



ABS. 1. 83. 179









**SIXTH EDITION,**  
*CONSIDERABLY IMPROVED.*

---

**BEST MEDICAL ADVICE  
ON CHOLERA;  
THE CAUSES, PREVENTION AND CURE  
OF THAT  
DREADFUL MALADY:  
WITH DISQUISITIONS ON ITS  
CONTAGIOUS OR NON-CONTAGIOUS NATURE;  
AND AMPLE  
PRACTICAL DIRECTIONS  
REGARDING THE  
TREATMENT OF IT IN ITS VARIOUS STAGES.**

---

- I.—Sanitary Instructions for Communities supposed to be actually attacked with Spasmodic Cholera.
  - II.—Observations on the Nature and Treatment of the Disease, by Drs. Russell and Barry, Secretaries to the Board of Health established by Government at Sunderland.
  - III.—Symptoms and Prescriptions by the London Board of Health.
  - IV.—The Edinburgh Board of Health's Regulations.
  - V.—Practical Directions by G. H. Bell, Esq. M. D. Edinburgh.
  - VI.—Remarks by H. Marshall, Deputy Inspector General, Ceylon.
  - VII.—Sir Gilbert Blane's Warning.
  - VIII.—Observations on the Disease as it appeared at Sunderland.
  - IX.—The Appearance and Treatment of some of the most striking cases in the North of England.
- 

**GLASGOW :**  
W. R. M'PHUN, PUBLISHER, 86, TRONGATE.

---

1832.

SIXTH EDITION  
CONSIDERABLY IMPROVED  
BEST MEDICAL ADVICE  
ON CHOLERA  
THE CAUSE, PREVENTION AND CURE  
OF THIS  
DREADFUL MALADY  
AND THE BEST  
CONTAGIOUS AND NON-CONTAGIOUS VARIANTS  
AND THEIR  
PRACTICAL DIRECTIONS



TREATMENT OF CHOLERA  
I.—General Principles  
II.—Symptoms and Signs  
III.—Diagnosis  
IV.—Prognosis  
V.—Prevention  
VI.—Cure  
VII.—Vaccination  
VIII.—The Epidemic and Sporadic Variants  
IX.—The Epidemic and Sporadic Variants  
X.—The Epidemic and Sporadic Variants

GLASGOW  
W. & A. BLACKIE PUBLISHERS TO THE ROYAL COLLEGE OF PHYSICIANS  
1882



THE  
**BEST MEDICAL ADVICE, &c.**

---

**SANITARY INSTRUCTIONS FOR COMMUNITIES  
SUPPOSED TO BE ACTUALLY ATTACKED  
WITH SPASMODIC CHOLERA.**

CENTRAL BOARD OF HEALTH,  
*Council Office, Whitehall, 13th Dec. 1831.*

SIR,—Agreeably to the intimation given by this Board in the concluding paragraph of their circular, dated 14th ult. I have the honour to transmit the subjoined "Sanitary Instructions for Communities supposed to be actually attacked by Spasmodic Cholera," with some observations on the nature and treatment of the disease, drawn up by Drs. Russell and Barry.

Every individual being deeply interested in the preservation of the public health, it is the bounden duty of all to endeavour to arrest the spread of disease at its very commencement. In order to attain this important object—

1st. The most efficient arrangements should be made by the Local Boards of Health, and other authorities, to obtain the earliest, and most correct intelligence of every suspicious case which may occur within their jurisdiction.

2d. All unnecessary communication should be prevented, as far as possible, between the infected and the healthy.

3d. As space, cleanliness, and pure air are of the most vital consequence, both to the recovery of the sick person, and to the safety of those about him, the patient labouring under spasmodic cholera, should either be placed in a separate well-ventilated apartment of his own house, if it afford such accommodation, and be attended by as few persons as the circumstances of his case will admit, or be induced to submit to an immediate removal to such building as may have been provided for the reception of persons whose circumstances will

not afford the advantages at home, of space, air, and separation from the healthy.

4th. When an individual shall have been attacked with this disease, and placed under the most favourable conditions, as already pointed out, both for the recovery of his own and the safety of the public health; the room or apartment where he may have been attacked, and from which he may have been removed, should be purified by scrubbing, lime-washing, free ventilation, and fumigation, by heated sulphuric acid and common salt, with black oxyde of manganese, or the same acid with nitre, or when these materials cannot be obtained, by strong vinegar thrown upon heated bricks.

The bed, bedding, and clothes, should be immersed in water, washed with soap, and afterwards fumigated as above.

5th. To correct all offensive smells, chloride of lime may be applied; but great caution is recommended in the use of this material, its fumes continued for any length of time, having been found highly prejudicial to health, more particularly in delicate persons.

6th. A number of steady men, proportionate to the district in which they are to act, should be appointed to lime-wash and purify, as ordered above, under the direction of medical authority, such apartments as may be pointed out by the inspectors of the Local Board.

7th. Those who die of this disease should be buried as soon as possible, wrapped in cotton or linen cloth saturated with pitch or coal tar, and be carried to the grave by the fewest possible number of persons. The funeral service to be performed in the open air.

8th. It is of the utmost importance to the public health that an improved diet, and flannel clothing, at least flannel belts and woollen stockings, should be given to the poor. No person should ever allow himself to sit down and get cool with fet feet. The most particular attention should be paid to keeping the feet dry and warm. Repletion and indigestion should be guarded against; all raw vegetables, acescent, unwholesome food and drink, to be avoided. Temperance should be most rigidly observed in every thing. In short, no means should be neglected which may tend to preserve individual health. The neglect of any or all of these cautions would not of themselves produce the specific disease called spasmodic cholera; but such neglect would most assuredly dispose the individual living in an infected atmosphere, to be attacked with the disease, when most probably he might otherwise have escaped.

The most effectual means by which this disease may be prevented from extending, is to enable the poor, who are generally the first attacked, to oppose to its influence, as far as practicable, those ameliorations in diet, clothing, and lodging, which public and private charity will, it is hoped, not fail to produce.

---

OBSERVATIONS ON THE NATURE AND TREATMENT OF THE DISEASE, DRAWN UP BY  
DRS. RUSSELL AND BARRY.

Of the two great classes of functions performed by the organs of which man is composed, one only is attacked in this disease. The operations of the senses and of the intelligence are either left untouched, or are affected but in a secondary manner.

Those functions, on the contrary, by which existence as a living being is preserved, those complicated powers, by means of which we are for ever appropriating and converting into a part of ourselves portions of the matter around us; are all and at once deranged by this terrible malady. Nutrition is annihilated; respiration becomes difficult, irregular, and inefficient; the involuntary muscles no longer perform their task; the voluntary are drawn into contractions by other powers than the will; the blood ceases to circulate; its physical properties are altered; its serous portion is suddenly thrown out upon the intestinal mucous surface of the body; the secretions are all arrested; the animal heat is no longer produced.

Under such rapidly destructive, and almost universal derangement of function, the most energetic efforts should be directed to produce what the disease has rendered nature unable to keep up, viz,—

1st. Fluidity, heat, and motion in the blood.

2d. Regulated action in the voluntary and involuntary muscles.

Lastly, but above every other consideration, renewed energy in the nervous centre, the source of all vitality and function.

No remedy at all approaching to the nature of a specific has been as yet discovered for the disease. In fact, no one mode of cure can be usefully employed under all the circumstances of any disease. The grades of intensity, and the grouping of the symptoms with which spasmodic cholera makes its attacks, vary with the conditions of the subject; its treat-

ment, therefore, must vary with those grades and conditions.

The leading preliminary symptoms generally are, either diarrhœa, spasms, apopleptic vertigo, with nausea, imperfect vomiting, or various combinations of these symptoms.

When the diarrhœa affords time for distinct treatment, it ought to be arrested at once, by the most prompt and efficient measures;—by opium in moderate doses; astringents; local bleeding by leeches, if the subject be plethoric; by cordials and sulphate of quinine, if there be cold sweats; by confining the patient strictly to bed, and keeping up heat; by diet; by emetics.

Should spasms be the first and leading symptoms, subnitrate of bismuth, cupping along the course of the spine, cordial and anti-spasmodic medicines, opium, frictions, and dry warmth are indicated.

But when the patient is suddenly seized with vertigo, nausea, coldness, loss of pulse, blueness of the skin, shrinking of the features and extremities, with more or less watery discharges and cramps; constituting an aggravated case of the worst type; whether this state shall have come on without warning, or shall have supervened upon either or both of the preliminary sets of symptoms already mentioned, time must not be wasted upon inert measures. Such a patient will inevitably perish, and within a very few hours, if the paralysed vital functions be not quickly restored.

