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2

ON EPIDEMIC
CHOLERA AND DIARRHŒA;

THEIR
PREVENTION AND TREATMENT

BY
SULPHUR.



BY
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"All untruth, whether it be an over-statement or a half-truth, recoils upon itself."

THIRD EDITION.

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PREFACE TO THE THIRD EDITION.

AFTER the experience of the last epidemic, during which the second edition of this Pamphlet was published, I can still as confidently recommend the use of Sulphur, not as a substitute, nor in any way to supersede the necessity for the most energetic sanitary precautions, but as a means, and I believe not a minor one, capable of giving confidence and comfort to many during the full tide of a future epidemic invasion.

I have added a few general observations to the present edition, which have arisen and seemed called for by events and circumstances having, as I thought, important bearings in relation to the diffusion of the poison-germs and the spread of the disease.

WANDSWORTH, *Oct. 2nd*, 1865.

PREFACE TO THE SECOND EDITION.

THE following pages have been put to press under the impression that I am discharging a duty to the Profession and to the Public.

A simple statement of facts in an unpretending form has been chosen as most adapted for practical purposes and general utility.

My best thanks are offered to such of my Professional Brethren as have favoured me with communications on the subject, and I gladly embrace the opportunity of requesting any further intelligence which may lead to a correct estimate of the value of the Remedy.

WANDSWORTH, SURREY,
August 17th, 1854.

INTRODUCTORY REMARKS.

THE interval between the first and second visitation of Cholera in a severe epidemical form was a period of sixteen years, and between the termination of the second and beginning of the third visitation only four years intervened. The frightful mortality of the epidemic of 1848 and 1849 is still fresh in our memories while we are again doomed to bear another infliction of the Pestilence. Again and in vain do the poorer classes of this country ask for a remedy easy of access and prompt in its effect. "Cholera doctors," as Mr. Carlyle calls them in one of his admirable 'Latterday Pamphlets,' are not numerous enough by far for the wants of the people, and when they are summoned to attend upon the sufferers, the disease has, in a very large number of instances, advanced beyond the reach of medical aid. If we cannot have our metropolis well drained; if we cannot have the Thames purified;* if we cannot give to the poor good water, and plenty of it; if we can neither feed them in distress nor tend them effectually in sickness,—let us at least provide them with some simple and ready means, if there be such, for removing the disease which we have not done our utmost to avert.

* Since the above was written, much has been done in this direction by the Metropolitan Board of Works; time alone will develop the full advantages of the works set on foot by the energy and capacity of that body of men with Sir J. Thwaites at their head.

I am not a quack, and therefore have no faith in infallible specifics. Many must die. But I have faith in the ways of Providence, and am of opinion that many simple remedies exist as antidotes to this disease, which is now amongst us.

It is at this eleventh hour of our neglect that I am desirous of again calling attention to what I believe to be both a prophylactic and a remedy for diarrhœa and cholera. All I ask is a fair trial; and my experience in many severe cases leads me confidently to hope, that the mortality from this epidemic would be greatly diminished by the more general use of sulphur, and that the early and equivocal symptoms which mark the presence of the choleraic poison in the system would be almost invariably removed by its timely employment.

EPIDEMIC CHOLERA AND DIARRHŒA.

GENERAL OBSERVATIONS ON CHOLERA.

THE extraordinary characters of the disease termed Cholera, to say nothing of the erratic manner in which it occurs among nations and peoples, is sufficient justification for any earnest thinker to put forward his opinions concerning its nature and treatment, if he thinks he can throw the smallest glimmer of light into the utter darkness which pervades the subject. As to the source of the disease and the mode of propagation, much might be said, but to little purpose, as every step taken would be open to controversy. The latter subject, the mode of propagation, is, however, of such vital importance at the present crisis, that to be silent with strong convictions would be blameable in the extreme.

Official reports on previous epidemics, would lead entirely to the belief in the incommunicability of the disease from person to person; but seeing that the views elaborated all turn on that vague word *contagion*, made more vague still by a blue-book definition,* I venture to put forward a few facts, with no intention to alarm, but to suggest what appears to me to be a wholesome warning against too much confidence, as well as a check against a fearful fatalism which must necessarily follow on the assumption, that regardless of infec-

* General Board of Health; first Report on Quarantine.

tion, sanitary measures alone are to be depended upon as the great bulwarks and only safeguards against the disease.

Without believing that this disease is as readily communicable as many others, still there is sufficient evidence of this property attaching to it as to other epidemic diseases, to suggest to all persons the necessity for taking similar precautions to avoid its occurrence, as they would in cases of fever, small-pox, scarlet fever, or any other infectious disease. The points to be clearly settled are as follows:—

1st. Is cholera communicable in any way, or to be traced as a sequence, from the diseased to the healthy?

2nd. Has cholera, in the virulent or Asiatic form, appeared in this country spontaneously?

There can be little doubt, if these two questions can be settled in the affirmative, that our course of action should not be entirely with one or other of the disputants on contagion, but for the future we should avoid the Charybdis that may overwhelm us, by heedlessly disregarding the communicability of the disease, or the Scylla that would act as a barrier against progress.

1st. Is cholera communicable?

The first case I would mention is taken from the Board of Health Report, which will of course be considered by the non-contagionist party as unexceptionable. "In the month of September, 1849, a most fatal outbreak of cholera occurred in the parish of East Farleigh, near Maidstone, among the hop-pickers, the first case being that of a man who had arrived the evening before, and who had been suffering from diarrhœa the day previously. The disease rapidly extended, so that in three or four days seventy or eighty persons were ill."

