ON

THE TREATMENT

OF

ASIATIC CHOLERA.

BY

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Invaded, as we are, by another visitation of Asiatic Cholera, it is incumbent on all those who have had experience in the treatment of it to communicate the result to mankind. More especially is this due to the members of the medical profession, many of whom, though now highly qualified, were not of an age, or in a position, on the former occasions of its ravages, to have witnessed them, or to have profited by what they saw. There are, besides, a number of the more experienced who can scarcely feel satisfied as to the proper mode of treatment; for, from the partiality with which it attacked some places, while portions of other districts entirely escaped, it was almost unseen by numerous persons of extensive practice.

There exists also a source of danger from erroneous directions put forth with the weight of imposing authority; as, for instance, from the Board of Health, in the "London Gazette" of the 6th October 1848, in which the instructions given are inefficient, and partly erroneous. In pointing out what I know to be useful in the way of remedies, these errors will be made sufficiently evident.

But, as it may be asked upon what authority I come forward so confidently, I may be excused for stating, that I have grown gray in the service. It is some years since other professional engagements compelled me to retire from the London

Hospital, one of the best medical schools in Europe, where I had taught for twenty-five years. Hundreds of medical men who were my pupils during that period are now practising in London and various parts of the world. The fourth edition of "First Principles of Medicine" was translated in France and Germany, and reprinted and published in the United States of America; so that there are several thousand copies in the hands of the profession, containing the views upon Cholera which are here again advocated; and I have not yet met, either in conversation or in print, with any attempt to controvert them. In a matter of this nature, upon which such conflicting opinions are advanced, it seems necessary to offer some kind of credentials, which must be my apology for so much otherwise apparent egotism.

In the work just mentioned, my views are entered into at some length; here, for the present, I may simply state that *Cholera is a species of fever*. This is already granted by some; to others, who hear it for the first time, it may seem a startling assertion, and, until they are convinced, it will of course be difficult to induce them to use the proper remedies, namely, fever-medicines, and to avoid what is hurtful, *i.e.* stimulants.

Ague is a kind of fever, so is small-pox; the first *cold* shivering is a febrile state. How different is the first accession of these diseases to what occurs afterwards; yet not more unlike than the first *cold* stage of Cholera to the second *febrile* state, which at first was not recognised, because so many died in the preliminary cold stage; and even in those cases where death did not occur until the febrile heat had commenced, the medical attendant, being generally a novice in this disease, supposed that this (in reality febrile) heat was a beneficial result of the stimulants he had been administering, and was surprised when the patient died within a few hours.

The cold stage of what is called "Fever and Ague" is as like Cholera as may be,—cold surface, shrivelled skin of hands, livid face, crampy pains in the limbs, pain in the stomach, headache, faintness, nausea or vomiting, and sometimes diarrhœa, and, of course, little or no urine is passed.

In the cold stage of ague, it is well ascertained that nothing cuts short the cold shivering, and other miserable sensations, so effectually as an emetic, and that it does so without the aid of any artificial external heat or internal stimulant.

Thus we see, that when medical men are thoroughly acquainted with a disease, they follow in many instances that practice which is called indirect, and is the most efficacious. Such indirect treatment I know to be the most successful in Cholera, the remedy for this disease being:

Water, half a pint.
Tartar emetic, two grains.
Sulphate of magnesia, half an ounce. Mixed.

The dose is, for an adult (from fifteen years upwards), a table-spoonful every half-hour; for a child of a year and a half or two years, a tea-spoonful; and for the intermediate years, a proportionate dose.*

External heat is useless. I have found the attendants scalding their hands in applying flannel wrung out of hot water, bags of hot bran, and other fomentations, without effect; these I have always put aside, and, generally, by the time the patients had taken the third dose (if not before) they have described a sensation of warmth creeping over them. The first or second dose usually begins to allay the nausea and diarrhœa.