Let him then be immediately placed between warm blankets; and should no medical attendant be at hand, let two table spoons full of common salt, dissolved in six ounces of warm water, be given immediately, and at once, if he be an adult. Let dry and steady heat be applied along the course of the spine, and to the pit of the stomach, (if no other means be at hand), by a succession of heated plates or platters. Let the upper and lower extremities be surrounded with bags of heated bran, corn, ashes, or sand, and assiduously rubbed with a dry hand, and a little oil or grease to protect the skin. Energetic, complete vomiting will probably be produced by the salt, and perhaps bilious purging, with tenesmus.

Should a medical man be on the spot, a moderate bleeding, if it can be obtained, would be desirable, previously to, or immediately after the administration of the salt, or of any other emetic which may be preferred.

The extensively deranged action of those organs, whose nerves are chiefly derived from, or connected with the spinal marrow; the anatomical characters found about that great source of vitality, after death, in many cases of this disease;

together with the success stated by Dr. Lange, chief physician at Cronstadt, to have attended the practice mentioned below, founded upon these views, in twelve out of fourteen aggravated cases, fully justify the following recommendation:—

“ In cases such as those just described, let the cautery be freely applied to one or two, or more places, on either side of the spine, as if for the purpose of forming good sized issues. Should the heated iron have produced any excitement of the nervous power, and the salt-emetic have caused any portion of the bile to flow through its proper duct, a great step will have been accomplished towards recovery from the stage of collapse. Cordials and opiates judiciously administered; sinapisms and other external stimulants, mercurials, with mild aromatic aperients, which the intelligence and activity of British medical practitioners will not fail to adapt to the actual circumstances of each case, will conduct the patient safely to the stage of reaction.

The organs during the collapse of this disease, probably owing to deficient vitality, often give no indications of having been acted upon by repeated doses of certain powerful medicines, which under other circumstances would have produced the most pronounced effects. It is, therefore, suggested that this temporary insensibility of the system should not inculcate the administration of such repeated quantities as could, by accumulation, when the organs begin to recover their vitality, give rise to unfavourable results.

Thirst being a most distressing symptom of this disease, the quality and temperature of the drink should perhaps be left to the choice of the patient; but the quantity taken at a time should not exceed four ounces, and should be acidulated with nitrous acid, if the patient can bear it.

Should the disease prove extensively, and rapidly epidemic in a community, it would be prudent to establish stations at convenient distances from each other, where medical assistance and medicines might be procured without the risk of disappointment or delay. The details of these arrangements are left to the wisdom of Local Boards of Health.

As the symptoms of the consecutive stage of feverish re-action in cholera differ but little, if at all, from those of ordinary typhus, except perhaps in the greater rapidity with which they but too often run to a fatal termination; and as this kind of fever is treated in no part of the world with more success than in England, the entire management of this stage of the disease is left to the zeal and science of the profession at large.

Attentive nursing, and assiduous well-directed rubbing, are

of the utmost importance; a strictly horizontal position, however, must be maintained until the heart shall have, partly at least, recovered its action. An erect, or even a semi-erect position, during the collapse has been often observed to produce instant death. Warm baths, therefore, for this and other reasons, are worse than useless: evaporating fluids, and indeed all moisture applied to the skin, seem to be contradicted for obvious reasons. Hot air baths, so contrived as to be applicable in a recumbent posture, and admitting access to the patient for the purpose of friction, may be of use.

I have the honour to be, Sir, your most obedient servant,  
E. STEWART, Chairman.

---

### BOARD OF HEALTH, COLLEGE OF PHYSICIANS.

The following are the early symptoms of the disease in its most marked form, as it occurred to the observation of Dr. Russell and Dr. Barry, at St Petersburg, corroborated by the accounts from other places where the disease has prevailed:—

Giddiness, sick stomach, nervous agitation, intermitted, slow, or small pulse, cramps beginning at the tops of the fingers and toes, and rapidly approaching the trunk, give the first warning.

Vomiting or purging, or both these evacuations, of a liquid like rice-water, or whey, or barley-water, come on; the features become sharp and contracted, the eye sinks, the look is expressive of terror and wildness; the lips, face, neck, hands, and feet, and soon after the thighs, arms, and whole surface, assume a leaden, blue, purple, black, or deep brown tint, according to the complexion of the individual, varying in shade with the intensity of the attack. The fingers and toes are reduced in size, the skin and soft parts covering them are wrinkled, shrivelled, and folded; the nails put on a bluish pearly white; the larger superficial veins are marked by flat lines of a deeper black; the pulse becomes either small as a thread, and scarcely vibrating, or else totally extinct.

The skin is deadly cold, and often damp, the tongue always moist, often white and loaded, but flabby and chilled, like a piece of dead flesh. The voice is nearly gone; the respiration quick, irregular, and imperfectly performed. The patient speaks in a whisper. He struggles for breath, and often lays his hand on his heart to point out the seat of his distress. Sometimes there are rigid spasms of the legs, thighs, and loins.

The secretion of urine is totally suspended: vomiting and purgings, which are far from being the most important or dangerous symptoms, and which in a very great number of cases of the disease have not been profuse, or have been arrested by medicine in the attack, succeed.

It is evident that the most urgent and peculiar symptom of this disease is the sudden depression of the vital powers; proved by the diminished action of the heart, the coldness of the surface and extremities, and the stagnant state of the whole circulation. It is important to advert to this fact, as pointing out the instant measures which may safely and beneficially be employed where medical aid cannot immediately be procured. All means tending to restore the circulation and maintain the warmth of the body should be had recourse to without delay. The patients should always immediately be put to bed, wrapped up in hot blankets, and warmth should be sustained by other external applications, such as repeated frictions with flannels and camphorated spirits; poultices of mustard and linseed (equal parts) to the stomach, particularly where pain and vomiting exist; similar poultices to the feet and legs, to restore their warmth. The returning heat of the body may be promoted by bags containing hot salt or bran applied to different parts of it. For the same purpose of restoring and sustaining circulation, white wine whey, with spice, hot brandy and water, or sal volatile, in the dose of a teaspoonful in hot water, frequently repeated, or from five to twenty drops of some of the essential oils, as peppermint, cloves, or cajeput, in a wine glass of water, may be administered; with the same view, where the stomach will bear it, warm broth with spice may be employed. In very severe cases, or where medical aid is difficult to be obtained, from 20 to 40 drops of laudanum may be given, in any of the warm drinks previously recommended.

These simple means are proposed as resources in the incipient stage of the disease, where medical aid has not yet been obtained.

HENRY HALFORD, President of the Board.

---

## REPORT OF THE EDINBURGH BOARD OF HEALTH.

THE Edinburgh Board of Health having maturely considered what steps should be taken for checking the Epidemic Cholera, if it should appear in this city, are of opinion that

the proper time is now arrived for making public the following directions for the guidance of its inhabitants :

I. The Board are satisfied, that the disease may arise spontaneously from hidden causes ; and that it may also become contagious in circumstances not yet ascertained. But they are fully warranted in declaring, that, when it does become contagious, the risk of its spreading in that manner is very much diminished if due attention be paid to cleanliness and sobriety. And they therefore entreat the inhabitants of Edinburgh, in the event of the disease appearing here, not to be misled by exaggerated notions of its contagious nature,—the inevitable tendency of which would be to leave the sick helpless, and without that attendance from friends and others which is more pressingly required in this disease than in any other.

II. Experience has shown, that the most essential precaution for escaping the disease is sobriety,—that intoxication during the prevalence of the epidemic, is almost sure to be followed by an attack,—and that those addicted to drinking are the most subject to take cholera, and the most likely to sink under it. In like manner, strict attention to personal cleanliness,—to cleanliness and ventilation of dwelling-houses,—to warm clothing,—to regularity of hours of sleep,—to keeping as much as possible within doors at night,—and to taking food before going out in the morning—may be relied on as important means of security.

III. The Board are providing, that should the disease appear, several Hospitals shall be opened over the city ; also, that stations shall be established, where, as well as at the hospitals, medicines and heating apparatus may be procured at all hours of the day and night ; and likewise that, if necessary, all night-watchmen shall be supplied with medicines for the immediate use of those who may need them. By these means it will be in the power of every one to procure instant aid.

