

**Practical observations on the prevailing epidemic called cholera, ... Pt. 1 /
by James Keir.**

Contributors

Keir, James.
Royal College of Physicians of Edinburgh

Publication/Creation

Edinburgh : W.F. Watson, 1848.

Persistent URL

<https://wellcomecollection.org/works/pjhg3bkc>

Provider

Royal College of Physicians Edinburgh

License and attribution

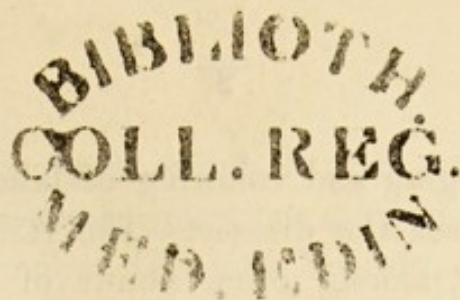
This material has been provided by This material has been provided by the Royal College of Physicians of Edinburgh. The original may be consulted at the Royal College of Physicians of Edinburgh. where the originals may be consulted.

This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.



Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>



PRACTICAL OBSERVATIONS

ON

THE PREVAILING EPIDEMIC

CALLED

CHOLERA.

At a time when there is so strong reason to fear that our country is on the verge of another visitation of the disease improperly called Asiatic or Epidemic Cholera, it may be of some use to the Public in general, and particularly to the more humble classes of society, to point out, and to endeavour to re-impress on the minds of those whom it may concern, the nature of the disease to which the community is likely to be exposed, and the precautionary and preventive method which experience and common sense has taught us during a former visitation, to be the means under the Divine permission, most likely to enable those who may be unconsciously exposed to the action of its cause, to repel and ward off its influence, or to struggle against its attack.

I have said that the disease on which I am now writing has been *improperly* called Asiatic or Epidemic Cholera, because, in the ordinary disease of this country, and of Europe generally, or in Cholera Morbus, as it appears first to have been called by our celebrated Sydenham, one of the most prominent symptoms is, a very unusual secretion of bile, or choler, which being poured out by the gall ducts into the intestines, and from thence pumped up into the stomach,

produces the purging and vomiting of bilious-coloured fluid which characterises the disease. The Asiatic or Epidemic disease however, among other points of difference, when fairly formed, is characterised by an almost total want of bile or choler in the fluids discharged, and so frequently and uniformly is this the case, that the practitioners of India, during the prevalence of the epidemic, compared the appearance of the evacuations to *Congee* or rice water. The disease has been aptly named by my friend Sir James Wylie, the *Αχολή* morbus (the bileless disease). The presence then of an unusual quantity of bile in the alimentary canal in Cholera Morbus or European Cholera, and its generally total absence in the first periods of the Asiatic type of disease, independent of other points of difference, constitutes a very essential and practical one between those two forms of disease, seeing that the state of the body, and particularly of the largest glandular secreting organ the liver, is essentially different in each, and that therefore, there ought to be a considerable difference in their medical treatment. In the one there is a superabundant secretion and evacuation of bile, in the other this secretion, which in due quantity and quality is absolutely necessary to the enjoyment of good health, is nearly or entirely suspended, or at least is hardly transmitted into the alimentary canal: it will not be difficult then for even those the least accustomed to think on medical subjects, or acquainted with the opinions of medical men on these matters, to comprehend, that these two forms of disease must be treated differently.

It would be irrelevant in this place, and foreign to my intention in writing these sheets, to enter more deeply into the above subject, but I may refer those who are desirous of being more fully acquainted with my opinions on this and on other points not treated of here, to my Treatise on Cholera, containing my experience of the epidemic disease known under that name, as it prevailed in the city of Moscow in autumn 1830, and winter 1831.—Edinburgh 1832; to my letter on the appearance of the disease in that city in the Edinburgh Medical and Surgical Journal, April 1831, p. 435;

to extracts from a report which I drew up in Moscow by desire, and in answer to questions proposed by the Lords of the Privy Council of His late Majesty, and published in the Report of the English Board of Health, on the disease called in India, Spasmodic Cholera, in 1831; to the supplement Cholera number of the Edinburgh Medical and Surgical Journal 1832; and to several other writers on the subject of Cholera who have referred to my writings on this disease at its former prevalence in this country in 1832.

On the subject of the cause of the epidemic I do not intend here to say much. It is still very obscure—quite as much so as that of the cause of the potato rot, with which it may possibly have some connection, and what we do know about it is little more than mere conjecture. There is some probability, however, for the opinion that the disease is induced by some deleterious vapour or gas,* perhaps proceeding from the bowels of the earth, which mixing with our atmosphere and applied to the body, or inhaled into the lungs, exerts its deleterious influence on the blood and vital organs, sometimes so strongly as to prove almost instantly fatal, in others at various intervals of time.† “When the disease terminated fatally in its first period, the powers of nature sunk under the severity of the attack, the vomiting and purging became less frequent or ceased, the cramps disappeared, the body was bathed in a clammy sweat, the respiration became more irregular, and death sometimes with convulsions closed the scene. In this form of the disease *death took place at various*

* Some observations lately made on changes in the magnetic state of the atmosphere, when coupled with Professor Reuss's (formerly of the Imperial Academy of Medicine and Surgery, and of the University of Moscow,) ingenious ideas on the connection and effect of atmospheric electricity on the venous circulation, and with some crude notions of my own on the influence and connection of electro-magnetism with some of the functions of the brain and nervous system, would lead me to suppose that these agencies may somehow or other be connected with the evolution of the epidemic. On this subject, however, I can say nothing more at present.

† Treatise on Cholera referred to above.

intervals of time, seldom, I think, longer than ninety-six hours from the beginning of the disease."