I am not so absurd as to assert that this treatment is infallible, there being of all diseases, as scarlatina, small-pox, jungle-fever, cholera, &c., different degrees; from that which kills in three or four hours, to that which never confines the patient to bed: one individual will be so slightly attacked as to be able to walk about during the whole course; another dangerously, but still within the reach of medical skill; a third mortally—the dose of the morbid poison of the epidemic imbibed by the patient being so deleterious that no human aid can avail,

* It seems almost superfluous to remark, that these minute doses of neutral salt act, not as a laxative on the bowels, but as a diuretic on the kidneys, the secretion of which is uniformly suspended in true Cholera. This, however, is not all; the saline coincides with the antimony (tartar emetic)—the best established of febrifuge medicines—in counteracting the disease.

any more than if a cannon-shot had passed through his body; the violence of the attack resembling the severe epidemic fevers of hot climates, where soldiers have been known to drop down on parade, and die in a few hours.

Cholera patients should be allowed to drink freely of quite cold water; it is the only beverage agreeable to them, and it relieves the sickness and other symptoms. It is useful to give five grains of calomel, because the liver suffers similarly to what it does in ague. Disulphate of quinine, also, should be administered from the first day, analogously with ague or remittent, a grain or more every fourth hour, and as long as the skin continues dry, and warmer than natural, as alluded to above; half a dose of the fever-mixture should also be given each time with the quinine.

The diet should be nutritious, but light, as the tone of the stomach is greatly diminished; at first nothing is better than milk mixed with water, arrowroot, gruel, &c., given cold, until the patient's own sensations make him prefer them warm, which is evidence of a return to a more healthy state; in this respect the patient's own wishes must be attended to.

Dry friction seems to be the only useful external application.

When the fever-medicine cannot be quickly obtained, it is well to be acquainted with a ready substitute. The following will be found to have much influence, though it certainly is not so efficacious as to allow us to dispense with the mixture, if it can possibly be procured.

Half a pint of water.

A large table-spoonful of common table-salt.

A large table-spoonful of flour of mustard. Mixed.

The doses the same as of the former.

Mustard is a well-known emetic; but it is not because it, or tartar emetic, or ipecacuan, or sulphate of zinc, &c., in large doses, produces vomiting, that they give relief, but because the emetic substances, and salines, in divided doses, have an effect on the nerves of the primæ viæ, that counteracts the effects of the epidemic poison which produces the phenomena of cholera, ague, and other febrile states.

Several other prescriptions might be given, containing metallic and other salts and emetic substances; but it is unnecessary to enumerate them, as they act on the same principle.

The "sal volatile," recommended in the manifesto of the Board of Health, is not hurtful as to the medicine itself, but inefficient; and the "hot water," ordered to be given with it, is positively injurious. The next thing there recommended is "hot brandy-and-water," which is also injurious: as must be known by every person, medical or not, hot brandy-and-water is inconsistent with fever-medicines in feverish disease. But, as that wicked wag Molière says, "Nous avons changé tout cela;" and for the present, the Toddy revival of Brunonianism is very rife.

It would be difficult for any person unacquainted with the phenomena of "fever and ague" properly to understand this subject.

One of the instructions of the Board is, "*in a word, to do every thing practicable to procure a warm general perspiration until the arrival of the medical attendant.*" Did the writer of this ever see Cholera? In it no human means *can* procure a warm general "perspiration." The first change, whether beneficial or otherwise, must be into a gradual restoration of *dry* warmth, not *perspiration*, which, as shown above, caused many to be deceived as to the operation of stimulants. The other directions of the Board, which are not incorrect, are hackneyed truisms: "to keep the feet dry, the chambers ventilated, not to drink to intoxication, to wear flannel next the skin in damp, cold weather." There is also a caution against "the use of cold purgative medicines, except under medical direction,"—as if the English were in the habit of using "drastic purgatives of all kinds, senna, colocynth, salts, &c.," as part of their diet. Then there is the common fallacy of confounding *post hoc* with *propter hoc*, when one event follows another, assuming the former to be the cause of the latter, where there was merely precedence of time. For instance, Cholera has occurred after a hearty meal; wherefore,

strong men, sailors and others, with good appetites, after working hard, must go to bed supperless, for fear of the Cholera!

But worse still, war is declared against *vegetables* and *fruit*, a most useful and healthful part of our diet, which physiologists show, from the formation of our teeth, we were intended to consume, if it were not enough for our guidance that a bounteous Providence has given them to us as a useful admixture with animal food for the preservation of our health. But because some poor creatures, who could not afford better diet, had fed upon bread, "plums, and sour beer" previously to being attacked with Cholera, "*fruits of all kinds, though ripe and even cooked, and whether dried or preserved,*" are interdicted, as well as "*green vegetables, whether cooked or not.*" Whereas, on the contrary, good vegetables and ripe fruit, by preserving a healthy state of the blood and secretions, are calculated to give strength to resist an epidemic influence.

