Notes

ON

THE PATHOLOGY AND TREATMENT OF CHOLERA.

BY

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[Continued from p. 252.]

In previous communications, I have adduced some facts and arguments adverse to the commonly received theory that the worst symptoms of cholera are mainly due to the drain of water from the blood by vomiting and purging. If this theory be erroneous, it is of incalculable importance that it should be discarded; for it is unquestionable that it has had immense influence on the treatment of cholera, as well as on the estimate which men have formed of the effect of various modes of treatment. Let a practitioner be thoroughly persuaded that the essential cause of choleraic collapse is a drain of liquid from the blood, and it will be difficult to convince him that opium and astringents can do harm, or that an emetic or a purgative can do anything but harm in the treatment of that disease.

A recent writer in the *Lancet* (Oct. 21st, p. 461) says: "Were we a cholera patient, we should pray to be delivered from men who have only one idea." Yet it is manifest that this writer is of the class from which he would pray to be delivered. His one idea is, that the secretions are suppressed "for want of serum; and that by supplying the materials of this, and by the use of means that shall act astringently, we are taking the best means to restore secretions." What does it avail to refer one, whose mind is thus prepossessed by a theory, to such facts as are contained in the very interesting paper by Mr. Watkins, published in a recent number of the *BRITISH MEDICAL JOURNAL* (Oct. 28th, p. 445)? Mr. Watkins there states that, in 1854, the deaths under various modes of treatment, but mostly with opium, having been more numerous than the recoveries, at a period, too, when "the epidemic was increasing both in the number of cases and in severity," he treated twenty-one cases by repeated doses of castor-oil; and, of the cases thus treated, nineteen recovered. About the same period, his colleague, Dr. Lett,* treated seven cases by full doses of opium, and "every case had died". What will be said of facts like these by a man whose one idea of the treatment of cholera is, that loss of fluid is to be counteracted by astringents? He will probably argue, that those who recovered while taking purgatives did so in spite of an erroneous and a mischievous treatment; while those who died under the opiate treatment succumbed to the disease in spite of a treatment which was theoretically correct, and which ought, therefore, to have saved them.

I am convinced, from a careful study of the history and literature of cholera, that there will be no general agreement as to the treatment of the disease until we have freed ourselves from erroneous theories as to its pathology and the relation of its symptoms to

each other. With this conviction, I purpose now to set forth, as clearly yet as briefly as I am able, certain facts and conclusions regarding the pathology of cholera which appear to me to be well established.

That the symptoms of cholera result from a morbid poison, which may enter the blood either through the lungs or through the gastro-intestinal canal, is a point so generally admitted, that I will not now stop to discuss the question, or to adduce any of the numerous facts upon which this view is based.

The most constant and characteristic effect of this poison is to excite a copious secretion from the mucous membrane of the stomach and bowels. This secretion is tinged with bile *before* collapse comes on, and again *after* collapse has passed off; while during the stage of collapse it has the characteristic rice-water appearance, and bile can be detected only by chemical tests. The vomiting and purging constitute the means by which the morbid secretions are eliminated from the alimentary canal.

It is certain that the cholera stools contain some poisonous materials by which the disease may be communicated. One fact confirmatory of this view is the frequency with which washerwomen and their families have suffered from coming into contact with the soiled linen of cholera patients. It is probable, therefore, that the poison is eliminated through the gastro-intestinal canal. It is also probable that the secretion from the mucous membrane of the digestive canal, together with the vomiting and purging, are as much parts of the natural process of cure as is the eruption on the skin in the case of small-pox. This, at any rate, is certain, that, as no patient ever yet recovered from small-pox without the appearance of the characteristic eruption, so no sufferer from cholera was ever known to get well without more or less of vomiting and diarrhoea.

As, in the worst and most malignant forms of small-pox, the patient may die of blood-poisoning before the rash appears, so, in the worst and most malignant cases of cholera, he may die of collapse without either vomiting or purging, or with little of either. There is no direct relation, as we have seen (see *ante*, p. 449, vol. i for 1865) between the degree of collapse and the amount of vomiting and purging—sometimes rather an inverse ratio between them.

There is yet one more point of analogy between small-pox and cholera. As the variolous eruption, which is unquestionably curative, may yet by its very abundance be fatal through its destructive influence on the skin, so the choleraic secretions may be so copious as to kill by exhaustion. Death by exhaustion is certainly not a common result of cholera; yet, with the known possibility of such a result, a rational eliminative treatment, while it endeavours to free the stomach and bowels from the morbid secretions which have been spontaneously poured into them, makes no direct attempt to increase the amount of excretion from the blood.

It has been suggested by some writers, that the analogy of small-pox and its treatment affords an argument against the eliminative treatment of cholera. It is said, with truth, that when the treatment of small-pox was conducted on the theoretical principle of assisting the development of the pustules and so the elimination of the poison, by keeping the patient in a close and heated atmosphere, the mortality of the disease was much increased. It would have been strange indeed if the mortality had not been increased by such a mode of treatment; but it is a result of shallow observation and reasoning, to infer that there is any analogy between that mode of treating small-pox and the use of emetics and purgatives in cholera. The unhappy sufferer from small-pox, who was covered with heaps of bed-clothes and

* The case of Dr. Lett himself is one of peculiar and most painful interest.

confined in an artificially-heated atmosphere, with closed doors and windows, was not only deprived of the refreshing influence of cool and pure air; but he was compelled to inhale again through his lungs the morbid poison which had escaped from his skin. This treatment was the exact opposite of eliminative. To eliminate is to put *élimine*, or out of the door; but this irrational treatment rendered elimination impossible by closing the doors and windows through which the poison might have escaped.