All past experience has proved, that such agencies or causes which have a tendency to weaken or depress the vital powers, such as a want of a sufficiency of wholesome food, insufficient clothing;* long continued cold, or cold with moisture applied to the body; want of proper protection of the feet and hands from the depressing effects of long continued cold with moisture, without exercise; cold, damp, low built dwellings, or cellars, particularly when situated in the neighbourhood of water, either running or stagnant; want of a sufficiency of fuel in cold weather; the depressing passions of the mind, such as fear of the disease, grief, and anxiety, as also the passion of anger, which, though exciting in its primary effects on the system, is soon followed by consequent depression; intemperance of all sorts, and especially *gluttony* and *drunkenness*; the presence of chronic disease, such as hardness and enlargement of the liver or spleen, internal tumours pressing on large blood-vessels and obstructing the free and natural circulation of the blood; a want of due balance of the circulation of the blood, between the arterial and venous systems; a weakened and imperfect state of the functions of the stomach and other organs concerned in the process of digestion, and morbid sensitiveness of the alimentary canal in general; finally, all causes which tend to derange the natural action of the digestive organs, whether directly acting on the alimentary canal and surface of the body, or proceeding from sympathetic connection brought into action by some irritating process set up in some other part of the system; want of daily natural repose or sleep,

* At this season of the year, the population in general should clothe themselves more warmly than many of them have probably done during the warmer months of the year. Woollen stockings and under clothes should take the place of cotton and linen, and in cold weather at least, a warm upper outside dress should be worn, and seldom laid aside; and thick soled boots should be used, and in wet weather the vulcanised India-rubber galosh with a leather sole will be found a very useful and valuable, and comfortable addition. In case of getting wet, a change of dress should be made immediately on reaching home.

all singly, or combined, predispose to an attack of the epidemic, and prove occasionally existing causes of the disease.

When, therefore, the population of any town or village is threatened with a visitation of this scourge, the natural question by them is, what ought we to do to prevent our being affected by the disease? This naturally leads me to say something on the mode of its propagation and communication. Into this subject, however, I do not mean now to enter minutely, but merely to say, that although I cannot convince myself, judging by past experience, that this disease is commonly communicated by actual contact from a person affected to another apparently not affected, still my experience has tended to shew, that during the prevalence of the epidemic, under *certain circumstances*, the disease *may* be communicated from the sick to the not affected, and therefore, that all *unnecessary* communication with the sick should be avoided; at the same time, while I recommend attention to this remark, I think proper to add, writing from experience, that in the case of a threatened visitation of this disease, every one in his proper sphere, place, and vocation, is called upon to do his duty, and to the utmost of his power to lend his assistance to those that need it; and in order to do so purposely, and with good effect, he himself should be prepared in every way, both mentally and bodily, for the worst; he should present a bold front to the disease, and resigned to the will of Providence, calmly and quietly go through his duty, living regularly and moderately, but keeping up his natural energy and activity, by a sufficient use of plain food taken at his usual time of meals;* nor is there any reason

* Treatise, Sect. XI. *On Prophylactic (precautionary) Diet.* Much error appears to me to have prevailed here (at Moscow) on the subject of diet, as connected with prophylactic precautions. The use of fruit was nearly proscribed, although I cannot see why, in moderation, it should not have been used; nor is there any good reason why people under such circumstances should live so abstemiously, as some seemed to think it necessary they should do. On the contrary, in a disease where all depressing causes so evidently favour the attack, next to the due re-

why those who are accustomed to it should change their usual habits as to the use of wine, or other strong drink and fermented liquors, provided they *only use*, but do not *abuse* their use; some articles of food had better altogether be avoided, such as raw vegetables and unripe fruit, melons, cucumbers, nuts of all sorts, rich dishes, salmon, swine's flesh in every form, and pastry; the use of butter in some constitutions is doubtful, and, with those affected with morbid sensitiveness of stomach, is decidedly hurtful, and should be altogether avoided, and great moderation in the use of coffee, tea, and sugar carefully observed. In these circumstances, there is no good to be got, but much harm, by *fearing* the disease; and of the predisposing action of this passion to induce it, combined with the efficient cause, I have met with some very striking examples in a former visitation of the epidemic. Such as have it in their power should remove from infected localities to the country, or to the highest ground and purest air they can find; and in every case where a poor person is affected, and who is without the means of procuring such advantages, he should, after the exhibition of the first medical means which it may be found absolutely necessary to employ, without a moment's delay, on the spot where he is taken ill, be immediately transported to an hospital or house previously prepared for the treatment of this disease, the means of transport being provided by the public authorities; for it must be evident to every one who has had

gulation of the mind, the supporting the body by a sufficiency of good nourishing food, appears to be one of the surest means of prevention."

"I believe much good to have been done by the charitable distribution of *food*, &c., to the lower classes, which was so properly had recourse to here, (Moscow), and elsewhere, during the epidemic, and that the mortality was considerably reduced by the removal of the sick and poor from their infected dwellings to the temporary hospitals and other charitable establishments. But while I recommend a sufficiency of plain wholesome food as a useful prophylactic, I must recall attention to what I have before said on errors in diet, both as exciting causes of the disease, and of relapse; excepting from such, or from getting cold, I have met with no other cause of relapse, and have seen no case of second attack.

any experience in treating the poor when affected with this disease, that the due administration of medical means is impracticable in their small, badly ventilated, and confined dwellings; besides, when the disease once establishes itself in a thickly populated locality, the number of medical men in any one place become insufficient for the service of so many patients; as according to Sydenham's expression when describing the Cholera Morbus, "*facto quasi agmine vel catervatim incidunt*," (numbers are taken ill at the same time.)

The symptoms which very generally precede and accompany an attack of the epidemic are the following:—"The complaint generally began with some sensation of feebleness and langour, succeeded either by a sense of weight and uneasiness, sometimes of pain at the (epigastrium) pit of the stomach, or uneasiness of the head, with vertigo, (giddiness), sometimes with ringing in the ears. These symptoms were soon followed by purging, nausea, and vomiting, and very frequently by cramps in the muscles moving the toes, feet, and legs: the purging and vomiting were sometimes preceded by unusual flatulence of the bowels, or the disease in the form of *diarrhœa*, would hang about the patient for several days, without any very marked symptoms, and then, if not attended to, put on the usual form of the disease: sometimes the patient complained of pain in different parts of the belly and extremities." "*Progress of the symptoms*—The contents of the stomach and bowels were first thrown off, and now and then the evacuations were tinged with a small proportion of greenish bile; but generally they soon became nearly colourless, or resembled a decoction of rice or barley, occasionally containing a white flaky matter, or they looked like whey. The purging and vomiting recurred frequently, several times in the course of an hour, and seemed in general to be attended with but little effort or tenesmus."*