There is one paragraph still requiring comment, as it contains a libel on human nature, implied by the statement that the opinion of Cholera being contagious "leads to the neglect and abandonment of the sick." I must say that this assertion is totally inconsistent with my experience; for in an extensive field of observation, for nearly forty years, in hospital, dispensary, and private practice, as pupil, professor, and physician, from the palace of the rich to the hovel of the poor, I have always had great difficulty in restraining relations, friends, and attendants from unnecessary exposure of themselves to danger, in fevers and other infectious diseases, and cannot recollect a solitary instance of the "neglect" alluded to.

For the purpose of demonstrating the mode of treatment recommended, I may add a couple of cases taken from my note-book—the first having all the marked symptoms of the worst form of Cholera from which patients can recover.

March 14th, half-past ten p.m.—W. H. M., aged 40, had been out attending to business, and rode in an open carriage from about 3 till 5 p.m., in good health and spirits, as remarked by his wife. About 6 p.m. attacked with pains in

limbs, back, and abdomen, chilliness and coldness of the skin, with frequent vomiting and purging; supposed to have had thirty watery motions up to the present time; the matter passed like rice-water, with white farinaceous-looking sediment; no urine; thirst, but tongue clean, moist, and cool; pulse 110; very feeble, countenance cadaverous, skin livid (blue-black), hands cold, and the skin shrivelled; fingers crooked like a bird's claws, and in pain from cramps in hands, arms, feet, legs, neck, and trunk both back and abdomen; voice shrill, complains chiefly of the cramps, cold, and nausea. Ordered antim. tartariz. two grains, magnesia sulph. half an ounce, in half a pint of water, a table-spoonful to be taken every half-hour.

Two a.m. (three hours from last visit).—All the symptoms relieved: no sickness, only two more motions of the same appearance; cramps gone from hands and arms, and less in the trunk—still in the legs; hands less cold, does not now feel chilly; began to feel warmer along the back after the second dose, *i. e.* little more than half an hour after commencing the medicine, though the previous efforts of his attendants with hot flannels, bags of hot bran, &c. had not produced the slightest effect, and were laid aside by me on my first arrival.

15th, eleven a.m.—All the symptoms relieved: pulse full, soft, 76; still rather thirsty, and skin warmer than natural, and dry; tongue clean, rather whitish; has had refreshing sleep within the last hour—none before; feels only weak, no cramps, but pain in muscles on motion; only three motions like the former during the last nine hours, amounting to about two pints; none for the last three or four hours; no urine; slight nausea after the last dose of the medicine—let him take only half a table-spoonful every two hours, and five grains of calomel immediately.

Six p.m.—One yellow, fœtid, feculent motion, and nearly a quarter of a pint of natural urine.

Eleven p.m.—Has had some sound sleep, feels comfortable, but weak; and muscles feel tired, and rather painful after the cramps.

16th, mid-day.—Feels well, but weak; pulse 84, full, and soft; skin still warmer than natural. Ordered to continue the mixture every four hours, with half a grain of sulphate of quinine each time. The recovery progressed rapidly.

Having alluded to the very slight cases, I may subjoin one of them. Called at 10 p.m. to a lady. She had been attacked in the morning with a shivering, slight nausea, and diarrhœa; about six watery motions (rice-water and white sediment), unaccompanied by griping, no cramps, but some pain in calves of legs; the shivering continued, and she took a hot bath without any relief; she then went to bed, and could not get warm, *until* after drinking a great many cups of mixed tea (a sedative); and afterwards profuse perspiration came on, with relief, in which state she was at my visit. There had been a dry heat before the perspiration, but even then a tendency to shivering; and she remarked, that upon stretching out the hand, or even turning the head round, there was a sense of shivering produced (morbid sensibility, independent of temperature). I recommended her merely to drink some more cool tea if thirsty; and, in case of any return of the diarrhœa the following morning, to take a dessert-spoonful of the saline antimonial every half-hour. It did return, with *nausea*, but the second dose of the medicine removed it entirely.