Notice of the situation of hospitals and stations for medicines will be given the instant the disease may appear.

IV. But to prevent the possibility of delay, especially in the dead of the night, when the disease is very apt to begin, the Board recommend families to provide the following articles :—

1. *Mixture*.—Take sulphuric ether and aromatic spirit of hartshorn, of each half an ounce, compound tincture of cinnamon, one ounce. Mix and cork up carefully.

2. *Laudanum*.—An ounce to be kept in readiness.

3. *Pills*.—Take of opium twenty-four grains ; camphor,



one drachm; spirit of wine and conserve of roses, enough to make a mass of common consistence. Divide into 24 pills.

4. *Clysters*.—Take of laudanum an ounce, tincture of assafoetida two ounces. Mix for keeping.—Before using, mix three tea-spoonfuls with a wine-glassful of thin starch; and retain it, when injected, by pressure below with a warm cloth, as long as possible.

5. *Mustard-Poultices*.—Have always at hand four ounces of powdered mustard. A fourth part of this spread over porridge poultices, will be sufficient for one patient.

6. *Hot-Air Bath*.—The Board have approved of a hot-air bath of a simple construction, which may be seen at the Blind Asylum, and made by any carpenter, price about ten shillings. Every family who can afford it ought to have one.

V. No time should be lost in sending for medical aid. But when the disease commences suddenly in a violent form, it is dangerous to lose even the time which must pass before such aid can be had. This form is at once known by sudden weakness, a contracted, ghastly countenance, blueness of the lips, and general coldness, accompanying or preceding vomit-purging, and cramps. In such cases the friends will, without delay, give a table-spoonful No. 1. with 60 drops of laudanum in half a wine glassful of cold water. Follow this with a table spoonful of warm spirits and water, or strongly spiced wine. Repeat two tea-spoonful of the mixture, with 30 drops of laudanum, every half hour, if the first dose fail to relieve. If the mixture be vomited, then give two Pills, No. 3, and repeat one every half hour, if the first two fail to relieve or be vomited. But after the vomiting and cramps cease, the mixture or pills must not be repeated without advice.—The Clyster, No. 4, should be resorted to also from the first, and repeated once if not retained.—[N. B. The doses of the Mixture, Laudanum, Pills, and Clyster, must not be exceeded. For children of fourteen, half the doses mentioned, and for children of seven, one-fourth is sufficient.] The Hot-air Bath, or if it is not at hand, dry heat over the whole body in any shape, such as by hot blankets and hot bricks, sand, salt, or bottles of hot water—together with constant rubbing of the whole body,—should likewise be resorted to from the first. The Mustard-Poultices should, as soon as possible, be applied over the belly and on the soles and calves, and kept on until the patient complains of the smarting.

By the time these measures have been put in force, opportunity will have been given for procuring medical advice: which is indispensable for the treatment afterwards. The

Board think it necessary to apprise the public, that where this disease has prevailed, blood-letting when resorted to within the first, second, or third hour from the commencement of the attack, has been very generally found useful along with the other remedies, notwithstanding the appearance of sudden weakness and excessive sinking already mentioned.

VI. By following these rules, and taking prompt advantage of the provision made at the station-points, the Board are convinced that very many cases will be checked at the outset. But, at the same time, they strongly exhort the labouring classes to convey their sick friends with all speed to the hospitals, rather than try to cure them at home, where they can seldom have the means at command. The hospitals will, it is hoped, be so numerous, that one shall be near every one's habitation; and carriages, to serve at the same time as dry-heat baths, may be found always ready at the hospitals and stations, for the instant removal of patients at all hours of the day and night. The Board feel assured, that, by quickly availing themselves of these provisions, working people will get their sick friends brought sooner and far more effectually under treatment than in any other way; and they must not forget that every minute's delay is highly dangerous.

VII. The moment the disease is suspected to have appeared, information must be given to William G. Cunningham, Esq. Clerk to the Board, at the City Chambers. And, should it establish itself in the town, medical men are expected to send to the same quarter, every morning before half-past nine, a report of each new case, death, or recovery—specifying the name, residence, age, employment, date of seizure and date of the event. The board anxiously look for punctuality in this respect from every medical person.

While the Board think it right to express their apprehension, that in certain circumstances the disease may be communicated by personal intercourse with infected persons or goods, they wish it to be distinctly understood, that as they are satisfied it may also be diffused in other ways, not yet ascertained—as they think it will be impossible in this country to establish a system of internal quarantine, or absolute seclusion of the sick—and as the attempt to do so would throw very many persons into great distress, they do not mean to recommend that any attempts should be made to prevent its diffusion in this city by seclusion of the sick, otherwise than as detailed above.

N. B.—To Apothecaries.—As an inferior laudanum is sold in many shops, apothecaries are cautioned to use only the

strong laudanum of the Edinburgh Pharmacopœia. Copies of this Report, and printed labels for the articles recommended by the Board, with directions for their use, may be procured by apothecaries from the Clerk.

By order of the Board.

JOHN LEARMONTH, Lord Provost.

16th November, 1831.

---

## PRACTICAL DIRECTIONS IN REGARD TO CHOLERA.

By GEORGE HAMILTON BELL, Esq.

[In a very able letter addressed to Sir Henry Hallford in consequence of what he has stated in the preceding article, the following remarks are published by Mr. Bell. He appears to have more practical notions in regard to cholera, than any of the others whose productions have come under our notice, and we most strenuously recommend to all who can afford it to put themselves in possession of his treatise, recently published in Edinburgh at 5s. 6d. We have to apologise to Mr. Bell for the freedom we have used in appropriating so much of his Letter to Sir Henry Hallford, and our only excuse for having done so, is, that his valuable hints on the subject may be more widely disseminated in the West of Scotland, than they had any chance of otherwise being.]

It was not my intention to have added any thing to what I have already published concerning this disease; and I should have adhered to that intention, had it not occurred to me, that, as the regulations in the Gazette are directed rather to the prevention of the spreading of the disease by means of contagion, than to the best means of relieving the sufferers, there was still room for some practical directions likely to prove serviceable to the community, and in a particular manner to the inhabitants of the city in which I reside. In offering these suggestions, I make no pretensions to any superior medical skill; but having accidentally seen more of the disease, I believe, than almost any of my professional brethren in this city, and considering it to be the bounden duty of every man who has had such opportunities, to do his utmost to allievate the sufferings of those who may be attacked, I venture, under

the influence of that feeling, and avoiding all controversial topics, to submit the following hints for your consideration :

I. It appears to me very desirable, to have a popular description of the disease as may enable us to recognize it immediately on its accession. Much anxiety and needless alarm would be avoided, were the public sufficiently impressed with the distinction between this formidable distemper, and those derangements of the bowels with which, from the name it has unluckily received, and from some of its less important symptoms, it is too apt to be confounded. Had we now to choose a name for the disorder, it would certainly be more appropriate to call it *Morbus Asphyxia*, or the *pulseless* disease, —the failure of the pulse, and a suspension of the healthful circulation of the blood, being much more characteristic of the disorder than any other symptom with which I am acquainted. The approaches of this morbid condition, however, are gradual and insidious. The patient feels lassitude at first, perhaps headache and ringing of the ears, accompanied by one or two lax stools. But it must be borne in mind, that the bowels are not invariably so affected; and even that the preliminary symptoms which I have mentioned are hardly deserving of notice, except when cholera prevails in the neighbourhood.

The symptoms which more properly belong to the disease are blue lips and nails; an earthy or blue colour of the skin, the surface appearing shrunken; while the countenance is sunk and the eye falls deep in their sockets, and are surrounded by a dark ring. The extremities become cold, and the pulse weak; it may even be imperceptible. There is oppression of the chest, and generally a burning sensation at the pit of the stomach. Severe vomiting and purging, of a fluid which is something like rice-water; urgent thirst, accompanied probably by violent spasms in the extremities, and excruciating spasmodic pains in the belly, supervene. The patient tosses about his body, and falls into a state of indescribable agony; and although the mind remains comparatively entire, he has very much the appearance of an animated corpse.

A very few hours will bring the sufferer to this state; which I need scarcely add is one of imminent danger, and little likely to be confounded with any of the ordinary maladies to which the inhabitants of this country are accustomed. And no one can see an individual reduced to this extremity, without being satisfied that not one moment is to be lost in sending for medical assistance.