As my chief view in writing these pages, is to put into the hands of the public the means of forming a judgment of the nature of the epidemic, so as to be able to understand the

use of the preventive means, and to apply the primary domestic treatment on its first attack, till medical advice can be procured : should some, or most of these symptoms above-mentioned occur to any one, and particularly, should the evacuations be colourless, or white, like rice and water, attended with coldness of the extremities, and weakness * or languor, paleness, and shrinking of the features, and feebleness of the pulse, not a *moment* is to be lost, but medical assistance sought for *immediately* ; and till that can be procured, the patient should have every thing tight in his dress removed, and being clothed in a warm dressing-gown, or great-coat, or wrapped up in warmed blankets, his legs, as far up as the lower part of the thighs, should be immersed in a tub of hot water of a temperature as high as he can well bear ; and to render the water more stimulating, a large tea-cupful, or more, of the powder of mustard seed, should be well diffused through it, and the water itself well salted with common salt ; while the patient is subjected to this bath, he ought to be well covered with warm blankets, and his hands and arms, if disposed to be cold, rubbed with warm flannels, on which may be sprinkled some powder of mustard seed, mixed with a portion of finely powdered salt ; a small quantity of brandy, or some warm brandy grog without sugar, should be given to the patient ; and, as the stomach at this time does not easily retain any thing, the bath should be employed for some little time before any thing is given by the mouth, and when given, both the brandy and grog should be taken in small portions at a time, and repeated from time to time, according to circumstances, and the feelings of the patient ; when little or no vomiting is present, which sometimes happens, earlier recourse may be had to the brandy or grog ; if brandy is not at hand, or cannot soon be procured, recourse may be had to whisky. If a slipper-bath is at hand, it may be more advantageous to use the hot bath in this way, but the whole body up to the chin should be im-

* During the continuance of the present affection, any one affected with looseness of bowels should, without delay, consult a medical practitioner.

mersed under the hot water, a sponge or quadrupled towel immersed in the water, then well wrung, should be applied to the uncovered head, a dry cloth or towel placed over the wet one, to prevent evaporation and cooling as long as possible, a high temperature of the water should be kept up, by changing part of it from time to time, and replacing it by newly heated water, adding a fresh portion of common salt and mustard powder.

On the use of different baths, I have remarked in my Treatise on Cholera, Sect. vii. page 115.—“No time should now be lost in getting the patient into a *hot* bath of salted water, (or hot sea water, if it can be got,) the heat of which should be gradually raised from about 30° to 35° of Reaumur, or the patient may be first put into the bath, and then bled in it. Where the circulation on the surface has become languid, and the temperature diminished, immediate means should be employed to restore them, by promoting the flow of blood through the capillary vessels of the surface, by stimulating frictions, the warm bath of salt water, or water with a proportion of ammonia, the vapour bath, by means of the vapour of water passing through stimulating aromatic herbs, or the vapour of vinegar, or spirits. Perhaps a warm air bath, as wanting moisture, which disposes to relaxation of the surface, and is not desirable in the first period of the disease, (unless under the circumstances mentioned below,) might be preferable.” Some gentlemen, I find, on the present occasion, object to the use of baths altogether, on the ground that their use fatigues the patient too much, and not unfrequently fails to restore permanently the natural heat of the surface. On this subject I had farther remarked. (Page as above.) Repeated observation by different practitioners has proved the utility of sweating, especially in the beginning of the disease, whenever we are able to excite it, which, when the disease has made some progress, is done with difficulty; for this purpose the warm bath, or warm salt water bath, or vapour bath, is certainly one of the best means, as it is one of the first remedies to be used. The public should be generally instructed, that till the arrival of the practitioner, the

patient would do well to use this remedy, the *timely use* of which may save life, and render farther treatment less necessary, or more successful. Should a bath not be immediately at hand, copious sweating may frequently be induced, by putting the legs up to the knees into a tub nearly filled with hot water, strongly salted with common salt, to which may be added two common tea-cupsful of powdered mustard seed (flour of mustard.) The patient being covered with woollen blankets, should now drink some warm Madeira-negus, spiced with scraped nutmeg, or some brandy-punch; or, instead of the foot-bath, good table vinegar may be thrown on heated bricks, and the patient exposed to the vapour; the addition of a bunch of mint or peppermint makes the vapour more agreeable; or the patient may be exposed to the vapour of spirits." *

"Although in the further progress of the disease, I have undoubtedly seen both the warm-bath, the warm salt-water-bath, and vapour-bath, prove useful in various ways, still there are many severe cases, in which it may justly be surmised, that notwithstanding every exertion, by their use the heat and circulation of the surface may not be restored, and that they may do more harm by the fatigue in removing the patient, than otherwise they do good."

"In these untoward cases, I think it probable, that we might derive considerable benefit by placing the patient in a bed or box, so contrived, as to expose the surface of the body, excepting the head, to the action of heated-air, or air impregnated with the fumes of some agreeable stimulating perfume, which would have the double advantage of avoiding

* One of the medical assistants attached to Count Shèrèmetieff's Hospital at Moscow, employed the vapour of vinegar with good effect, by heating some small cannon balls, which he placed in a brass dish or pan, and holding a bunch of mint or peppermint in his hand above, and at some little distance from the balls, poured vinegar through the mint on the balls; in this state he placed the dish in the patient's bed, and kept the bed-clothes from coming down on the dish, by placing over it an arched wooden cradle, used in that, and other hospitals, for defending fractured or amputated limbs from external injury; it seemed to me to be a very good way of using this remedy.

the fatigue by moving the patient, and the disadvantage of moisture, which, when considerable collapse has taken place, I think, by the relaxation which it occasions, is rather hurtful than useful. In the circumstances of which I am now treating, it is not relaxation, but excitement of the capillary circulation on the surface which is necessary, and if this can be effected by stimuli, every one must acknowledge, that none more powerful and universal, or more quick in its effects than heat can be applied to the human frame." But this is but a preliminary and auxiliary part of the cure, which, simultaneously with the above, must be carried on according with the principles I have recommended in my Treatise on Cholera.