The conclusion to be drawn from this statement would seem to be inevitable, viz. that the man who arrived with the disease was the immediate cause of the outbreak. If the narrative were to be read with measles, scarlatina, or small-pox, allowing time of course for their specific periods of incubation, no one, I imagine, would have any doubt as to the

origin of the disease being due to its communicability from the sick to the healthy. I concur entirely with the writer of the report, that the rapid spread and fatality of the cholera attack, were due to the filth and *pigging* of the people among whom it broke out. We are not however now considering those causes which tend to spread the disease, but those which originate it, in well-marked cases.

A correspondent of the 'Times,' writing from Berlin, September 17th, 1852, recorded as follows:—"No cases of cholera have yet been officially reported in Berlin, but several deaths in the Catholic Hospital, within the last few days, are attributed to the disease or some form of it. A patient was received who had arrived, suffering from the premonitory symptoms, from Posen (Posen being at the present time desolated by the disease), and though death did not ensue in that case, several of the sick in the same ward were attacked. It is remarkable that all the cases happened in the same story of the building, and that none have been attacked in the floor above."

I will mention another instance, to which I think no exception can be taken, before making any remarks, beyond the statement that a selection has been made from a large number of cases, to show the various peculiarities, within a small compass, attaching to the infectiousness of cholera. In the first instance, the disease was started among a number of people ripe for its reception, by the advent of a man already suffering, and while all the conditions required for an epidemic invasion were known to be in existence; in the second instance, the source of contamination was a man not only suffering, but known to have come from an infected neighbourhood, but he alights among patients in a hospital, where we may presume hygienic conditions are regarded. The third instance is one in which communicability of cholera from those on shipboard to those on land is unmistakably made out.

In 1833 the frigate 'Melpomene' arrived at Toulon from Lisbon, at which latter place cholera was raging. The 'Mel-

pomene' had lost fifteen men before she started, and more than half the crew had been attacked during the voyage. On her arrival at Toulon, *where not a single case of cholera prevailed*, the cholera patients were taken into the lazaretto, where four galley-slave attendants, with an inspector, were sent to wait on them. Four ordinary attendants were also sent on board the frigate. One of the latter was immediately attacked, and died in eight hours; on the next day two others, who likewise died. The fourth was also attacked, but escaped. Of the four galley-slaves in the lazaretto, two died on the second day, a third soon afterwards, and the inspector on the fifth. The disease did not spread beyond the precincts of the lazaretto, and Toulon remained free from it for two years.

The most determined non-contagionist could hardly doubt the evidence here adduced, and all unprejudiced persons must admit that stronger or more satisfactory proof of communication of cholera from the sick to the healthy is scarcely attainable. But the mode in which the communication took place is not mentioned, indeed it is not known; nor is it any better known in the great bulk of cases of measles, smallpox, or scarlatina which come under our notice; and herein lies our difficulty. The non-contagionist harps upon "propagation by *contact* from person to person" being unproved, and sets aside altogether other modes of propagation; and to such an extent is this carried, that cases difficult to square with his views are thus dismissed:—"She had committed some act of intemperance," or "She was exhausted by over-fatigue," "Predisposing causes to the powerful influence," etc. Much patience is required to reply to such arguments or to deal with them in any way. It would be far more reasonable and much more conducive to the advance of any inquiry if doubtful cases were accepted as doubtful, instead of attempting to put them aside with vague and unsatisfactory expressions. The Berlin case, mentioned above, is one in which the non-contagionist would conjure up a multitude of doubts. The first patient who was ill did not die; there was no evidence that he suf-

ferred from cholera; there was no proof that he *had* brought or *could* bring with him into the Hospital the seeds of the disease from Posen, and such like observations; and yet we read among the writings of those who doubt after this fashion, "that the disease passed right through and across several of the streets like a cannon-ball."

2nd. Has cholera appeared in a virulent form in this country at times when no epidemic "force" or "constitution" prevailed, and when no assignable cause could be discovered to account for the outbreak?

This question, fortunately, can be answered affirmatively, and accepted on both sides as an indisputable fact. At East Farleigh, in Kent, in the year 1834, the hop-pickers were attacked with cholera, and thirty-four of them died, though the disease did not elsewhere prevail, nor was there any special epidemic "influence" or "force" said to exist at the time.

Again, at Coventry, in the year 1838, a great mortality from cholera occurred in the House of Industry. Fifty-five persons died there in less than a month under one roof, the first seizure being early in January and the last death on the 2nd February of that year.

It would be mere idleness to doubt the value of these facts. They show conclusively that cholera may arise spontaneously among us without seeking for imported cases; but that these facts should definitively settle the points as to the communicability of the disease is quite another matter. The daily press has lately contained letters setting forth cases of the present murrain attacking cattle under circumstances said to be inexplicable under the contagion theory, yet no one would be mad enough to say that the disease does not spread by contagion, using the word in its common acceptance.

It is here, then, that I would emphatically draw attention to the conclusions I have arrived at from a careful consideration of the modes in which cholera originates and is propagated. While on the one hand I should be most desirous to avoid creating unnecessary alarm among the sensitive, and a

fear of infection among those who have hitherto felt confidence from the strong assurances put forth in high quarters, that the epidemic disease now threatening us is not infectious, "that it is propagated not by the contact of one infected person with another, but by a general influence operating on particular localities and persons according to certain localizing conditions and predisposing causes," on the other hand I consider it but just, and therefore wise, to set forth candidly the unvarnished truth as far as it is attainable. The evidence generally leads to this conclusion, that those sick with cholera may be a source of contamination to the healthy, not by contact or touch of persons or things contaminated probably (not impossibly), but by impregnation of the air or ingesta inhaled or absorbed by the healthy. There has been abundant evidence to show that the effluvia from drains and contaminated waters known to be impregnated with the excreta of cholera patients have been fruitful sources of the disease, as well as of other modes of propagation, too numerous and unnecessary here to mention. These, taken with the extraordinary circumstance that *both here and abroad not only the same streets, but the same houses, and in some instances the same rooms*, have furnished the first fatal cases in successive epidemics, point most unequivocally to the necessity of heeding the poison germs or primary elements of the disease as the thing of the first consideration.