II. Medical advice, however, may not always be at hand;

and although safety is scarcely to be hoped for in absence of a professional man, it is nevertheless, of great importance to point out to the friends of the patient, what steps may be safely taken between the accession of the disease and the arrival of the physician :—

*The patient ought to be immediately placed in warm blankets, and surrounded with bottles of hot water, bags of hot sand or salt ; and every other means of applying dry heat which may be within reach, ought to be resorted to. The whole body ought to be rubbed with hot flannel, and the belly should be covered with mustard poultices, which should also be applied to the calves of the legs.*

*I have seen so little good to result from the application of the hot water bath, that, even if it should be at hand, I should not put a patient into it. One great objection to the application of hot water is the fatigue which it occasions the patient, besides that any benefit attending it is generally neutralized by the difficulty of drying the body, or by the evaporation which takes place during that process.*

*Laudanum is usually to be found in every house, and certainly ought to be so during the prevalence of this disease ; but the friends of the patient must be cautious of administering it in large doses without the sanction of a medical man. A tea-spoonful of laudanum, added to six table-spoonfuls of brandy, may be prepared, however ; and one table-spoonful of this mixture may be administered in half a wine glassful of hot water every quarter of an hour,—five drops of essence of peppermint and ten drops of sulphuric ether being added to each dose of the brandy and laudanum. In case the stomach reject the liquid, pills containing three grains of camphor and half a grain of opium may be given ; and if the irritability of the stomach be so great that it rejects all that is swallowed, a warm chyster of arrow-root, with a tea-spoonful of laudanum in it, should be injected into the bowels.*

*As a measure of precaution, all these remedies ought to be at hand ; but in towns, of course, medical attendance will probably be obtained in time to admit of their being applied under sanction of a professional man.*

*Early bleeding is of so much importance in this disease, that, if possible, it should be resorted to even before the arrival of the regular medical attendant of the family. The rule is to bleed, until the blood, which is black and thick when a vein is first opened, assumes a red and more natural colour, and until the oppression of the patient is relieved. In the course of my prac-*

*tice I have always found that the danger is, that too small rather than too large a quantity of blood is removed.*

*The greater part of the course of treatment just prescribed, may be adopted in almost every case, and, if promptly followed, the most salutary effects may be expected. But, as I have already said, the sooner that a medical man is called so much the better is the patient's chance of surmounting the disease. As to the minute details of medical treatment, it would be foreign to my present purpose to enlarge upon them.*

*III. Could we make even a plausible conjecture as to the remote cause of Cholera, we might have some hope of being able to resist the advances of the disease by precautionary measures. But, in the present state of our information and experience, an absolute preventative against an attack of this extraordinary malady, is a desideratum which we can hardly expect to see supplied. At the same time, while we are thus unable to arrest its progress, we are warranted in giving the character of predisposing causes, to certain circumstances which are within our reach. In India, it has been almost invariably found, that regular habits, nourishing diet, and cleanliness, gave those exposed to the disease the best chance of escape; while exposure to fatigue or to cold, particularly during sleep, poor diet, and, above all, intoxication and dissipated habits, have been found powerfully to predispose to Cholera. There is also reason to believe, that persons living in low ill-aired situations, and sleeping on the ground floors, or in damp floors near the ground, are more liable to the disease than those who are less unfortunate in their habitations.*

*In this country, attention to clothing and to within door comforts, will be of even more consequence than within the tropics. Every endeavour therefore ought to be made, by the upper classes of society, to prepare the poor for resisting the disease, by providing them with warm clothing, and, if possible, with warm and well-aired houses. It is said, that in Vienna, where proportionally more of the upper classes have suffered than in the other towns in which Cholera has appeared, it is the custom for this class to inhabit the lower storeys, and to leave the upper part of the house to the humbler classes of society. If this fact be established, it would justify us in transferring our beds, where that can be conveniently done, from the lower to the upper flats.*

*Nourishing diet is unquestionably very useful as a preventive, white crude fruit and undressed vegetables, and, in general, all food having a tendency to produce disorder in the stomach and bowels, ought to be avoided.*

*Debauchery of all kinds may be regarded as almost the certain means of provoking an attack of the disease, while it prevails in a town or district. Powerful purgatives are also dangerous at such a time; and, in general, I should recommend it to that pretty numerous class in the community who are in the practice of dosing themselves with favourite medicines, to abstain as much as possible from this indulgence during the prevalence of cholera. For although at such a time attention to the state of the bowels is of much importance, yet as certain of the ordinary medicines are more likely to be prejudicial than others, or to predispose to attacks of the disease, it is particularly desirable, while the danger exists, that the slighter, as well as the more important derangements of the system, should be treated by medical men.*

*The disease in India was usually confined to a particular part of the city, or camp, or district, while those residing beyond the tainted limits were safe, for the time, from attack. If the same phenomenon should be exhibited when the disease makes its appearance in this country, safety may occasionally be found in deserting the quarter of the town or district in which the disease particularly manifests itself. But before resorting to this expedient, the habits of the disease would require to be well ascertained; for any thing like a precipitate removal, unless it be to a quarter indisputably beyond the limits to which the disease is confined, might prove more prejudicial than it would be to remain and face the danger—using such precautions against the predisposing causes as have been suggested.*

IV. The duties of Magistrates and of the Heads of the Police, on the appearance of the disease, may, I think, be disposed of in a very few words. The higher classes of society may safely be left to themselves, as they can easily have within their own houses most of the means required for the cure of the disease; and any attempt to enforce against them a system of regulations intended to prevent contagion, would speedily be found impracticable. On this subject I have already said enough, and I have little doubt, that if we are unfortunately visited by the disease, all such regulations must and will be abandoned as vexatious and useless.

It is therefore to the poorer classes that the attention of the Magistracy ought to be directed. For their accommodation, as well as for the benefit of such of the inhabitants generally as may be willing to go into hospitals, certain houses ought to be fixed upon, which may be converted into sick-houses on the appearance of the disease. These houses should be conveniently situated for the service of the most densely peopled

portions of the town; and there ought to be several of them, so that if one or two are found to be within the *foames* of the disease, they may, for the safety of the attendants on the sick, be deserted.

A sufficient reward ought to be held out to induce persons of good character to come voluntarily forward as hospital attendants; and each hospital should have as many medical attendants attached to it as possible, so that they may relieve each other from the severe duty to which they must necessarily be exposed. I have already adverted to the recommendation of the Board of Health, that the hospital attendants ought to be *few*. This recommendation bears internal evidence, that the individual by whom it was suggested to the Board, *never witnessed the actual disease*. For my part, I should say, with humble confidence, that if the hospital attendants are *few*, it would be much better for the sick that there were no hospitals at all, and that each patient were left to such chance assistance as his friends might be able to procure for him; for, most undoubtedly, in the whole circle of diseases to which the human constitution is liable, there is no one in which the aid of numerous assistants is more absolutely indispensable than in Cholera. My suggestion therefore would be, that the Magistrates of each town in which the disease appears, should have a list of all such persons as are willing to enrol themselves for this duty; and that, when occasion requires, they should be sent in sufficient numbers to each hospital.

These hospitals ought, of course, to be well supplied with medicine, and with the apparatus for a spirit vapour bath, described in my treatise on Cholera. Indeed, it would be a proper regulation to have this apparatus placed in certain marked stations in each town, for the use of the sick generally, whether in hospitals or private houses. The hospitals ought also to be provided with an ample supply of warm bedding, with the means of keeping up a high temperature by stoves or otherwise; and with a cooking establishment for the benefit of the convalescent.

---

## CITY OF LONDON BOARD OF HEALTH.

### PRECAUTIONS.

The City of London Board of Health, anxious to prevent the introduction of cholera morbus into this city and to arrest



its progress should it unfortunately make its appearance, feel it their duty to direct the attention of their fellow-citizens to the following precautions and observations, and earnestly to recommend that every housekeeper should make them known among the members of his family, and use his influence towards carrying them strictly into effect.

*House* —To guard against accumulation of refuse matter in drains, cess-pools, dust-bins, and dirt heaps, and to purify such receptacles by solution of chloride of lime, to be procured on application at the medical stations of each ward.

To maintain in a cleanly and wholesome condition all reservoirs, cisterns, and sinks, and to allow impurities, where practicable, to be carried away by running water.

To keep inhabited apartments clean, by frequently washing, and very carefully drying the floors; and to ventilate them thoroughly, as well by fires as by free access of fresh air.

To have the windows, especially of bed rooms, put in good repair, so that the occupants may not be exposed, during sleep, to currents of night air.