"I frequently found great difficulty in persuading the patients, especially in the more advanced cases, to get into the bath. This repugnance seemed to arise, either from the spasmodic contraction of the toes, or a morbid sensibility of the feet, so that touching the warm water seemed to excite disagreeable feelings. They generally, however, were relieved for a time at least, when they had lain a while in the bath."

The essential nature of the epidemic in its first period, and with that alone we have to do at present, is, from the agency of its cause or causes, such, as to be attended with great prostration of the natural energy of the innate powers by which life is maintained, which in some occasions comes on so suddenly, that cases have occurred, where the person attacked has fallen down in the public street, as if knocked down by a violent blow on the head, or struck with lightning; such cases, however, are not common, but tend to throw some light on the nature of this affection, by showing us, that in them the causes of the disease, acting as it were almost instantaneously on the vital powers, had been sufficiently powerful, so to overpower the brain, as nearly to deprive it of its natural command over the moving powers of the body; hence losing the power of balancing himself, the person attacked falls to the ground.

"From an early period of the disease, there was a marked failure in the natural power of the circulation, and in almost all the more severe cases, the pulse was not to be felt at the

wrist ; a sense of weight or oppression about the chest, with jactitation, were frequent symptoms, and sometimes a palpitation of the heart ; the secretion of urine seemed to be suppressed, and there was little or none passed during the first period of the disease ; and although bile was generally found in the gall bladder of those whose bodies were opened, still it rarely appeared in the evacuations of the sick, or was met with in the alimentary canal after death. Indeed it was sufficiently evident, that the system in the first period was not in a state to perform secretion. The evacuations from the alimentary canal, in the beginning of the disease, do not appear to me to be the product of secretion, but of this we shall say something more hereafter." *

I have entered thus far medically into the above, in order that the unprofessional reader may the better comprehend the reason of the employment of the domestic remedies I recommend, and thereby be better able to use them properly ; and, for the same reason I continue to observe, that the consequence of the action of the cause or causes of this disease, or rather, perhaps, more strictly speaking, of this disordered action of the frame, and, as is well observed in Mr, now Dr Searle's Extracts from the Report of the Madras Medical Board, the epidemic has more the appearance of " a general suspension of the natural, and gradual cessation of the vital functions," (the usual consequences of poison), " than an establishment of morbid actions," there is a strong tendency to an unnatural accumulation of blood, particularly in the veins of the internal parts of the body, by which, in consequence of the feeble action of the brain and heart, the circulation is carried on with languor and difficulty, and the natural temperature of the body in some cases reduced as low as ten degrees of Reaumur's thermometer, below its natural standard, and I do not doubt, in advanced and very severe examples, a good deal lower ; if the disease increases in degree, the pulse ceases to be felt in the extremities, the

* Treatise on Cholera, p. 60. † Idem. p. 83-4, and Dr Searle's work on Cholera, p. 13. 1830.

feeling of cold by the hand of a healthy person, increases, different parts of the body put on a blue colour, and the blood in the extreme parts seems to stagnate and coagulate, and the natural evolution of heat, of course, is nearly suspended—in fact, the parts of the body so affected may be considered as already passing from life into death; even in this state, the patient must not be left to his fate, nor all hope of his ultimate recovery given up, but the case is now become a very serious one, and his recovery will much depend on the promptitude and energy with which suitable and remedial means are employed, and on the accuracy with which the practitioner's prescriptions and advice are fulfilled, as well as on his own practical acumen and tact, with the aid of former experience, if any, in treating a similar affection. The conduct of the case will now, of course, chiefly depend on the medical attendant, but half the cure at least will be due to the kind and Christian care of the friends and attendants on the sick. These are the cases where the inestimable attentions and care of *Sœurs de Charité* are most wanted, and where they will prove of the most essential service. Unluckily, there are few establishments for training such in this country, where they are much wanted, and there is no necessity that they should form an appendix to the Romish Church alone. Though such is the case, thank God we have many leal and kind-hearted men and women, ever ready to extend the arm of aid to those in distress, and, who I doubt not, have both moral courage, and good-will enough, to lend a hand in aid on the present occasion, should unfortunately the state of public health require their valuable services. But to return,—The treatment of the symptom which has been called the premonitory diarrhœa, I think, is a matter of some nicety, more so, it appears to me, than is sometimes supposed; on this subject I have said, Sect. X., *Cause of the water purging and vomiting, and in what light these symptoms are to be regarded.*

“I consider the watery purging and vomiting to be the consequence of the great accumulation of blood in the internal parts, and an effort of nature to relieve herself from

the oppression thus induced ; wherefore, these symptoms are to be regarded as more or less *salutary*, and therefore, are not to be *suddenly, or hastily checked*, supposing this to be in our power, by large doses of opium. If these discharges did not exist, it is not improbable, that either serous effusion would take place, into some other cavity, or the patient would die apoplectic or convulsed. One case of Cholera sicca (Hippocrates, Galen, and Sydenham), has been noticed here, (Moscow), where the patient was affected with dreadful convulsions, requiring the power of several men to restrain him, and was thrown into the air from his bed by their violence. On the other hand, it is necessary, that the practitioner should endeavour to *moderate* the purging and vomiting, otherwise nature, exhausted by the efforts which she has made, may sink never to rise again. This is a point of no mean importance in the treatment of this disease." But medicine is like a double-edged sword, if you handle it rightly you may both keep off your enemy and defend yourself ; but if you use it improperly, you are almost certain, as in taking the sword by the blade, to suffer by your imprudence. I am no advocate for the public using any medicine without the advice of a medical man, and I abhor quackery of all sorts ; long experience has brought to my knowledge not a few cases, where serious mischief has followed the indiscreet and improper use of medicine ; but on the present occasion, a point must be stretched, and active enough practice employed in the beginning of the disease, for a time at least, by the unprofessional, though they may not have had the honour of being capped and robed in a doctor's bonnet and gown, nor taken the oath Hippocratic ; seeing, that cases of the epidemic may easily occur in situations, and under circumstances, where no medical assistance can be got. To such more particularly the following observations and advice are applicable.