To sum up, in as few words as possible, the deductions to be made from personal experience and previous records, it would appear that cholera epidemics are due neither to fresh importation alone, nor to revivification of indigenous poison-germs, but that undiscoverable influences, atmospheric or telluric, or probably both combined, tend, at certain indefinite periods, to develope, or bring into activity, the latent forces of the elementary forms of organized existences, and otherwise generally to affect the economy, as well as disturb the forces, existing in all organized beings.

That these undetermined, but generally acknowledged, influences are all potent in determining the activity or dormancy

of the exciting agents or germs of disease. That as we have no power over world-wide influences, but considerable energies given to us to be exercised in the discovery and control of material objects, our business is to eliminate all that can be known of these, and apply this knowledge.

That in short, as we resort to means for evading or destroying the poison germs of other epidemic and infectious diseases, we should do the like with cholera. That the rooms and houses of its old haunts should at once be put into the best possible sanitary condition,—if need be, stripped and evacuated, but at any rate the drains, sewers, and watercourses well flushed, and the water-supply made free from taint or impurity. It was by operating on the elements of disease that Jenner controlled the Smallpox; and no advance will be made in the power of checking or controlling epidemic and infectious diseases so long as occult influences, of whatever kind, are made to stand in the place of material investigation. There are three essentials for the development of an epidemic:—1st. The Specific Poison; 2nd. Special Cosmical Influences; 3rd. Recipients predisposed to the action of the poison. In other words, there must be the seed, the hidden agencies which animate it, and the soil which nourishes it. The specific poisons, and the laws which govern them, are the legitimate object of our study; the cosmical influences which periodically affect them will, as the study progresses, eliminate themselves by degrees into more tangible proportions, and at length fall into harmony with the established principles, as well as the general details of public Hygiene.

THE SYMPTOMS OF CHOLERA.

During the existence of cholera in my neighbourhood, I have observed a marked difference in the mode of seizure, whether the attack has been of the nature of cholera in a severe form, or whether the disease has stopped with a simple

diarrhœa. Many patients have also applied to me with the following symptoms. They have complained of much uneasiness in the stomach and bowels, of nausea, loss of appetite, a sensation of faintness and lassitude, giddiness and noises in the head; these symptoms have been common; other persons, and these not a few, had, in addition to the above, a great diminution of the warmth of the surface, with an appearance resembling cyanosis: in some cases there had been diarrhœa, in others none at all. The number of these cases, all occurring at the time when the cholera was at its height, induces me to believe that all these persons were suffering from the effects of a poison circulating with the blood, and thus giving rise to these symptoms. I am partly justified in this view by the fact, that several cases of cholera which I have attended were ushered in with similar indications of disturbance. Holding the opinion that poison was to be counteracted to rid the patient of his malady, and believing that sulphur was the antidote to the choleraic poison, I invariably exhibited it, and in a day or two as invariably the patient lost all his unpleasant symptoms. Whether this result may be taken as evidence of any real and practical value, I leave others to decide; it is nevertheless a fact, and facts are always worthy of being recorded, for they are often applicable in a manner in which the person recording them little anticipated.

I quite concur with those who state that attacks of cholera date their commencement most generally between the hours of sunset and sunrise, that is, those which commence with diarrhœa and vomiting. In these cases no warning usually is given; the patient is perhaps roused from sleep by an urgent call to evacuate the bowel, which is quickly succeeded by another and another, until a feeling of exhaustion comes on; vomiting may attend the first evacuation, or may not appear till after several; this varies much, but generally as soon as the vomiting is established, the spasms of the extremities succeed.

Another mode in which the disease invades the patient is

by a gradually increasing diarrhœa; from being very slight for a day or two, it increases in severity, and at length, perhaps, after four or five days or a week, vomiting sets in, and the more urgent symptoms become rapidly developed. There are intense cramps in the legs, arms, and abdomen, the muscles of the abdomen may be so violently contracted (as in three cases I have seen) that the belly is forcibly drawn towards the spine, and instead of being convex in its outline, it formed a large and deep concavity: this is a most distressing state of agony, and unless the patient be relieved, exhausted nature rapidly sinks; the skin becomes cold, the pulse imperceptible or slightly vibrating; the diarrhœa and vomiting are accomplished without an effort, and the patient passes into absolute collapse. In this state the condition of the patient may be thus described:—He lies as one quite exhausted; he throws his arms and legs about, is exceedingly restless, complains of great thirst, prefers cold drinks, his countenance looks sunken and expressive of suffering; the pulse ceases to beat, the skin has a livid appearance, and is bedewed with a profuse cold sweat; the vomiting and diarrhœa, which before had been urgent, now begin to subside in consequence of exhaustion and the loss of tonicity and irritability of fibre, and the patient either gradually sinks, or, after a time, a new set of symptoms arises which indicates a state of things called consecutive fever: but of this I have no experience, not having had any cases of the kind under my charge. Fever also occasionally attends those who have not suffered under the pure form of collapse. It has only occurred, however, in two or three cases with me.

The consecutive fever, which has been so much considered by the profession, and in most instances, I believe, looked upon as a form of typhus, appears to be the effort of nature to throw off the poison, which in the first instance, had a tendency to pass through the bowels. This being in a measure checked by a temporary suspension of the vital powers, in the stage of collapse, in which, as in a temporary torpor, the patient for a time continues, the disease then exhibits itself

under a new form, though still retaining the mucous surfaces for its particular seat, unless, as before mentioned, the patient succumbs under the violence of the shock. Looking upon the consecutive fever then as the result of the particular poison, which produced the first symptoms of the disease, it seems but reasonable our treatment should be directed to the neutralization of the agent, whatever it may be.