To change bed linen and furniture frequently, and to clear out those spaces in inhabited rooms which are concealed by beds and other furniture, and which are so often made the depositories of filth and rubbish.

Where persons live in crowded apartments, which should be avoided as far as may be practicable, additional vigilance should be used to preserve a free ventilation; and where offensive exhalations arise, they should be destroyed by solution of chloride of lime.

*Person*.—To maintain personal cleanliness by frequently washing and change of clothing, and, if available, by occasional warm bathing.

To guard against sudden changes of temperature by wearing flannel next the skin, more especially round the bowels, and to protect the feet and legs by woollen stockings.

To avoid excessive fatigue, profuse perspiration, and exposure to cold and wet, particularly at night, and to change damp clothing without delay.

*Diet*.—To let the diet consist of plain meats, bread, and well-boiled vegetables, rejecting injurious and indigestible kinds of foods, such as salads, raw fruits, nuts, rich pastry, and in general, such articles as each individual may have found by experience, to create acidity, flatulence, and indigestion.

*Beverage*.—To abstain from undiluted ardent spirits, acid drinks, and stale soups or broths, and to be sparing in the use

of Sugar, especially if it gives rise to a sour fermentation in the stomach.

To maintain regular habits, using moderate exercise, keeping early hours, and taking nourishment at limited intervals, so that fatigue or exposure may never be encountered during an exhausted and empty state of the stomach.

Finally, to preserve a cheerfulness of disposition, a freedom from abject fears, and a full reliance that such measures will be taken by the government and the local authorities, as are best calculated, with Divine assistance, to meet the exigencies of the occasion.

The Board of Health are aware that these precautions cannot all be taken in every case, but they feel convinced, that the more closely they are followed, the greater will be the probability of security; and though they may be thought to be of a general nature, they become more immediately important at a time when the community are threatened with the visitation of a malady which especially affects the stomach and bowels; which usually makes its attacks during the night; which falls with the greatest severity on the poor, the ill-fed, and the unhealthy; and which rages most destructively in those districts of towns where the streets are narrow and the population crowded, and where little attention has been paid to cleanliness and ventilation.

CHARLES PEARSON, Chairman.

J. F. DE GRAVE, Medical Secretary.

---

## REMARKS ON CHOLERA.

BY HENRY MARSHALL, Esq. D. I. G.\*

[The following remarks are from the pen of a gentleman whose experience entitles him to speak with some confidence on the cholera. What he here states, are facts which came under his own observation in the island of Ceylon, and must, accordingly be admitted to have more weight than any thing

---

\* Mr. Marshall had the superintendence of the medical concerns of the army, in the central provinces of Ceylon, when cholera appeared in that island.

that can be said by writers who merely express their individual opinions, however favourable the hypothesis may be on which they are founded.]

Cholera has always occurred, sporadically, in India, Ceylon, &c. Bontius has described the disease as he saw it in Java. Between the year 1808, when I arrived in Ceylon, and 1819, when it appeared epidemically at Kandy, I had an opportunity of witnessing several cases, all of which terminated fatally. The nature of the disease was indeed not at first duly appreciated. I am aware of other medical officers who witnessed cases of a similar nature. The cases I met with were all either Africans or indigenous inhabitants of India, but Dr. Badenach had a commissioned officer under his care who died of the disease in a few hours.

Cholera was epidemic in the peninsula of India in 1782 or 1783. This epidemic was described by Mr. Curtis as he saw it at Madras by Fra Paolina da San Bartolomeo, a Carmelite Friar, as it occurred in the neighbourhood of Travancore; by Dr. Girdlestone, as it appeared at Madras in a regiment to which he was surgeon; and by Sonnerat as it was reported to have happened in the neighbourhood of Pondicherry. Dr. Girdlestone denominates it a "*spasmodic disease*," and Sonnerat calls it "*indigestion*." The latter author informs us that 60,000 inhabitants died of the disease near to Pondicherry.

The disease became epidemic in August 1817, about 100 miles to the northward of Calcutta. In December 1818, it reached Jafna, in Ceylon, and about the 26th or 27th of January, it appeared at Colombo, and the first case which occurred among the troops in the Kandyan Province happened at Kandy on the 25th February. Between this date and the 4th May, when the epidemic ceased in the Kandyan Province, it appeared in fifteen of about thirty military stations.

In the Kandyan territory, commissioned officers were nearly exempted from its influence; and I do not recollect having seen a female or a child affected by it.

The different classes of the troops, including Europeans, Malays, Indians, and Africans, were all liable to the disease. Unlike the cause of intermittent fever, it attacked Africans as generally, and perhaps fully as severely, as any other species of troops. It is, I presume, pretty generally known that Africans are not liable to be affected with intermittent fever. With the exceptions above stated, Europeans and other classes



of people who enjoyed the means of living comfortably, and who seemed to have a sufficient degree of prudence to induce them to consult their own welfare, fell under the influence of cholera nearly as severely as the comparatively naked, abstemious, and improvident Indians.

Cholera did not appear to be in any degree affected by the weather, or by considerable transitions of temperature. It prevailed with as much severity while torrents of rain were falling as it did when the atmosphere was dry and parching. Every endeavour to trace a connexion between the extension of the disease and an obvious condition of the atmosphere, was completely futile. In no one instance did it seem to prevail among people residing in the same house or barrack, so as to excite a suspicion that the contact of the sick with the healthy contributed to its propagation.

As it frequently affected only a few individuals among considerable numbers similarly situated, it may be inferred that there were some concurring conditions of the constitution which influenced the supervention of the disease. The nature, however, of that aptitude of the system which may have disposed or concurred towards the existence of the disease, seemed to be quite inexplicable.

Cholera in general supervened suddenly, and without any appreciable previous indisposition. For the most part the symptoms which first arrested the attention of a patient were vomiting and purging. The matter thrown up by vomiting was primarily the ordinary contents of the stomach, and eventually it was watery and colourless. The stools consisted in general of an opaque whitish fluid, resembling harley water. The primary symptoms appeared to supervene more frequently between the hours of two and four in the morning, than during any other period of the day. Prostration of strength soon supervened, with cramps, chiefly in the legs, and coldness of the skin. In some instances headache was present, but this was not a general symptom. Great thirst and uneasiness about the precordia were never absent. As the progress of the disease advanced, the countenance became collapsed, and the eyes sunk, the action of the heart and arteries grew weak, and the pulsation quicker than natural. The nails of the fingers and toes became livid, and the skin cold, clammy, and shrivelled. The breath was cold, and when a thermometer was placed under the tongue, the mercury frequently stood at 94 degrees, being 4 degrees below the natural temperature of the body. The tongue was often clean, sometimes it was

white. In a great proportion of cases the senses, particularly the sense of hearing, became less acute than natural, when the above symptoms were violent. Eventually the voice became comparatively indistinct. The respiration was frequently hurried and anxious, and before death there was commonly great anguish and agitation. In many instances the intellectual powers appeared to remain to the last little impaired. Coma, or a state of insensibility resembling it, supervened in some cases before death. The duration of the disease in fatal cases varied from 2 to 34 hours among the Malays, Africans, and Indians, and the mean period may be estimated at about from 12 to 24 hours. The European constitution did not yield so rapidly to the fatal effects of the disease as that of the blacks; and the whites seem to suffer under more severe pain and uneasiness, than either the indigenuous or imported blacks.

In a disease which runs so rapid a course, it may be supposed that notwithstanding every care on the part of medical officers, the complaint had sometimes made considerable progress before a patient was admitted into hospital. Among the blacks, some of these cases did not complain of much uneasiness, although the awful progress of the disease was strongly marked by great prostration of strength, a collapsed cadaverous countenance, cold clammy skin, and weak thready pulse. The skin was sometimes not only clammy and cold, but it was soft, and felt more like a wet hide than an animated substance.

When recovery took place, the improvement commonly became apparent before 24 or 30 hours had elapsed from the commencement of the disease. The warmth of the body returned, the pulse rose, the spasms, vomiting, and purging ceased. A state of re-action followed, attended with thirst, furred tongue, hot dry skin, with copious brown or pitchy coloured stools. Recovery did not always follow a stage of re-action. Sometimes the tongue became brown, dry and hard, teeth covered with sordes, the pulse weak, the breathing difficult, accompanied with general listlessness and moaning; insensibility supervened, and death soon followed.