The question then recurs, how is the case to be managed by the bystanders, at this period of the complaint, when apparently simple diarrhoea is the principal or perhaps the only prominent symptom, and where in other respects the patient seems to enjoy his usual health ? I answer, do not get

alarmed *unnecessarily*, or suppose, that because the bowels are unusually loose, the person so affected labours under a serious attack of the epidemic, which, when it prevails, affects different persons differently. “P. 99 of Treatise, Sec. 1. *Epidemic nature of the disease generally admitted.* The explanation of the cause and propagation of epidemics has, and will probably always continue to be, a matter of difficulty and dispute; the reason of which is sufficiently obvious, since neither in general is cognisable by our senses. A wide field for conjecture is therefore opened. In regard to the disease of which we treat, its epidemic nature, I believe, is not disputed. During the prevalence of the disease few enjoyed perfect health, some complained of uneasiness in the head, others of cramps in the lower extremities, or of unusual flatulence. I had occasion to attend some affected with diarrhœa, others with bilious purging and vomiting, and some with symptoms indicating considerable derangement of the biliary secretion.” All such cases I watched narrowly, but I never considered it either necessary or prudent under such circumstances, to endeavour to check the diarrhœa, merely because a peculiar state of the atmosphere seemed to prevail, and because this diarrhœa might possibly terminate in the watery purging and vomiting proper to this epidemic; I rather chose, and thought if *safer*, to follow the reasoning of our illustrious Sydenham, the great observer of epidemics, when treating of his practice in Cholera Morbus in the epidemic of 1669. *Sedula mentis applicatione, et multiplici etiam experientia edoctus, quod si hinc acres istos humores fomitem morbi, cathartici expellere conarer, idem agerem atque is qui ignem oleo extinguere satagit, cum cathartici vel lenissimi operatio, omnia magis perturbaret, et novos insuper excitaret tumultus; et si ex adverso, medicamentis narcoticis aliisque astringentibus, in ipso statim limine primum humoris impetum compescerem, dum NATURALI EVACUATIONI OBSISTEREM, ET INVITUM HUMOREM DETINEREM, æger, inimico visceribus incluso, bello intestino INDUBIE CONFICERETUR.* Has inquam ob causas, media mihi via insistendum mihi duxi, ut partim scilicet humorem evacuares, partim etiam diluerem; morbum

itaque hac arte mihi a multis retro annis comperta ac comprobata, toties quoties in ordinem coegi," &c. *Translated.*—Taught by serious reflection and multiplied experience that if I should endeavour to expel from the alimentary canal these acrid humours, the *tinder* of the disease, by using cathartics, I should just act like one, who, wishing to extinguish a fire, might think that the pouring oil upon it was sufficient for that purpose, since the operation of even the mildest cathartic (purging medicine), might create greater disturbance, and moreover, might excite new tumults; and if on the other hand, I should check the first rush of fluids *immediately, and on the very threshold of the disease*, while I should be making opposition to a natural evacuation, and should act the part of a *jailor to an unwilling prisoner*, the patient with his enemy shut up in his bowels, would undoubtedly be killed by an intestine war.* On account of these

* Let those who so officiously, ignorantly, and dangerously recommend to the public the endeavouring to check the looseness of the bowels, by the use of astringents and narcotics, on the very onset of the present epidemic, weigh well these *effata* of the sagacious, learned, and admirable Sydenham, on all hands allowed to be one of the best observers of epidemics, and one of the first practitioners of his time; let them study seriously and thoughtfully his different writings on this disease; let them cast quackery and empiricism, not physic to the dogs; let them not carelessly and flippantly use the means which the Almighty has been pleased to create for mankind, in a way so contrary to all reason and experience; let them not think that because there are some points regarding the epidemic form of this disease which must be allowed are difficult of explanation, that therefore they are to sit down with their hands crossed, and despair of ever being able to *understand* or become masters in the treatment of this disease; *proh pudor!* let them rouse themselves from their lethargy, and making the best use in their power of the reason which it has pleased their Maker to give them, let them use it in the study and practice of this nice and difficult disease; let them adopt the motto which I have borrowed from Celsus, and placed in the title page of my treatise.

"Quod si jam incidat mali genus aliquod ignotum, non ideo tamen fore medico de rebus cogitandum *obscuris*; sed eum protinus visurum, cui morbo id proximum sit; tentaturumque remedia similia illis, quæ vicino malo sæpe succurrerint, et per ejus similitudinem opem reper-

reasons, I say, I was induced to keep a middle path, namely, that I might partly evacuate, and partly dilute this fluid matter; I therefore, as often as I was called on to do so, proceeded as follows, in using a method of cure invented and employed by myself for many years back, &c.

On the use of Purgative and Laxative Medicines during the presence of the present Epidemic.

Many people who are incommoded by torpid bowels, are in the habit of occasionally, or periodically, using purgative, or laxative medicines, and were they at the present time to discontinue such practice, might suffer seriously by so doing. To a great number of such persons who are in the habit of using the ordinary and mild opening pills, such as the compound rhubarb pill of the Edinburgh Pharmacopœia, or such like, and which they have found useful and sufficient to keep the bowels easy without exciting disagreeable irritation, to such, I would say, continue your usual practice, or what is still better, every other, or every day, if found necessary, throw up into the bowels a quantity of tepid water, or if the bowels are very sluggish, say five good-sized tea-cups full of warm water, in which you have previously dissolved a square inch of Castile or other soap, slowly injected into the bowels with a common injecting syringe, or clyster apparatus. If any thing stronger is required, from a table-spoonful to two table-spoonsful of castor oil may be taken, or a desert-spoonful of lenitive electuary, but no black draught or other active purgative, nor saline medicines of that class, should be used

turum"—*Translated*,—But if there should have already occurred any unknown kind of disease, it should not be the physician's business to be cogitating about obscurities, but he must immediately endeavour to discover to what disease it has the nearest resemblance, and he must then try similar remedies to those which have often been found effectual in the treatment of similar affections, and by their similitude discover the remedies.

by any one during the prevalence of this malady, without absolute necessity and medical advice.

Treatise, Sec. XIII.—*Disease, excited by slight causes.*—During the prevalence of the epidemic, it was observed, that slight causes, and such as at another time would have been but little attended to, such as food not easy of digestion, or the use of a rather large quantity of apples or other fruit, a dose of MAGNESIA, or the exposure of the body to sudden change of temperature, the passions of fear and anger, seemed to prove exciting causes of the disease.”