The fever, which is characterized by a hot dry skin, urgent thirst, occasional sickness, and diarrhœa, a dry tongue, and consecutively the head or chest symptoms, which occasionally attend upon an attack of typhus, are all indicative of a poison existing in the blood, and though time may ultimately favour the patient, by an elimination of the poison through the natural channels, I cannot believe that any attempt at restoring the secretions by medicines usually called alterative, can have any beneficial effect on the disease. The cause of the disturbance is the matter for our investigation, and by removing that, the secretive organs will of themselves be restored to healthy action.

ARE THERE ANY ANALOGIES BETWEEN CHOLERA AND OTHER EPIDEMIC DISEASES?

Before answering this question we must distinctly understand what is meant by an attack of cholera. We must not consider that only those who turn blue on the skin, become pulseless at the wrist, have the cold tongue, the vomiting, and diarrhœa, and cold clammy sweat, are suffering an attack, any more than we should wait for the severest and most extreme symptoms of smallpox or scarlatina before we pronounce our opinion on the nature of the disease. During an epidemic of smallpox or scarlatina there are certain premonitory symptoms by which we may generally be guided to a diagnosis of the disease, the eruption is the development of the previously latent poison, and our opinion is confirmed by

this result. In these cases we do not withhold our opinion, because the patient has not evinced the most alarming symptoms, such as extensive ulceration of the throat, or enormous abscesses of the parotid glands, or sudden sinking of the vital powers from effects of scarlatinal poison,—there are unerring signs of the disease long before these events take place, so are there in attacks of cholera; and there can be no question, when we become more familiar with the disease, the profession will be more alive to its approaches, and the public more cognizant of its early symptoms.

The nature of an attack of cholera has before been considered. I now proceed to point out what appear to be the analogies between this and other epidemic diseases.

We first remark, that a specific poison is the origin of this as of all epidemic diseases. Secondly, that there is a tendency in this disease as in others, to escape, as it were, from the system; an eruption on the skin, in smallpox, scarlatina, and measles, seems to be the mode of outlet for the poison, but in that under notice the mucous membrane of the stomach and bowels is the region selected for the development of the full force of the affection. In the latter stage of cholera there is an exudation from the skin of a peculiar nature, unlike to anything we are in the habit of observing in other diseases: this appears to me to be analogous to the diarrhœa, which is an almost invariable attendant upon the latter stages of the exanthemata. We may therefore, without any great stretch of the imagination, regard the cholera as an inverted form of an epidemic eruptive disease, which might perhaps be called enanthem; for since the evacuations of cholera patients contain a considerable amount of epithelium scales, and the liquid which passes from the bowels is literally an exudation of serous fluid through the capillaries of the mucous membrane, the term enanthesis cannot be considered an inappropriate method of describing the affection.

Thirdly. Cholera, like other epidemic diseases, appears sometimes in the sporadic, sometimes in the endemic form; occasionally, also, its visitations are mild; at other times se-

vere. Again, locality appears to exert much influence over the poison—either increasing or diminishing its intensity.

Fourthly. The stages of cholera, like other epidemic diseases, are not always marked by a regular gradation: the course of the disease is sometimes run in a very short space of time, and the train of symptoms passes onwards with great rapidity, the intervals between the stages of the disease, viz. from the seizure to the collapse, being scarcely appreciable.

As to the period of incubation, not much can be said on the subject. It appears, from all that is known, the period must be very short. The chief method of arriving at any conclusion on this head is afforded by the attacks which have occurred on board vessels leaving an infected port. Mr. Kennedy has stated that about two days may be supposed to be the time; and I have heard from a person just landed from America that they had cholera on board the ship two days after leaving port; both the persons attacked died, and no other cases occurred during the voyage.

Another instance confirming the two days' interval has lately come to my knowledge. A person who washed the clothes of a cholera patient (an isolated case in the neighbourhood) took cholera two days after and died; her son was also attacked by the disease, and recovered.

Without proceeding further to trace analogies, I will apply the above observations to a common-sense view of the matter.

If we are to regard the cholera as a disease, having its various shades of intensity, as every disease invariably has, would it not be infinitely better to consider every attack of diarrhœa which makes its appearance, in a sudden or unusual manner, as a result of the choleraic poison, and at once to treat the disease in a scientific and professional manner?

Further, we are not yet thoroughly acquainted with the nature of the disease; in fact, who shall say, when diarrhœa commences, whether it is likely to pass on to a severe form of cholera, or at once subside? In many instances nature herself is sufficient for a perfect restitution, without the aid of

art; and over-officiousness in checking diarrhœa, is, I believe, a fruitful source of injury to those who resort to the practice, —I mean, taking the bulk of cases. If it be true that the majority of diarrhœa attacks would of themselves subside, by an ordinary attention to diet, which I believe, from some experience, to be literally the case, we must attribute the recovery to the *vis vitæ* of the individual, in whom the power of resistance is superior to the *vis morbi*. It would appear to be the most scientific method to wait the result of nature's powers before we materially interfere with them, especially too if the diarrhœa of cholera is to be regarded as a means of throwing off something from the system, as in the eruption on the skin in measles, scarlatina, smallpox, etc. Were we to endeavour to check these eruptions at the outset, much constitutional disturbance would probably arise, and considerable mischief might accrue.