So far from there being any analogy between this destructive mode of treating small-pox and the treatment of cholera by emetics and purgatives, the analogy would be much closer with an opposite mode of treatment—one by which a patient should be made to swallow his own evacuations, or one which approaches very near to this in its results; namely, that which has for its object to restrain the evacuations by opium and astringents, thus increasing the risk of the morbid secretions being reabsorbed into the blood.

There is no known cure for cholera—there probably never will be; but, as the cooling treatment of small-pox which, in spite of violent opposition, was first introduced by Sydenham, materially lessened the mortality from that terrible disease, so the general adoption of an eliminative treatment of cholera—by means of emetics, mild purgatives, and copious draughts of water—would, I am persuaded, do much to lessen the mortality from this great modern scourge.

The analogy of small-pox and the results of the two opposite modes of treating that disease, are certainly in favour of, and not opposed to, this view, as some writers have too hastily assumed.

In my next communication, I shall endeavour to explain the symptoms of that remarkable condition which we know by the name of choleraic collapse.

[To be continued.]

A LADY DOCTOR. There is a lady doctor—Madame Newman—practising in Islington. She informs the public “that none need despair, no matter what are the opinions of medical attendants, or how complicated the disease”—of course, if they will only go to her.

GATESHEAD INFIRMARY. At the last monthly meeting of the committee of this charity, the secretary laid before the committee a letter from Mr. F. Bennett tendering his resignation as one of its medical officers. “I wish,” Mr. Bennett said, “to give place to younger members of my profession, because I think that even honorary services ought not to be monopolised.” Thereupon it was unanimously resolved—“That the Committee have heard the announcement of Mr. Bennett’s resignation with great regret. That they call to remembrance that, in the earliest report of this institution, made to the governors in 1833, after the passing away of the first visitation of cholera in Gateshead, the able execution of his duties and his kind and assiduous attention to his patients, during a period of unexampled distress, were emphatically recognised as deserving and receiving the blessings of the poor; that they feel that from that time to the present Mr. Bennett has continued to render his invaluable services to the charity, in the same earnest spirit of self-devotion, and with a kindness to the objects of his care, which has won for him their warmest gratitude and esteem. That these resolutions be entered in the minutes, and that the secretary be requested to transmit a copy of them to Mr. Bennett, with an assurance of the high and grateful respect unanimously entertained towards him by the officers and committee of the dispensary.”

Illustrations

HOSPITAL PRACTICE:

METROPOLITAN AND PROVINCIAL.

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TWO CASES OF SUPPURATION OF BRAIN AFTER INJURY
TO THE SKULL: TREPHINING.

[The notes of these cases were taken by Mr. REEVES, House-Surgeon.]

CASE 1. John W., aged 42, was admitted on August 4th, 1865, under the care of Mr. Shaw, for a contused and lacerated wound of the scalp, a little to the right of a point corresponding to the junction of the frontal and sagittal sutures. It was three inches long, and the pericranium was stripped from the bone. He stated that, shortly before admission, he had fallen on the pavement from a height of ten or twelve feet; but he had had none of the symptoms of concussion, not even feeling stunned at the time of the accident. The wound was closed by steel wire sutures, and water-dressing applied. On the 16th and 18th August, some small sloughs were removed, leaving a healthy looking wound, which in three days more had healed in its central third, and seemed about to close in the remaining parts. The patient had remained in bed only for a few days at first; but, feeling well and cheerful, he rose and assisted in the duties of the ward till August 19th (the fifteenth day since the accident), when he had rigors, with sickness and general feverishness, which increased in violence till the 21st. The wound continued to look healthy. He was clear in his mind till the morning of the 22nd, when he had a slight epileptiform fit, followed by great drowsiness and prostration. In the afternoon of the same day, he had several similar fits; his evacuations were passed involuntarily; and he was roused with difficulty. The left side of the body was found to be paralysed, the arm being bent and rigid.

On August 23rd, the insensibility being more profound, it was resolved to trephine. On enlarging the wound by dividing the central cicatrised portion, the surfaces of skull corresponding to the unclosed parts were found bare and bloodless, though no distinct line of demarcation was visible. The larger deal portion of the skull having been removed, a few drops of pus were seen lying on the dura mater; and, shortly afterwards, about half a drachm escaped from under the bone. This was followed by a gradual accumulation of blood and serum in the cavity. There was no bulging of the dura mater, and no pulsation; it was, therefore, not considered necessary to open it. There was no perceptible change after the operation, except that the rigidity of the left arm ceased. The patient was ordered to have two grains of calomel every two hours for three times, and to have ice-bags kept to the head. He was bled a few hours later to twelve ounces, with the effect of relieving the breathing and quieting the pulse; and a blister was applied to the back of the neck. Turpentine enemata were administered to act on the bowels.

The day after the operation, he had frequent fits, affecting both sides of the body; and, after lying in a low typhoid state for some hours, he died, thirty hours after the operation.

AUTOPSY. Coagula of blood with a superficial layer of pus were found adhering to the dura mater near