It is very seldom indeed that any medicine of a purgative-nature is required at the first onset of the disease, but cases may occur in persons where the biliary secretion, either from neglect, improper diet, previous constipation, want of due exercise in the open air, sedentary habits, or other causes, is out of order, and where, although the symptoms proper to the Asiatic type of the disease are not present, bilious diarrhoea sometimes with vomiting supervenes; in such cases it may be necessary and proper to endeavour to correct the vitiated secretory action, by giving small alterative doses of calomel, either singly, or combined with small quantities of ipecacuanha, lactucarium, and occasionally with camphor and hyoseyamus.

But in the after periods of the malady, when re-action has succeeded to internal oppression, and tendency to collapse, purgative medicines may be employed with great advantage. “Treatise, Sec. XXVIII. Use of alterative doses of calomel and ipecacuan, with, and without opium, hyoseyamus, or lactucarium, *alternated with purgatives, and what; use of purgative clysters.*—Towards the farther prosecution of the ideas which I have exposed above, and in fulfilling our third indication, I used alterative doses of calomel, or calomel combined with small quantities of ipecacuan, to which occasionally were joined, a small proportion of opium, hyoseyamus, or lactucarium, alternated with purgatives. At first I frequently employed castor oil in the form of emulsion, and so combined as to become as little disagreeable to the taste as possible; but notwithstanding this, and even when joined

with laudanum, it was often rejected by the stomach, or proved insufficient to open the gall ducts, so that I found it necessary to employ more stimulating purgatives, such as pills with rhubarb and calomel, sometimes with a proportion of jallap; an infusion of senna with sulphate of magnesia and manna, or the compound extract of Colocynth of Reuss' Pharmacopœia, with calomel, sometimes with a small portion of opium.

"By one or other of these medicines, I commonly succeeded in procuring a free discharge by stool of very morbid bile of various hue, from very dark green to a pitchy black; sometimes a thick, mucous, or yeasty-looking matter was discharged; in others, a purulent-looking fluid, or an earthy-looking substance; and in a few cases, where, in all probability, the functions of the liver had been much deranged before the accession of the epidemic, considerable discharges of dark-coloured venous blood, which I conjectured to come from that organ, took place; this however, did not prevent me from continuing the purgative treatment, which I had already found useful, but induced me to take the precaution of employing the least irritating of that class of medicines.

"In a few cases the discharge from the bowels towards the end of the disease resembled those of dysentery, consisting of small evacuations of a bloody mucus."

"I frequently found it necessary to assist the operation of the purgatives by using purgative clysters, composed of a decoction of senna, in which common, or Glaubers salt was dissolved; I never observed that the patients complained of irritation from the use of these, but, on the contrary, that they were always much relieved after the bowels had been freely evacuated.

"There was no appearance of debility as a consequence of this practice, but an increase of the patient's strength, and an improvement of his general health was very evident. In order to judge correctly of the effects of these medicines, the practitioner himself ought to examine every thing discharged by the patient; if he *trusts* to the accounts of the

attendants, he will constantly be subject to error on this point.

“My experience has strongly confirmed the utility and necessity of employing purgatives by the mouth, and purging clysters in this disease; indeed, until they began to act, no bile in general appears in the alvine discharges, the powers of the body seemed so torpid, that calomel, as I employed it, was insufficient to open the gall ducts, or excite the mucous glands to give out their secretions, till assisted by purgatives, of which ordinary doses of the milder sort were often insufficient to produced the desired effect, so that I was frequently obliged to use the more stimulating; but while I did so, I frequently conjoined a small portion of opium, so as to guard against too great irritation, and with the hope of counteracting the spasmodic state of the alimentary canal, so evidently and so frequently symptomatic of this disease.”

The next remedy requiring consideration, is the important one of blood-letting. Treatise, Sect. VI.—*General bleeding, when to be used, and how practised.*—When the primary symptoms only have shown themselves, such as uneasiness in the head, or at the pit of the stomach, or where the disease has assumed the *form of an ordinary diarrhoea*, (looseness,) it will be a prudent practice, especially in the young and plethoric, to take some blood from the arm; and, as the object here in view, is not the diminution of the tension of the system, as in inflammation, but the subtraction of a part of the mass of blood already become oppressive, or soon likely to become so, by its quantity, and unnatural qualities, as also by its undue determination to the internal organs, so, the doing so by a moderately sized opening in the vein, will be the safest practice; it must not be too small, otherwise the difficulty of drawing blood, which is always experienced when the disease has made some progress, might thereby be increased, and frustrate our purpose.

As the blood loses a large portion of its serum (thin part of the blood) by the evacuations, it becomes proportionally

thicker, and more disposed to coagulate, and as its progress to the heart becomes also slower by the nature of the disease, so, it is often no easy matter to draw off a *sufficient* quantity.

The proportion to be drawn must depend on the circumstances of the case, but unless it be sufficient to relieve the oppression of the circulation, and to enable the heart and arteries more easily to contract and propel their contents, it will be of little use. On the contrary, a free bleeding has frequently been found of great service, and has sometimes cut short the disease. To do this, however, it must be employed early, before great oppression of the vital powers has taken place, for, after this, particularly if the pulse has ceased at the wrist, it is more likely to do harm than good. I met with no case where general bleeding, employed in the first period of the disease, was useful, unless where it was used early. The employment of blood-letting appears to me to require no small degree of judgment. Wherever it can be employed in the beginning of the disease, it is likely to be of more use than anything else. But, on the other hand, if it does not serve to raise the vital energy, it may have a powerful effect in favouring the state of collapse, which is so apt to supervene in this disease. Its effects at the time of the operation should be carefully watched, and if the pulse, instead of rising under its use, should sink, the opening ought to be instantly closed, I can see no advantage in bleeding *ad animi deliquium* (fainting), in the first period of the disease, as some advise, where there is neither general tension nor inflammation present, but simply a loaded and congestive state of the internal circulation; on the contrary, I think it ought to be our aim not to induce syncope (fainting) by the detraction of blood, and, for that reason, the patient should be bled in the horizontal posture, with his head but little raised, and as we have elsewhere observed, the opening of the vein should be *moderate*; so we shall, with the greater certainty, succeed in drawing off what quantity of blood may be deemed necessary for relieving the oppression and torpor of the circulation, with the smallest proba-

bility of inducing consequent debility, by the loss of blood, in a disease where fatal collapse is so apt to take place." Bleeding in Cholera is not a new practice—see Treatise, p. 114. It is sometimes advisable to bleed the patient in the warm bath, as, by so doing, the action of the vital organs is more quickly excited, and the internal oppression relieved.