We are not without evidence that such has been the result over and over again, nor are we without proof that the sudden arrest of diarrhœa by chalk-mixture and opium, has been productive of much evil; many instances have come under my observation, as well as that of some medical men with whom I have conversed on the subject, where the patients, believing the diarrhœa to be the essence of the disease, they supposed it but necessary to check that and the recovery would be immediate. To their cost, and our sad experience, it is found that though anodynes and absorbents arrest diarrhœa, they have no power over cholera in an advanced stage; indeed, severe vomiting and spasms have often succeeded a sudden arrest of diarrhœa, during the prevalence of this disease in my district, and I have invariably found that the return of the diarrhœa, moderated by treatment, is a most favourable symptom. Looking at the disease in this light, then, as one bearing certain analogies to other epidemic diseases, is it not a fair question to ask how far it is possible for epidemic diarrhœa to be associated with epidemic or Asiatic cholera? We have before observed that scarlet-fever, smallpox, and measles occasionally show themselves in a most malignant, occasionally

in a mild and tractable form; it is not supposed that the poison differs in its characters or elementary nature, whether the disease be severe or mild,* we equally apply the term scarlatina, rubeola, or variola, as the case may be, placing some adjective after each name expressive of the particular form in which the disease exhibits itself. Why, then, should we seek for other causes of a mysterious nature to explain epidemic cholera than such as may be supposed to attach to the appearance of malignant scarlatina? I grant that the remarkable manner in which the disease appears to travel from place to place, offers material for investigation, but is it quite certain that the malignant forms of epidemic diseases have not a similar peculiarity? In 1845, if I mistake not, the smallpox was exceedingly virulent in most parts of this country, and I believe on the Continent also; but particular attention has not been directed to the travelling of this disease, it being considered, and properly, highly contagious. Every professional man must be well aware that malignant forms of the disease almost invariably visit the various quarters of the globe in a successive manner; but these diseases, being familiar to us, and attacking more especially the junior members of society, and again, being more slow in their progress, do not excite that general alarm which is caused by the appearance of an epidemic of cholera.

* Dr. Copland describes three varieties of cholera,—the bilious, the flatulent, and the spasmodic. While speaking of the third variety, he says, "There can be no doubt that the first and third varieties of cholera chiefly differ in degree, and in the circumstance of the latter arising, in most cases, from the operation of causes of a *more intense grade* than those which induced the former."

Dr. Bird says, "The two diseases—'bilious cholera' and 'algide cholera'—are the same morbid states, differing only in degree. During the months of April and May cases of cholera of a bilious, spasmodic, and collapsed form were received into hospital; the chief peculiarities of which were the long continuance of the vomiting and purging, accompanied by gradually decreasing energy in the circulating system and vital powers, before the complete development of the collapsed stage, *which always terminated fatally*."

Again, he says, "There is no real difference between the two forms; the action of causes producing them may differ in intensity, but the morbid changes effected in the constitution by their agency are the same."

I say, how far is it justifiable to associate epidemic diarrhœa with cholera? If we believe the same germs of disease to be in operation in scarlatina simplex as in scarlatina maligna, modified by circumstances with which we are unacquainted, it is not so very monstrous to conjecture that the same germs which induce epidemic diarrhœa under modified circumstances shall induce epidemic cholera; at any rate this doctrine gains remarkable feasibility, from the fact that the sulphur treatment applies equally to diarrhœa as to decided attacks of cholera; indeed, many of the patients under diarrhœa have exclaimed that the medicine acted almost like a charm. Now, from what we know of the therapeutic effects of sulphur, we might rather expect that the action of the bowels would increase, but usually the contrary obtains; this would again show that it must in some way act on the cause of the disease, but in what manner we do not at present pretend to explain; nevertheless the above statement favours the supposition of a similar cause being in operation, as no known therapeutic properties of sulphur combined with a few grains of soda will account for their action in bringing about a cure in cases of diarrhœa and cholera.

It is certainly an extraordinary circumstance that up to the present time (August, 1854), with all our experience of diseases comprehended under the term an epidemic of cholera, such discordant notions exist as to what constitutes an attack of cholera.

It has appeared to me a great inconsistency that the generic terms cholera and diarrhœa should be so confounded together, as they have been in all the published reports which have come under my notice. If a case of cholera is spoken of, it is generally stated to have commenced with diarrhœa, the former term being considered applicable only when certain urgent symptoms supervene on a diarrhœa. We have nothing analogous in medical nomenclature with which I am acquainted to compare with this anomaly.

Now as the chief element or character of the disease called cholera is a flux from the alimentary canal, I am at a loss to

know why the word should be used generically by a transmutation in this form,—a person suffering with frequent rice-water evacuations is said to be affected with choleraic diarrhœa ; this runs a rapid course, the patient dies, and all at once the disease is pronounced cholera maligna.

What need is there for any other generic term than diarrhœa? We have already a variety of adjectives to express the specific forms of diarrhœa, as of other diseases ; in some instances with a refinement bordering on absurdity ; and the climax is complete when choleraic diarrhœa passes into English cholera, spasmodic cholera, cholera maligna, and Asiatic cholera. Ask half-a-dozen professional men to define and mark the limits of any one or all of the diseases said to be indicated by these expressions, and I believe they would require a long consultation before they could arrive at a unanimous conclusion. Why should not three divisions of diarrhœa answer all purposes, and be sufficient to comprise all that can be conceived under the host of epithets now in use, thus:—1. diarrhœa simplex ; 2. diarrhœa spasmica ; 3. diarrhœa maligna? We have here generic and specific terms which can admit of no misinterpretation. That there are varieties of the species is quite certain, but if new names are to be coined for every variation of a disease, the Registrar-General must furnish the profession annually with a dictionary for the purpose of ensuring accuracy in his reports.