The treatment indicated and adopted was to restore heat to the system, and to excite the action of the heart and arteries. This is not a place to enter into a detail upon the remedial means; suffice it to say that very energetic measures are required. Among the various means employed to recall heat to the system, we found the following the most practicable and

effectual: A blanket was spread over a rattan-bottomed couch and upon this blanket the patient was laid in a state of nudity. He was carefully covered with blankets, which were sometimes dipped in warm water and changed as circumstances required. Under the couch vessels containing hot water were placed over other vessels filled with embers. By this means the patient had all the advantages which could be expected from a permanent steam bath. Tin bottles filled with hot water were applied to the sides and feet. Enemas of warm conjee (rice-water) were sometimes exhibited. These means seemed to be sometimes beneficial, at others, however, no improvement followed. The bodies of a number of the patients seemed to have the power of generating cold, (if I may be allowed to use such an expression), for we could with more ease have raised the temperature of an inanimate body to the natural heat of the human system, than we could that of some of our patients. This phenomenon is no doubt to be attributed to excessive evaporation from the skin. It may be observed that although the skin was cold, the patients complained of internal heat, and also stated that hot applications were hurtful to them. As we became better acquainted with the disease, more dependance was placed on the exhibition of internal stimulants and venesection, and less upon the external application of heat than in the commencement of the disease.

1 With the view of stimulating the extreme vessels of the skin, friction of the body with oil of turpentine were frequently had recourse to, and sometimes flannel cloths dipped in hot water were applied to the scrobiculis cordis, as a vesicatory.

To excite the vascular system, and to accomplish other indications, various agents and means were employed, such as draughts of laudanum, with oil of peppermint, arrack and hot water, (toddy) cordials of various kinds, large doses of calomel in powders, venesection, &c. In the application of these means, medical practitioners must be guided by their own judgment and professional experience.

The disease sometimes supervened with such extreme violence, as apparently to render the employment of remedial means unavailing. In such instances there is often little or no vomiting, purging, or spasms; the nervous power seems to become suddenly exhausted, the skin is insensible to external agents, the stomach to internal stimulants, and death ensued in from one to four hours. I have never seen a man die of this disease under a period of an hour and three quar-

ters, but I am informed by Dr. Daun that he had two cases under his care who expired in a still shorter period; and, what was very remarkable, the two patients stood in the relation of husband and wife, and both died in one morning.

Where the cases were less severe, medical means were decidedly beneficial, and the best evidence I can adduce in support of this opinion is, that I never knew a person recover who had not received medical assistance. This opinion seems also to have been entertained by Mr. Ogilvy, Secretary to the Medical Board, Bombay, for he says, "Of these cases, 1294 sick had been without receiving medicine or medical aid, and there is reason to believe that of these every individual perished."

The Indian Cholera, as it is sometimes called, appears not to be essentially different from cholera as it occurs in this and all other countries. The former disease is distinguished from the common cholera chiefly by its extreme violence, great mortality, and occasionally epidemic existence. Late events have taught us that cholera may be as severe and as general in high latitudes as between the tropics. I consider it, therefore, impossible for a medical practitioner to speak decisively from having seen one or even a few cases of cholera in this country, and to say whether they are precursors of "the epidemic cholera" or not. That the disease is ever propagated by means of personal contact, or by the clothes of the sick, has not, so far as I know, been satisfactorily proved. The quality of contagion was never attributed to the disease in Ceylon, and I believe no where did it occur in greater severity.

I am aware that an attempt has been made to distinguish the ordinary cholera of this country from the "epidemic cholera," by means of the colour or quality of the discharges from the bowels. In the former it is said the discharge is chiefly bile, while in the latter it is stated to bear no trace of bile, but to be colourless and watery. How far is this alleged diagnosis well founded? I am disposed to believe that in all severe cases of cholera, whether it be the cholera of this country or the epidemic cholera, the secretion of bile is either suppressed or the fluid is retained in the gall bladder. Indeed, the exercise of almost all the functions of the body seems to be greatly impaired or suppressed, except that of the mucous membrane of the stomach and intestines, which secretes a large quantity of serous fluid. According to Celsus, the discharge downwards in cholera is "at first like water, after-

wards as though fresh flesh had been washed in it—sometimes black or variegated.” Dr. Mackintosh says, in his *Elements of Pathology, &c.* that in cholera “the discharge from the bowels in this country is generally watery, containing feces very thin and offensive; occasionally the discharge looks like water in which meat has been soaked.” Dr. Pers-ton, surgeon to the 26th regiment, had a case of cholera under his care in Dublin in 1826, which terminated fatally in about thirteen hours. In his report of the case he states that “the matter passed by stool had a dirty grey appearance.”

It would appear that in some of the less violent cases of Indian or epidemic cholera, bile continues to be secreted or discharged. “The bile,” says Mr. Orton, appears in excess only in the mildest cases.” Mr. Curtis makes a similar statement; he says, “The cases which appeared after this were all of a different nature, much less severe, and none turned out fatal. They were all of them combined with bilious accumulations.” Although the discharge from the bowels may not indicate that the Indian cholera is specifically different from common cholera, it is in general a certain mark of the degree of the disease, in whatever country a case may happen. In extremely severe cases there is no bile, and where the symptoms are not violent it is perhaps never absent. This is a highly important distinction, in so far as the practice is concerned, and it ought never to be lost sight of by a practitioner. It is much to be regretted that the three valuable reports upon cholera which were drawn up and compiled by the Secretaries to the Medical Boards of the different Presidencies in India, namely Bengal, Madras, and Bombay, have not been published. They were, it is true, printed, and distributed as presents in India; but I do not think any of them can be purchased. I know that they are not for sale in this country. There must also be some valuable papers on this subject in the depositaries of the army and navy medical departments, which deserve to be published, for the purpose of rendering the information they contain accessible to the medical profession at large. On a topic of such vast importance every source of information should be put in requisition, and the results diffused as widely as possible.



## WARNING TO THE BRITISH PUBLIC,

AGAINST THE ALARMING APPROACH OF THE INDIAN CHOLERA.

By SIR GILBERT BLANE, Bart. F.R.S.

The epithets *contagious* and *infectious* I employ as synonymous; but I avoid the use of both as much as possible, and comprehend them both under the term *communicable*. It is also desirable, with a view to perspicuity, to state, that of the two terms *epidemick* and *endemick*, both denoting diseases of a general and simultaneous prevalence in a great community, I understand by the former (*epidemick*) those which proceed from the exhalations or secretions of a body labouring under the same disease; of this the plague may serve as an example—by the other (*endemick*) is meant a disease which proceeds from the exhalations of the earth; of which intermittent fever, commonly called *ague*, may serve as an example. The want of attention to this simple distinction has given occasion to an incredible amount of unintelligible *jargon*, and multiplied sophistries in the wearisome controversy regarding contagion. I need not add that the *epidemick* alone are contagious, that is, communicable; the other, the *endemick*, never so.

And in order to disentangle the subject from further risk of ambiguity, it is only necessary, in addition to the discriminating character already mentioned, to enumerate a few of the most remarkable peculiarities, particularly those marking its difference from the English cholera, recurring *endemically* in the end of summer and beginning of autumn. The discharges in the Indian disease consist of a liquid resembling thin gruel; in the English disease they are feculent and bilious. The origin and main seat of both is the bowels; and I repeat that after striking a person apparently in good health like lightning, it never quits him till throwing his whole frame, vitals, body, and limbs, into a state of suffering incomparably more violent than the English malady, it destroys life in a few hours, frequently in a single hour or less. If there is any disease known in England, which is in point of suffering comparable to the former, it is the *Itcus* already mentioned. But the most important difference, politically considered, is that the Indian cholera has now, after long discussion and controversy, been admitted to be *communicable*, whereas the English has never been suspected of this.

As it is another peculiarity of this dreadful impending dis-

ease, to require above all others an early and energetic practice ; it is of the last importance, that as many as possible of the community at large, should have some knowledge of what should without a moment's loss of time be put in practice, and the first seizure is so striking that there can be no excuse for delay. It is important to observe that there is a certain characteristic which pervades all the stages of this disease, namely, that there is a notable prostration of the whole powers of life, and as this holds true also of those who are most susceptible, this practice applies to diet as well as medicine ; so that those who can afford it will do well, in order to fortify their constitutions against an attack, to adopt a generous, but perfectly temperate and moderate style of life. In case of an actual attack, the proper medicines to have in readiness for administration are tincture of opium, more commonly known by the name of laudanum, which ought to be given in some warm cordial drink to the amount of about sixty drops, that is, a middle-sized tea-spoonful, with a table-spoonful of spiritous liquor—brandy has been chiefly recommended. This ought to be repeated in two or three hours, by which time medical assistance may probably have arrived. In the mean time a hot bath ought to be prepared, and some hot nourishing broth. The remedies on which most dependance has been placed next to those above-mentioned are calomel, in the doze of twenty grains, and blood-letting. Among the secondary remedies may be mentioned some of the essential oils, such as that of Peppermint and Cajeputa.