The baths should be continued so long as they are agreeable to the feelings of the patients, and as long as they do not seem to be fatigued by their use; and, if fortunately they should induce perspiration, it ought to be our aim to encourage it as much as possible, by the use of warm punch, or negus, mint tea, or other gently stimulating fluid, taken warm; their use, however, must be regulated by the state of the stomach. Under the circumstances I am treating of, and as a primary remedy to be used by the public in the absence of a medical attendant, where it may appear to the bystanders, who have carefully read and understand these observations, which I have expressly endeavoured to make as simple and intelligible to all, and as unprofessional as present circumstances would permit, where it may appear, I repeat, necessary or proper to bleed the patient, the operator should be directed to take, as a general rule, from an otherwise healthy man, three ordinary tea-cupsful of blood, and if he bear the loss of that quantity well, without much increased feeling of weakness, or disposition to faint, and more especially if he feels relieved by the blood already drawn, half a tea-cupful or a whole one more may be detracted. This quantity will generally be found sufficient in a healthy young person to check the tendency to diarrhœa (looseness), and to stop the progress of the malady; but if the patient be old and infirm, or broken down by any cause, the propriety of bleeding becomes questionable, and it had better not be practised without medical advice.

After the bleeding, if the bath has been duly used for a sufficient time, and the general heat of the body, particularly of the hands and feet, seems to have been restored, the patient may be wrapped up in a warm sheet, and being well dried, it should be changed for a warmed

woollen blanket, in which he should be conveyed to his bed, previously well warmed, and in which should be placed bottles of hot water, or bags with hot sand, or the like, applied to the neighbourhood of the limbs, and an ox bladder, three-fourths full of a decoction of camomile flowers, with a small proportion of bruised white poppy seeds, and some mint or peppermint, in water or milk, applied to the pit of the stomach and upper part of the belly. The whole surface should now be diligently rubbed with warmed flannels, on which may be poured some of the following embrocation, as soon as it can be got; or it may be kept ready in the house in case of need. Mix two ounces of camphorated spirits of wine with as much tincture of soap, an ounce of fluid volatile alkali, and half an ounce of laudanum; shake the phial, so as to mix the ingredients well together before using them; the friction with this embrocation may be repeated from time to time, and it should be warmed, by putting the phial containing it into a bason with warm water, after loosening the cork; or a little of it may be warmed by putting it into a cup placed in hot water for a short time. This may be all that is required to be done before the practitioner sees the patient. But things may also turn out otherwise. If, therefore, after trying the above, and keeping the patient some time in the well warmed bed, say for half-an hour, the patient's heat of body should appear to decrease, it will be time to go on with the treatment. A pretty large mustard poultice, or sinapism, should be laid on the pit of the stomach, or the part may be well rubbed with spirits of turpentine, or fluid volatile alkali, before the mustard poultice is applied, and both may be used in the same way to the calves of the legs, and friction continued to the rest of the body.* Should the vomiting and purging increase, and the evacuations become watery, or like rice-water or

* These applications should be carefully attended to and *removed* when the skin appears to be *reddened* by them; if they have not already sufficiently inflamed the skin, they *may* be repeated at a due interval of time, but should not be allowed to lay on very long, as by doing so, we may induce too great subsequent inflammation in the parts.

whey, without any appearance of natural colour, no time should be lost, but the following pills should be given, and as a useful precautionary measure, every household should endeavour to have them and the other remedies at hand, in case of need. Take three to four grains of calomel, one to two grains of powdered camphor, one grain of solid opium, two drops of essential oil of peppermint, and four grains of softened extract of liquorice, mix them well together, by beating them up in a mortar with a little gum water, and form the mass into three pills; give one of these pills to the patient every five or ten minutes, till he has taken the three; if the first be returned by the stomach, wait a short time till the present efforts seem to have ceased, and the patient seems less uneasy, and then give a second pill, and so on also the third. If, after the lapse of four hours, the state of the sufferer should not appear to mend, and more particularly if the rice-water evacuations continue, and there is no appearance of yellow-coloured stools, the pills should be repeated as before; and again, after the same interval of time, the same quantity of the pills may be given; but before this time, it is to be hoped the medical man may have seen the patient, and, of course, will direct what farther remedies should be tried. If however, unfortunately this should not be the case, without paying attention to the watery rice-water vomiting, a mustard emetic should be tried. Farther than this point, I can hardly recommend the public to proceed, but *strongly* advising a careful and minute attention to what I have said above, based on much experience in the treatment of the Epidemic of Moscow in 1830 and 1831, I with some confidence recommend to others what I have myself found the most successful in its treatment. And here I wish to direct attention to a Note in page 128 of my Treatise on this disease. "The combination of calomel with opium and oil of peppermint, which we owe to Mr Corbyn, is undoubtedly the best internal remedy yet known in the treatment of the first period of this disease. Whether or not the large dose of calomel by itself (20 grains) might have the effect of quieting the inordinate state of the system, as some have alleged,