I think, however, if all cases were recorded in a tabular form, as under, we should secure the largest amount of success obtainable with the smallest possible expense of time and labour, and the most undoubted accuracy.

I am induced to present this Table as the most simple, compatible with accuracy, that I could suggest, because all those forms I have seen are of such an elaborate nature, that no man with any amount of practice, could possibly record his cases by them ; though, at the same time, I do not undervalue the information capable of being obtained in some cases by those forms.

DIARRHŒA AND CHOLERA REPORT.

COUNTY.			TOWN OR VILLAGE		LOCALITY, ELEVATION, and GEOLOGICAL CHARACTERS.					
Surrey. 1854.			Wandsworth and Battersea.		Alluvial Soil, on banks of Thames.—In some places on a level or below high-water.—In no case more than 10 feet above.					
No.	Date.	Sex.		Age.	Diarrhœa Simplex.	Diarrhœa Spasmica.	Diarrhœa Maligna.	Treatment.	Result.	
		M.	F.						Recovered.	Dead.
1	July 2	1		21	3 A.M. R. W. V.	.5 A.M. A. EE.	× 9 A.M. No. P., no U., B.S.	S. & O. st. S.	July 8. 1	
2	July 4	1		30	× 4½ P. M. R. W. V.	A.E.	S. L., no U.	S.	July 7. 1	
3	July 30	1		26	1 P. M. R. W. V.	× 10 P. M. EE. very severe.	S. B. cold. P. feeble.	S. & O. st. S.	August 10. 1	
4	August 3	1		60	4 A. M. R. W. V.	× 7 P.M. A.EE.	Rigors, S. cold, P. F.	S. & O. st. S.	August 12. 1	

1.—Under Diarrhœa simplex, initials can indicate the character of the evacuations, thus: R. W. for rice-water; B. bilious; F. feculent. If vomiting attends, V.

2.—Under Diarrhœa spasmica, A. can indicate abdominal spasms, E. spasms of extremities; EE. if in the arms and legs; J. for the jaws.

3.—Under Diarrhœa maligna, the variations in the form or extent of collapse may be indicated by any initial chosen by the observer: as, S. B. skin blue; S. L. skin livid; No P. no pulse; No U. no urine. The hour of seizure, and course of symptoms, by the usual method.

4.—Under treatment, the initials of medicine; and a cross × to mark the stage when first seen.

SULPHUR AS A REMEDY IN CHOLERA.*

That sulphur is a valuable medicine is "as old as the hills." It has long been popularly considered as a purifier of the blood, indeed most of us must have a distinct recollection of

* The following occurs in the 'London Practice of Physic,' published in 1692; a digest of Dr. Willis's writings:—

"In the year 1670, about the autumnal equinox, a world of people here were seized with a most dangerous flux (though without blood), and joined with a cruel vomiting, which presently caused great faintings and a total decay of strength. For the cure of this disease no evacuation did good; nay, bleeding, vomiting, and purging did hurt; only cordials, and those of the hottest nature, to wit, such as abounded with spirit and *sulphur*."

the morning dose of brimstone and treacle. Mr. Dickens, however, has immortalized the compound in 'Nicholas Nickleby.' It is seldom that anything obtains popularity unless there be a substantial reason; whether the public understand the matter or not is of little consequence, they obtain an advantage in some way or other, and that is sufficient for them. We have instances in medicine parallel to this: burnt sponge was used as a valuable remedy in scrofulous diseases, but why it was useful could not be understood until the discovery of iodine, when it was found that the properties of the burnt sponge were due to that elementary principle. Sulphur is an important constituent of the human body. It is found in the brain, in the nervous system, in its pure state dissolved, or in combination with fatty or oily matter, for oil is a solvent of sulphur. It is also found as a constituent of protein, and in the blood in combination with albumen and fibrin. Salts of sulphuric acid also exist in notable quantity in most of the secretions and excretions of the human body; in fact, in some form or other, there is no part of the body which does not contain it either in its simple or compound state. This, to my mind, is a strong point in favour of the exhibition of sulphur as a medicine, and I would argue thus:—We are aware that disease depends occasionally upon a deficiency of iron in the blood: we restore to the system that which it has lost, and health returns. We are yet in the dark as to the cause of this tendency to a loss of the ferruginous salt from the blood in young women. We only know it to be a common occurrence; it may arise from their sedentary habits, which allows an insufficient exposure to light, and thus engendering imperfect assimilation; it may be from various other causes; but knowing the fact, may we not also assume that sulphur occasionally may be deficient, though at present we are not able to detect the symptoms which indicate such a state? It is, moreover, quite certain that in some states of the body other constituents of the organism have a tendency to pass away. The experiments instituted by Dr. Bence Jones on the amount of phosphates in the urine during the existence of diseases connected with

the nervous system confirm this opinion. I am told, upon undoubted authority, that the only remedy which has been effectual in the cure of those diseases which have appeared as a murrain among cattle during the last few years, is sulphur; it is usually combined with the sulphate of magnesia, and I strongly suspect were it combined with an alkali, as the carbonate of soda, a larger success would attend the remedy. Here again we appear to have evidence of the requirement of sulphur, and were it more frequently given in the diet, it is possible the disease might be much diminished. I am also told, from whatever cause it matters not, that these diseases are contagious,—that healthy animals brought to Smithfield among those diseased, are liable to be attacked.

Another curious circumstance I have learnt from a neighbour, a very intelligent and observant man. He says he has frequently exhibited sulphur to his pigs, when they have been scoured and cramped; and that an animal might appear in considerable danger in the morning, when a dose or two of sulphur would restore it to perfect health by the evening, the scouring and cramps having entirely ceased.

He has further observed, that pigs killed when suffering under the disease, have the blood dark and pitchy, and that it flows with difficulty; but should sulphur have been given, the blood will have entirely lost its abnormal character.