Having now stated what is essential as to the practical treatment of the disease, I may add a few observations on the theory, which will, I trust, prove interesting to the profession; premising, for the information of those who have not read the "First Principles of Medicine," that in the term sedative I include those remedies which have been usually denominated antiphlogistic, and which have been employed to counteract fevers and inflammations, such as saline medicines of various kinds, vinegar, preparations of antimony, zinc, and mercury, vegetable emetics and astringents, &c.

Upon the analogy between Cholera and Ague I would address a few words to men of practical experience. What is called "the fever," so well known in India, beginning with

chills and shivering (rigors), &c., followed by intense heat (after which, in favourable cases, there is perspiration, with relief of symptoms), pursues occasionally a different course; for, as we also see here in common ague, the sweat does not come on, but the skin remains hot, in a state of continued or remittent fever. Who that has seen much of the Cholera does not recollect some cases with this routine? Again, "the fever" of India, when it goes through the ague stages daily, does not commonly, like our agues, continue for weeks; a second, or at most a third paroxysm, is usually fatal in the *severe* cases which the physician cannot check. Who has not seen patients die in Cholera after they had become quite hot, that fever-heat exciting fallacious hopes? There was an epidemic, the "Bombay fever," recorded more than half a century ago, which is said to have destroyed the patients in the cold stage; and it was inferred that, had the patient lived, the hot stage would have come on. Who will decide now whether that was cholera or remittent fever, or which is which? for, though called "fever," the description agrees with cholera. Whoever has had much experience in ague has seen all the modifications of Cholera; the cold stage, with convulsions (spasms) = spasmodic cholera; ague, with nausea and diarrhœa, and of course little or no urine = the purging cholera; ague, with livid blueness of the skin and shrivelled fingers, like a drowned person = blue cholera; ague, passing into continued fever = a common termination of cholera; &c. &c.

One of the most successful modes of treating ague is to give an emetic in the cold stage, followed up of course by bark, or other tonics, with calomel, salines, &c., *pro re natâ*.

It would be quite beyond the limits and scope of this essay to enter further into the description of Cholera; but in Dr. James Johnson's "Med. Chirur. Review," April 1832, will be found ample valuable information on the subject. At p. 627 there is a note by the editor especially worthy of notice, showing that the gruel or rice-water evacuations which constantly occur are not specific, but merely the result of all the bile and fæces which had been in the intestines being carried away; or,

as he says, "ex nihilo nihil fit:" and I may add that, so far from a "discharge of bile completing cure," the discharge of bile is merely the ordinary event, evincing remission of the disease, or convalescence; and a renewed diarrhœal paroxysm of Cholera would soon wash that away too. This clear-sighted and experienced physician also inculcates the use of sulphate of quinine.

In fine, Cholera is an essentially febrile disease, whether it assume the intermittent, remittent, or continued form; it is not a new disease, but the same described by Sydenham in 1669, and subsequently by Frank;—the same which occurs in Madras, Bengal, Italy, Russia, England, and elsewhere. Sydenham's terms, "fresh type" and "new epidemic," do not imply a new disease, but a modified form of a disease according to the "constitution of the epidemic in the year in which it occurs;" just as he speaks of the great peculiarities assumed by the disease small-pox at different periods.*

If severe cases of Asiatic Cholera be taken in time, they may be cured by acting upon the principle of relieving the internal congestion; unless, indeed, analogous to what takes place

* The disease is one of functions, not of anatomical organic lesions, and the pathology is similar to that of fevers. At first there is no organic change, but an affection of the system conveyed through the nerves; subsequently, during the disease, if it last long, complications may arise, as those of the thoracic or abdominal viscera or brain; neither, any more than in fever, being essentially connected with the disease, though, in the latter, Broussais and Clutterbuck have said otherwise: in these cases, of course, after death morbid lesions are found, but not uniformly the same, though in particular years considerable unifermity exists; in some years, in epidemic fevers, the bronchial membrane is chiefly affected, as remarked by Sydenham during the epidemic fever of 1685, which he denominated "febris nova;" and which was also the peculiarity of the epidemic fever of the year 1831, in London. In other years, disease of the intestinal mucous membrane and its glands prevails, as described by Broussais; whilst in some seasons and localities disease of the liver accompanies the fever; but if a person were to die on the first day of the disease, who had been sound up to that time, no visceral morbid change would be found. Thus in cholera various visceral lesions have been observed and described which had existed before the attack; but when the viscera have been previously healthy, and the patient has died quickly, nothing has been found except appearances of congestion, and that fur upon the mucous membrane of the intestines resembling a very furred tongue.

