold administration of calomel, combined with opium and sudorifics. But in estimating the powers of any one mode of treatment we should endeavour to trace it through its general consequences, before we venture to give a final opinion; and if we find that there are some instances in which it fails, and that others of a precisely similar charac-

(40) Dr. Armstrong has omitted to mention the use of emetics. By Cullen we are informed that they have been considered the principal remedy in this disease, and in certain cases they are undoubtedly indicated. We cannot help thinking that of late they have been too much neglected. They will frequently be found admirable preparatives to the use of the other curative means, more especially calomel and opium.

ter prove remediable by the combination of another mode, we surely ought not to hesitate in making the addition in our future experience. Now, though bleeding and purging alone may cure dysentery, and though calomel and opium may have the same effect, yet a conjunction of these measures will be more efficacious in the main, than either administered alone; and as we judge in medicine of the expediency of any thing from its general rather than from its particular effects, so we have the strongest grounds for preferring the united agency of these means to their separate agency. As soon, therefore, as a sufficient quantity of blood has been drawn, a scruple of calomel ought to be given, with about two grains of opium. However it may contradict our preconceptions, very full doses of calomel generally produce in fever less irritation than small ones, and indeed when combined with opium, so far from creating, commonly allay irritation, and also act powerfully on the skin. About two or three hours after the exhibition of the calomel and opium, small doses of the sulphate of magnesia should be repeatedly prescribed until copious stools be procured; and where the stomach continues irritable a little calcined magnesia may be added to each dose of the sulphate, a compound which often remains better upon the stomach than any other. The bowels having been thoroughly evacuated, calomel should be boldly administered, in urgent examples, with small doses of opium or of the compound powder of ipecacuan, and continued afterwards at proper intervals, that its specific effects may be established as speedily as possible; and where the belly is not regularly moved under the use of the calomel, either the sulphate of magnesia or castor oil may be given as occasion may require, since these are unquestionably the best purgatives in dysentery, but especially castor oil. When the mouth is once obviously affected by the calomel, prudence requires that it should be withdrawn, or only prescribed in small quantities; but until recovery be completely insured, an action must be daily maintained upon the bowels; and yet this action must be moderate when the bowels have been once thoroughly opened, and ought not to be continued long when the stools become perfectly natural.