The effect of sulphur upon man is very rapid. In the great number of cases I have had, ample opportunity has been afforded for observing its influence. Soon after taking a dose of the mixture, a feeling of warmth pervades the abdomen and chest; in about half an hour, if the body be not exposed to the air, a general perspiration breaks out all over the skin, and the characteristic smell of sulphur is unmistakably detected. Should the bowels have been relaxed previously to taking the dose, they in most instances become quiet, and any uneasiness and flatulence are entirely dissipated. The next evacuation which passes has been generally found to have a healthy appearance, both as to consistence and colour. Indeed, in all the bad cases of cholera which I have seen, the

evacuations have always resumed their healthy characters without the aid of any other medicine.*

Should it be proved as I anticipate, that sulphur is an antidote to the cholera poison, it is not unlikely that the same remedy may be available for other epidemic diseases. That such a desideratum is attainable, as a general specific for epidemic diseases, has been the belief of many of our most able physicians of past times, and is the opinion of some of the present day. It is said that the hydrated protosulphuret of iron is an antidote to almost, if not all, the mineral poisons, and with some force of reason; I cannot see, therefore, why one agent should not be efficient in neutralizing all poisons which are capable of generating epidemic disease; for we may infer, that if the poisons be not identical, yet in all probability they have a similar type; and whether they are composed of animal matter in a state of decomposition, having the power of inducing catalytic action in organic liquids, or whether they consist of minute vegetable germs, there is but little reason to apprehend that more than a modification of one type performs the extraordinary work.†

Looking at the human body preparatory to an attack of disease as in a condition of organization predisposed to disturbance in the equilibrium of its functions, it may be regarded as in a state having a tendency to decomposition.‡ Organic liquids, it is well known, are liable to decomposition, unless some agent be used to arrest the process. Alum arrests the process of decomposition in paste. Bichloride of

* The gall bladder is found charged with bile after death from cholera, so that secretion is not suspended.

† Some writers on cholera would establish a difference between cases of endemic and epidemic origin; distinguishing varieties of serious diarrhoea, attended by depression of nervous energy, feebleness of the circulation, and low animal heat, as forms of pseudocholera:—

“The action of the causes producing them may differ in intensity; but the morbid changes effected in the constitution by their agency are the same.” (*Contributions to the Pathology of Cholera*, by James Bird, A.M., M.D.)

By organic liquids is meant liquids containing organic matter.

‡ It is here supposed that a distinction will be understood between real and apparent health.

mercury has a similar effect, as well as preventing the process of germination; many other mineral salts have the same property. This arrest of decomposition is accompanied by an arrest of germination, so that even should it not be effected in the blood, as supposed by Dr. Cowdell, the first steps in the proceeding are commenced in an attack of cholera. Now, supposing this decomposition to be commencing, what agent have we, simple in itself, harmless as regards the vital actions, natural as a constituent of the body, and useful as a stimulant and alterative?

I unhesitatingly affirm that sulphur is that agent; after a dose or two doses of this medicine have been taken, the whole body soon becomes under its influence, every portion of the skin exhales the peculiar odour of that substance, and a genial warmth and moisture pervade the whole surface. When I have discovered this effect to be produced on my patients under the influence of the cholera poison, I have always been able to pronounce them safe, and hitherto I can honestly say without one disappointment. Whether we understand the cause of the power of sulphur over this disease or not, should it interfere with our reliance on it as a remedy? I apprehend there is no one bold enough to assert that they know the *modus operandi* of mercury in syphilis.* I would rather incline to the belief that the cure is effected on the principle before-mentioned, that the bichloride of mercury retards decomposition, and moreover, that it is to the bichloride alone, as a soluble salt, we must attribute the advantage, whatever may have been the form in which the mercury had been originally exhibited. Mialhe has most clearly shown, that no medicine can have an effect upon the system generally, unless it first be absorbed, and to be absorbed, it must first be rendered soluble. Calomel and blue pill we may therefore consider inert, until the chemicals existing in the stomach or bowels shall render them soluble; and to make them so, chlorine must, in some way or other, be obtained for the

* In the uncertainty of the matter, however, does any man hesitate to use mercury as a remedy for Hunterian chancre?

purpose: how this can be brought about is yet a mystery; though we know this much, that there is an abundance of the chlorides in the fluids of the body to supply the necessary amount of chlorine for the purpose.

The use of sulphur has been objected to by many because they could not understand the principle upon which it is supposed to act; the results, however, of its application, as recorded further on, bear ample testimony to its efficacy, and they who use it must, for the present, be satisfied without knowing its *modus operandi*.

Dr. Bird, of the United States, asserts that in the neighbourhood of sulphur springs, or where sulphur abounds in the water, cholera does not prevail. He further says, he has tried sulphur in cholera, and found it a valuable remedy.

Mr. Blacklock, of the Madras Medical Establishment, considers sulphur not only a valuable remedy in cholera, but he believes if sulphur were administered as a prophylactic, cholera might be banished from the army as scurvy has been nearly eradicated from the navy.

Induced by these suggestions to try sulphur in cholera, and being satisfied, from the trial made in 1849, that it was a remedy of great value, I published the results of my experience with cases. Since that time I have had further opportunities of testing its advantages, and these have amply confirmed my opinion. I believe that a fair and judicious use of the remedy will yield results as certain as any within the domain of medicine.