---

### SUNDERLAND CHOLERA.

LIKE many towns of quick growth, Sunderland has become too confined for its population ; and those inhabitants who have the power of choice very generally escape from its crowded lanes to the more salubrious heights of Wearmouth. The former parish contains seventeen thousand inhabitants.—The poors-rate is contributed by 750 individuals, so that two-thirds or three-fourths of the population are either actual paupers or considered poor. When this state of things is contemplated, the utter impossibility of doing even what is necessary to the helpless must be admitted ; and where so much of poverty, and so much of wretchedness exist, the gate stands open for the pestilence. In this seat of want, the cholera has made by

far the greatest ravages ; but it has sprung up, at the same moment, in Bishop Wearmouth, on the one side of the river, in Monk Wearmouth on the other side, and in suburbs two miles from Sunderland. The first appearance of the disease has invariably been amongst the wretched and in obscure and filthy situations ; on its second visit, or by prolonged stay, it may probably climb farther up the tree.

At the first, many people were afraid of a contagious tendency, the experience of a week greatly removed their apprehension ; but after farther acquaintance, a more general belief prevails, that under certain circumstances, which are partly inexplicable, it is communicable. It may readily be imagined that for some time after the commencement of an attack there can be no danger in approaching the sufferer, previously in his ordinary health ; the more malignant kind often comes on at one swoop, and some hours must elapse before a healthy body becomes so depraved as to afford an effluvia. After fifteen hours, or after death, the presence of attendants who were not necessary should be avoided. Interment ought to be speedily performed ; and the same precautions resorted to in the management of the linen, the bedding, and the room as in typhus.

The attention of the public has been drawn to the contemplation of a destructive influence after death, by the solemn fact of two or three persons who attended funerals, having been interred themselves the next day. But this is by no means conclusive. The vanity of our country requires, that even in the duty of attending the departed we should observe an etiquette, a fashion in mourning ; and people stand half an hour in a cold grave-yard with their shoes, and in flimsy apparel. Attacks equally sudden and fatal have arisen after wading for coals that float on the margin of the sea ; and amongst women, who from the reeking washing tub have rushed to the clothes-line. Added to this, not one of our medical men has become a victim ; or one of the great number of foreigners and strangers who have inspected the sick. Two hospital nurses, truth must admit, have died of the disease, one of them a woman fearless and indefatigable in the performance of her duties. It is probable that this nurse, the master of the poor-house, and his sister, became predisposed by watching, anxiety, and, in one case, distress of mind.—Moreover, the nurse had for years been subject to cruel spasms of the stomach, said to occasion peculiar susceptibility.

The population of the town of Sunderland, which includes the two parishes of Wearmouth, amounts to 48,000. If we

include villages on the banks of the river, from which, I believe returns have been regularly made, we may take the whole at 50,000. Between the 26th of October and the 18th instant, the number attacked had been 503; deaths, 177; 15 of the 177 in Sunderland poor house, one twelfth of the whole mortality amongst 138 individuals; while in Bishop Wearmouth house, a lofty building, in a healthy situation, not one pauper had been attacked.

It is not unlikely that all the deaths have been of spasmodic cholera, or that so many should have recovered of the disease; still there is some propriety in Dr. Gibson's remark—so much railed against at Newcastle—of “making the net sufficiently wide to catch all the fish,” for at Sunderland it was found simple diarrhœa sometimes terminated in malignant cholera, and, unquestionably, what we termed the “complaint that's stirring” in August was a type of the destructive malady. If we acknowledge a relationship between these diseases, we find indications of the storm in the month of July. In August, I believe before the Archangel vessels had returned to this port, I have instanced a marked case. We find the disease proceeding up to the present date with more or less violence, through weather not greatly varied in temperature, but much in kind. July, August, and September were clear, and the grain and potato crops bountifully matured, no trifling matter on the approach of the cholera. From September to the present, there has been extraordinary mildness for the season; a freedom from tempests, which often visit this coast in the last quarter of the year; and a more than ordinary humidity. The wind has generally been south during the day, and veered towards the west at night. Between the 15th and 22d of November, we had smart frost and some snow. There was no time for this weather to check the cholera; a cold temperature possesses much power, and some feeble people, no doubt, would die in consequence of the abrupt change.

In Sunderland 12 hours have almost invariably elapsed between the attack and death, unless the cholera was preceded by diarrhœa; and where 24 hours have succeeded the violent shock, without relief, consecutive putting on typhoid appearances has often supervened. In India spasm precedes, in this town (I speak subject to correction) it generally follows vomiting. But spasm, or sickness, or blueness is not always attendant on fatal cholera.

From what has been said, may it not be inferred, that the influence, atmospheric or otherwise, which produces the disease, has existed in the northern corner of the empire for

many months ; and that as soon as the season of privation amongst the poor comes, its malignity was exercised? No doubt, in some cases distress was as great in summer ; but then there was the walk in the refreshing air, the open lattice and the open door. This is a season during which not the poor only feel a change of constitution, but most delicate people droop in winter.

---

## SELECTION OF CASES AND REPORTS ON CHOLERA IN THE NORTH OF ENGLAND,

*Made to the Central Board of Health.*

There has for some time existed a general feeling on the part of the public, and the members of the medical profession, that something more should be made known to them than the mere numerical returns of the persons seized with cholera, together with the general results. The truth is, however, that very great difficulty has been experienced in getting any detailed account of the cases—a circumstance partly owing to the overwhelming extent to which the time of those who saw much of the disease, was necessarily occupied in ministering to the sick, and partly owing to the desire which many possess of choosing their own time and manner of giving publicity to their observations. We believe it to be the intention of the Central Board of Health themselves, to publish the cases which have been transmitted to them ; but, meantime, we have been permitted to select those which appeared to us of most importance, with a view of laying them before our readers. We have placed them in the order of their dates, prefixing a heading to each, indicative of the chief points it illustrates. Generally speaking, the evidence we subjoin is calculated to shew the inefficacy of the most powerful stimulants, and therefore the necessity of seeking for some other mode of rousing the circulation ; probably, also, sufficient encouragement for a farther trial of stimulating emetics may be found, particularly in the observations of Dr. Lindsey. While we cannot absolve all the medical men of Sunderland from the charge of having practised concealment, yet it is due to those who have followed a different line of conduct, and constituted honourable exceptions, to give publicity to their names, that they may obtain the credit which so justly belongs to them.

No one at all acquainted with the difficulties against which the Boards of Health in London—both the former and the present—have had to contend, can for a moment attribute to them want of zeal or activity in the public service.

CASE I.

TREATMENT: *Effervescing Draughts—Calomel and Opium—Brandy and Wine—External Warmth—Blister.*—RESULT: *Death in six days.*