sometimes in continued fevers, the individual have received so powerful a dose of the epidemic poison as will certainly prove fatal, despite any mode of treatment. If the blood, however, has begun to coagulate, the patient is dead to all intents and purposes, even whilst breathing and speaking, and the heart acting; for I have heard the sounds of the valves of the heart just before death in Cholera, when I am satisfied clots were already formed in the ventricles: at this stage, of course, neither sedatives, stimulants, bleeding, nor any thing else, can produce any effect. The slight or middling cases of Cholera have a tendency, like ague, to remit of themselves; hence, whatever treatment had been adopted, the practitioner used to think he had cured them: and thus I have been repeatedly told by practitioners that they had found the right thing to cure the Cholera. But the next time I met them, there was a diminution of confidence in the specific. Any person, however, who will treat the disease on principle, may defeat it by a variety of weapons, only using them with energy,—antimony, arsenic, all sorts of salines, vinegar or lemonade,* acetate of lead, sulphate of zinc, common salt and water, even cold water alone, calomel; but the last, if used in the quantity necessary to be sedative, may afterwards

* "Case by W. G. Maxwell, M.D., Calcutta:

"'Previously to the time when I was attacked by Cholera, I had for ten years and more been treating it, and trying to cure it, in others; but when my own time was come, and I lay prostrate, then did I feel how little I knew of the disease. I had lost my patients under every treatment that I tried; and I had also seen cases recover which I had given up, and placed on litters to be brought to the next halting-ground for interment. These would have no covering, but would have the *cold damp air of night* blow on them; and they recovered.

"'It was by *chance* that I fixed on citric acid (lemonade) for myself. It was standing amongst many other bottles on my table in my room, and I fancied it as the very thing I had an *internal longing* for.

"'I took more than two ounces* of the crystallised acid, in copious repeated draughts, which refreshed me, and allayed the dreadful thirst. I passed urine, and recovered.'"—*Medical Times*, Dec. 9, 1848.

This case is the *beau idéal* of empiricism, but may be turned to account as an illustration of the principle of action of a sedative constringent on congested primæ viæ; and, by the contrast of the *cold damp air of night*, the inutility of hot applications.

* =above three dozen of lemons.

produce havoc on the mouth.* Stimulants in moderation do little harm, except the evil of augmenting the secondary fever; as the hot or febrile stage of many cases of Cholera, which might have been safely combated by the sedative constringents, would have been scarcely perceptible if stimulants had not been used freely during the collapse. The constant desire for cold water in Cholera is an example of natural instinct, which is thwarted by man in his wisdom, while every thing hot, both as to caloric and stimulants, is often poured into the patient. Considering, then, the constringent effect of the various sedatives, antimony, mercury, lead, neutral salts, alkalies, &c. &c., we can understand how, as they ultimately coincide in the indication of cure, they have been adopted by different persons to effect the same purpose; and each, finding some particular substance efficacious in certain cases, has subsequently used that in preference to others.

Previous to the visitation of Cholera in 1831, before I had an opportunity of personal observation, I was led (by reading letters from India, and books) to make a too-limited estimate of the other symptoms of Cholera, referring chiefly to the affection of the stomach and bowels (old English Cholera morbus) as the cause of the collapse. When, however, I encountered the enemy hand to hand, I saw at once that it was like ague, not merely as regards its epidemic and miasmatic origin, but almost, if not altogether, a remittent of a fresh type; and I often thought of what the great Sydenham candidly said of his first encounters with new epidemics. I inculcated, therefore, a treatment in Cholera similar to that successfully adopted in Fever and Ague, which has been detailed above, and which was carried out with marked success by some of my medical friends in London, Paris, and elsewhere.

* Dr. Ayres, in his communications in the *Lancet*, November 1848, states, that he has not found this to result when he has treated cholera by calomel; and quotes numerous cases in confirmation. Still, as we know that salivation occurs occasionally some time after mercurial medicine has been discontinued, I feel it safer to employ antimony, which I have experienced to be at least equally efficacious, although, as mentioned above, I have also used calomel with it in moderation. If antimony were not the most efficient of antifebrile medicines, Dr. James's fever powders would not have retained their reputation up to the present day.

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