I cannot decide, having never ventured to trust the primary treatment to this medicine, unaided by opium ; but the combination of the three together, is certainly as powerful a one, and as well adapted to fulfill our views of quieting irritation, and afterwards *rousing* the system to defend itself, as can well be imagined. The *rapid course and fatal tendency of the disease* indicating the NECESSITY of early treatment, render such a combination of remedies particularly necessary. *The reason why both this and every other practice yet known MUST frequently fail, does not arise from the inefficacy of the remedies, but from the deadly nature of the disease itself, and the cause which induces it, as well as the much to be regretted delay under which the practitioner has so often to prescribe.* In more severe cases, and especially in such, where the oppression of the internal circulation appears to be great, and considerable sinking of the powers of nature has already occurred, *the blue* appearance of the sufferer being *present*, and the evacuations, if any, continuing to be watery and *without* colour, the above proportions of the ingredients which compose the pills should be increased, *and in such a case, if medical assistance can not be got, Mr Corbyn's practice may be tried.* Treatise, Chap. xiii. Sect. viii. *Use of calomel in full doses, followed by a mixture of laudanum, oil of peppermint, and water.* Taking a favourable opportunity, a full dose of calomel should now be given, mixed with a little thick mucilage of gum-arabic, the dose of calomel varying from eight and ten, to fifteen and twenty grains, in very urgent cases, perhaps to thirty grains, which should be washed down with a mixture of laudanum, oil of peppermint, and water. It is not of much consequence which preparation of laudanum we employ ; but the mixture should contain from two to four grains of opium, from five to twenty drops of oil of peppermint, and an ounce and a half or two ounces (four table spoonsful) of water ; or, instead of the oil of peppermint, a small quantity of brandy may be substituted." At a due interval of time it may be necessary to repeat this practice. But to resume. The principal indication in the treatment of this disease, is to restore and keep up the natural circulation of the blood, and as connected

therewith, the natural heat of the surface and body in general; by

1st, Placing the patient in a comfortable room, where he may have the advantage of breathing cool, but not cold fresh air.

2d, By using the external remedies above recommended.

3d, By blood-letting as above; and

4th, By using the internal practice I have advised. By these means prudently used, under Divine permission, I confidently and conscientiously feel, that many lives may be saved, which in all human probability would otherwise be lost.*

* Treatise, Sect. xi. *On the utility of large doses of calomel in this disease.* "In regard to the use of calomel, I would remark, that although the practitioners in India have long been familiarized with twenty grains, or half drachm doses of calomel in inflammatory diseases of the viscera, and that the use of twenty grain doses in the epidemic Cholera of India has the support of a great part of the profession there, still, in this part of the world, (Moscow,) there seems to exist a strong *prejudice* against its employment in these doses, occasioned, I have reason to believe, more by fear of some supposed bad consequences, than from any actually experienced bad effects of this valuable medicine; nay, I doubt much if those who are so ready to inveigh against it, have ever exhibited a twenty grain dose of calomel in the disease. As I employed calomel during the whole course of the epidemic, in the manner I have described above, I can safely affirm, not only that I did not observe any bad effects from its use, but that, excepting in three cases, it did not even excite ptyalism, (salivation,) nor had any other very evident or immediate effect; but under its use, aided by opium and oil of peppermint, the vomiting and purging gradually gave way, while the *external heat* and power of the circulation increased; and consequently, it seemed by *rousing* into action the secretory organs, to enable the body to free itself from the internal congestions, and vitiated secretions, the effects of the disease. I believe, and have experienced, that twenty grain doses of calomel, repeated with *prudence*, according to circumstances, will sometimes succeed in saving life under very *desperate* circumstances, when in all human probability, there is no hope from any other medicine; and this is saying more than can be affirmed of any other practice or medicine yet known, under the circumstances I allude to. That there are cases which do not require these large doses, and that some may recover without taking calomel at all, I will not deny; but I consider its *utility and superiority* in this disease so well established, that I should not feel myself justified in omitting

In case of children and weakly or diseased persons being affected, the practice must be proportioned to their age and state, but should be founded on the same ideas as in treating adults.

If medical men instead of trusting to, or dealing with *nostra* and dealers in *nostra*, would sedulously and carefully consider the epidemic, they would find, that it ought not to be, properly speaking, considered as a usual disease, such as fever or rheumatism, but rather as a sudden change produced in the usual state of the body, by a noxious agency from without, and which in its symptoms bears a considerable resemblance to the symptoms of some poisons, for which it has sometimes been unfortunately mistaken.* In doing so they would discover that it is absolutely necessary in treating this epidemic that they should represent to themselves or have in their mind's eye the changes in the body which are either already induced, or rapidly taking place in the vital functions, and that at first at least, all their endeavours must be directed to restoring *them* to their normal state, and *especially by promoting* by every rational means, *the circulation of the blood, the progress of free and healthy respiration, and the healthy and natural power of the brain and nervous system, and body in general, by a timely and cautious supply of light nourishment*, fitted to the state and period of the affection. Although there is a considerable sameness in the cases which may present, yet, as in other complaints, each case requires its own peculiar treatment, and therefore, each requires the reasoning head of the practitioner who directs the cure, but not the dictum of the symptomatic empiric and scribbler of incomprehensible formulæ.

ON THE NAME OF THE DISEASE.†

Name of the Disease, its Nosological place and definition.

“ From what has been said in the course of this treatise, it follows, that the name of Cholera is but ill fitted to express the nature of the epidemic on which I have written. This disease, it appears to me, ought to have its place in a

* Treatise page 84.

+ Treatise, page 138.

system of Nosology, rather under the Comata or Adynamiaë, than the spasmi. I regard it as a species of Apoplexy or Asphyxia, and would propose as its name, till a better can be found, Asphyxia Mephitica alvi fluxu epidemica, with the following definition:—

“Morbus aliquando contagiosus, epidemice grassans; virium vitalium plerumque subita, maximaque prostratio, oppressa debilisque cordis arterarumque actio; recessu sanguinis a superficie ad interiora, diarrhœa vomituque scrosis, *raro bile coloratis*; et fibrarum muscularium spasmis, animi facultates parum turbatæ.

“After a lapse of nearly eighteen years, I do not know that I can propose any thing more appropriate than the above; the word Cholera most undoubtedly, applied to the present epidemic is certainly a most egregious misnomer, but the public and medical men are accustomed to it, and custom and habit, particularly in regard to names, even when most inappropriate, are changed with difficulty; but there is much in a name, and more perhaps, ‘Horatio, than is dreamed of in your philosophy.’”

its use in any severe case of the disease, where considerable prostration of the vital powers had already taken place; as under such circumstances, I know no remedy of equal value, or which at all merits to be compared with it.”

Vive, vale, si quid novisti rectius istis,
Candidus imperti: si non, his utere mecum.—HORACE.