William Sproat, aged 60 years, a keelman employed at the pier, had been for a week or ten days labouring under diarrhoea, but he was not so ill as to be obliged to relinquish his employment. For some time previously, he had been in a declining state of health. On Wednesday morning, October 16th, he became worse, and was unable to continue his work. On Thursday evening, Oct. 20th, at 6 o'clock, I was called to him, and found him vomiting and purging, but with not a symptom of collapse. The pulse was natural in force and frequency; the skin of the natural temperature; tongue moist, and slightly covered with a white fur; the papillæ at the tip and edges not red or raised; no thirst, and in good spirits; the stools were rather light coloured, but feculent, and neither thin nor frothy. Ordered the effervescing mixture. On Friday, Oct. 21st, he was rather better and sitting up at breakfast; pulse, temperature and tongue as before, vomiting only when fluids were taken; stools as before, quite thick, though light-coloured. To have sago and wine, and arrow-root pudding for common diet. At the evening visit he was better. Ordered a bolus of calomel and opium at bed-time, and a table spoonful of castor oil in the morning. On Saturday, Oct. 22d. he was greatly improved; the vomiting had entirely ceased, and he had only two stools during the night; the pulse was natural. I made examination of the abdomen, and not the slightest uneasiness was produced by pressure. At this time I considered my patient convalescent, and gave strict orders as to his diet, directing that nothing but farinaceous food should be given; yet, notwithstanding these orders, I found that he had had toasted cheese for supper on the preceding night after my visit; in spite of my injunctions as to diet, he had a mutton chop for dinner, and after dinner he went to the river to his keel; he was absent about twenty minutes. On his return home about 4 o'clock he was taken very ill; had a severe shivering fit, with giddiness, cramp of the stomach, and violent vomiting and purging. Although he

was in this alarming state, his friends did not send for me until Saturday morning at 7 o'clock. I found him evidently sinking; pulse almost imperceptible; extremities cold; skin dry; eyes sunk; lips blue; features shrunk; he spoke in whispers; violent vomiting and purging; cramps of the calves of the legs, and complete prostration of strength. At this time the tongue was dry and warm, but it shortly afterwards became dry, brown, and chilled; the urine was suppressed. I had not an opportunity of examining the stools, but they were described to me as being "like meal washings, and horribly offensive." Ordered brandy and wine, ad libitum, a blister to the epigastrium, hot bricks to the feet, and to be wrapped in warm blankets. On my next visit I found the blister had not risen, and had been removed. I proposed a mustard cataplasm to the abdomen, but this was objected to, and not applied; I then gave him an enema, composed of starch. Two hours afterwards I visited him again, and found that slight reaction had taken place; the pulse was stronger, his hands were warm, countenance more natural, and he expressed himself as being better, but the other symptoms above mentioned continued: ordered to continue the stimulants and hot applications, to apply a blister to the epigastrium, and to have the enema repeated. On the following morning, Oct. 24th, he was quite collapsed, with aggravation of all the symptoms, except the vomiting, which had entirely ceased; at this time the stools passed involuntarily.

Ordered to continue the stimulants and hot applications.

Towards the evening the starch enema was repeated without the laudanum. On Tuesday, October 25, he was less collapsed; the countenance more natural; the blueness of the lips had disappeared; the vomiting had ceased, but the purging still continued, although not so violent as before; the pulse was nearly imperceptible at the wrist, and the extremities were cold; the face and trunk were warm; the spasms of the legs still continued; he expressed himself as being more composed.

Ordered a table spoonful of brandy to be given every ten or fifteen minutes, and a pill, composed of calomel, every three hours.

Towards the evening he became sleepy, though restless; the pupil contracted freely on presenting a strong light; at this time the purging had entirely ceased, as well as the vomiting, but the other symptoms continued. On Wednesday morning, October 26, he was much weaker, the pulse scarce-

ly vibrating under the finger ; countenance quite shrunk ; eyes sunk ; lips blue, as well as the skin of the lower extremities ; the nails were livid ; he was comatose. At 12 o'clock noon he died.

(Signed) HENRY HOLMES.

82, High Street, Oct. 27, 1831.

This case was drawn up from memory, on the day after the death of the patient. H. H.

I visited the above named patient two or three times, and have reason to believe that the whole statement is perfectly correct. (Signed) W. REID CLANNY, M D.

#### CASE II.

TREATMENT: *Brandy and Laudanum—External Heat—Calomel—Ammonia—Ol. Terebinth.—Sulphuric Æther.—*  
 RESULT: *Death in nine hours and a half.—Postmortem Appearances.*

At two o'clock, P. M. on the 26th inst. I received an urgent request to visit Robert Jordan, aged 56, a labourer, of temperate habits, and of previous good health, residing in a small and dirty room in the New Road, the floor of which was below the level of the street. I found him in bed with a pulse  $8\frac{1}{2}$ , and almost imperceptible ; his breathing laborious, skin cold and clammy, sunk eye, contracted countenance, livid lip, tongue colder than natural, but moist and covered with a whitish fur ; abdomen flaccid, uncorrugated, capable of bearing the greatest pressure without pain to the patient, and the integuments of the fingers slightly corrugated and softened. From the nature of his employment, his person was covered with coal-dust, which prevented me from determining the colour of his skin. To all questions put to himself I could gain no further answer than "Yes," or "No" His wife informed me that the attack had commenced about a quarter past one, P. M. with pains in the stomach and lower part of the bowels, immediately followed by an evacuation by stool. From this he obtained no relief, and a second evacuation soon took place. He now began to suffer from cramps in the feet and legs, and with coldness of the surface ; for which his wife administered half a glass of brandy, which was immediately rejected. This was the only instance of vomiting which occurred during the course of the disease. The two evacuations above alluded to were not seen by me, but were described as being scanty in



quantity, of greenish colour, and mixed with slime. A little before I arrived he passed about a pint of urine, and had a third and last evacuation by stool. These, contained within the same utensil, were shown to me; the former being pale and clear, and the latter having the appearance of oatmeal gruel. On my first visit I stayed with him about half an hour; during which time he suffered much from cramps in the toes, legs, arms, and fingers, and seemed to experience much relief from friction by his attendants. I gave him a second glass of brandy, with thirty-five drops of Tr. Opil, and wrapped him in a heated blanket. Heated bricks and bottles of hot water were soon afterwards applied to the feet, hands, epigastrium, and sides of the chest. Re-action not coming on, I gave him a second glass of brandy, with fifteen more drops of Tr. Opil, which appeared to produce considerable relief in the spasms. At three o'clock I saw him again in conjunction with Dr. Bulman, and, at his suggestion, ten grains of calomel and two of opium were given. Still the same.

Half-past three, *r. m.* visited again, with Dr. Wightman, and remained with him for an hour. No alteration.

Hot applications and brandy frequently administered in small doses. At half-past four, Dr. M'Whirter joined us. By his advice bladders of hot water were applied to the head and other parts of the body, and at a quarter past five a draught, consisting of Spt. Am. ar. Spt. Terebinth. Spt. Æth. Sulph. of each one drachm was given. An enema, containing one drachm of Spt. Terebinth, was administered, and a liniment of equal parts of Ol. Oliv. Aq. Ammon. Spt. Terebinth, was well rubbed along the course of the spine. I continued to visit him every half hour, and, during the evening, two additional enemata, and a second stimulating draught (only a part of which was swallowed) were administered. At eight, *r. m.* his pulse could hardly be counted. At a quarter past ten, *r. m.* all power of deglutition was lost; and at eleven *r. m.* nine hours and a half after the commencement of the attack, he expired.

Having mentioned above his having passed a pint of urine previous to my first visit, it is important to observe that not a drop was subsequently voided. Notwithstanding the coldness of the surface, it is worthy of remark, no shiverings were observed. During the whole period he seemed to experience no suffering of thirst, and his senses continued unimpaired to the latest moment. He had been occasionally subject to severe

cramps of the legs. From the minutest inquiry no traces of infection could be discovered.

*Appearances on dissection, 21 hours after death, in the presence of Drs. M'Whirter, Whiteman, White, Mr. Greenhow, and others.* The only remarkable appearances on viewing the body were—the countenance flaccid and natural; the tendons on the front of the ankle joint very prominent. Omentum and peritoneal covering of the intestines, much injected and florid; peritoneum shining and moist; no adhesions between the intestines. Intestines not much distended; rather less so than usual; no appearance of fæces or bile in them. Small intestines containing a quantity of reddish viscid fluid, resembling raspberry cream in colour and consistence; the mucous membrane pale, and exhibiting a well-marked contrast with the red and injected appearance of that of the small intestines. The stomach externally pale, and considerably distended with a fluid of a dark reddish hue; the mucous membrane vascular and red, and a portion near the cardiac dark-coloured. The surface of the liver mottled with whitish spots; the gall bladder much distended with dark-coloured bile, extending beyond the margin of the liver; gall ducts pervious. The urinary bladder contained about an ounce of urine, which was somewhat turbid; the mucous membrane injected; the spleen was small, flaccid, and corrugated on the surface; the pancreas was natural; the kidneys exhibited no remarkable appearance; the pericardium contained two ounces of a red-coloured serum. The ventricles were empty; the right auricle contained black blood; the vena cava contained dark fluid blood; the lungs were very much collapsed within the chest, and exhibited a *remarkably black* appearance, and contained a quantity of black blood; they were, nevertheless, lighter than water. There was no appearance of pleuritic inflammation, nor were there any morbid adhesions in the chest. An examination of the head or spine was not permitted by the friends.

CHARLES DAVISON.

---

Maclure, Printer, 56, Trongate.