The mode in which I prepare and exhibit the sulphur is as follows:—

R. Sulph. Præcip. Pur.	℥iv	
Sodæ Bicarbon.	℥iv	
Sp. Lavandulæ Co.	℥xxiv.	
Aq. Destillat.	℥lxxii.	Ft. mistura.

The soda and sulphur are first triturated and combined in a mortar, the spirits of lavender then added by degrees, and trituration continued until the whole are well mixed, when

the water is added. Two or three ounces of this compound is dispensed at a time, of which the patient is ordered to take two teaspoonfuls, in a little water, every two, three, or four hours, in simple diarrhœa, but if the case is urgent, every ten minutes or quarter of an hour. In sudden attacks, or if the patient is suffering severely, I commonly add from 10 to 30 minims of Liq. Opii Sed. or Tr. Opii to the first dose of the mixture. The following cases are from my notes, taken at the time the patients were suffering; they are simply brief records of what appeared to me important particulars in reference to the complaint and its treatment by sulphur. I have selected instances which have occurred during the present epidemic (1853 and 1854), entirely omitting those which came under my notice in that of 1848 and 1849).

CASE.—Edwin D., aged fourteen years, went to bed in perfect health and spirits on the night of October 31st. At 4 A.M., November 1st, he was seized with an attack of diarrhœa. His first evacuation was so copious that (according to his own statement) it nearly filled the chamber utensil. He is errand boy to a druggist. He complained of bellyache and relaxation in the morning on going to shop. His master gave him a warm dose of rhubarb; after this a teaspoonful of paregoric. Being no better from these remedies, he gave him an ounce of Board of Health mixture; half to be taken immediately, and to be repeated at 2 P.M. if necessary. At 4½ P.M. the boy's mother applied at my surgery, saying that her son had been purging and vomiting all day, and was very bad. The evacuations, she said, were like water, only with white flakes; and he was suffering severe pains in his belly and legs.

I ordered that he should be kept warm by means of hot bottles to the body and extremities, and administered the sulphur mixture, with a small quantity of Liquor Opii Sedativus.

At 6½ P.M. a messenger came to say he seemed somewhat better. Up to this time I had not seen the lad, in consequence of being required urgently in another direction.

At 8½ P.M. a messenger arrived to say that the lad was not so well. I went immediately to see him. He was perfectly

pulseless; his countenance was sunken and livid; his lips were blue; he had dark areolæ around the eyes; his hands and feet were purple, and the skin shrunken. There was no sweat. The voice was peculiar, resembling the falsetto. He had vomited, and was purged just before my arrival; both of these evacuations were like arrowroot or rice-water. He complained of cramps, and required his legs to be constantly rubbed. Thirst was urgent. He passed no urine. I administered the sulphur mixture, with two minims of *Liquor Opii*, and waited half an hour; I then gave him another dose at 9 P.M. These were both retained; but he was moved twice before I left, at 9¼. Evacuations were the same.

At 10 P.M. a messenger came to say he had not vomited since I first saw him, but the bowels had been moved twice. I now allowed a small quantity of soda-water, as he begged incessantly for cold water to drink.

11¼ P.M. There had been no sickness since 8½ P.M. The bowels continued loose, the stools being the same in character. The mother had substituted a bed-pan instead of getting him out of bed, because the cramps were so severe when he was moved off the bed. The surface was now much warmer; the pulse was perceptible at the wrist. The voice was slightly improved. The eyes were still as sunken, and the dark areolæ as pronounced as before. The spasms of the abdomen were not nearly so severe. He complained bitterly of thirst. I directed him to take sulphur mixture without opium every two hours. Soda-water and arrowroot-water cold, in limited quantities, were allowed as drink. The warm applications to the surface were continued.

Nov. 2, 6½ A.M. He had had a restless night, but slept at intervals. The bowels had been open four times. He was sick at 2 A.M., 4 A.M., and 6 A.M. I visited him at 8 o'clock. The countenance was somewhat improved. The dark areolæ remained. The cheeks were sunken, and the face pinched; still there was a more healthy hue on the skin. Pulse 80, weak. The skin was warm. He had continual sighing. The cramps were much less severe, and only occasional. The

evacuations remained the same. The medicine was continued. During the night the medicine had not been administered as frequently, nor in the doses ordered.

12½ noon. He had had no sickness since 9 A.M. The bowels continued relaxed. He had had short sleeps at intervals, the eyelids only half closed. His countenance was better. The surface was warm. He was restless, and had not passed any urine. He evacuated the bowels in his bed. His pulse was 108. Thirst continued.

3 P.M. He had been sick half an hour previously, rejecting the medicine. In other respects, he remained the same. Pulse 100.

7½ P.M. He had not been sick again; the bowels were still relaxed. His lips were now florid; yesterday at this time they were quite blue. Pulse 96. I ordered a tablespoonful of beef-tea to be taken occasionally.

10 P.M. The bowels had not been moved since 7½ P.M., nor had he been sick. No urine had yet passed. He had taken beef-tea twice, and liked it much. He had dozed for short intervals more tranquilly, with the eyes closed. When awake he tossed his arms about, and sighed very much. He was directed to continue the medicine every two hours.

Nov. 3, 6½ A.M. The father came to my house, bringing with him the first urine (3ij) which had been passed since Tuesday midday. An interval of thirty-six hours had elapsed; for this occurred at 12½ on Wednesday night. The bowels were still loose; there had been slight sickness once, and he had taken half a pint of beef-tea during the night.

9½ A.M. He lay on his side in a tranquil sleep, and had been so for three-quarters of an hour. The countenance was rather flushed. The dark areolæ of the eyes were subsiding. He had had one motion of the same character since seven o'clock. Urine had been passed several times. Pulse 90. He was not roused by the manipulation. I left him asleep, after waiting thirty minutes, ordering a continuance of the medicine and beef-tea as before, with alum whey *ad libitum*.

2 P.M. He continued much the same, but was very delirious two hours since, and could not be kept in bed.

9 P.M. The face was very flushed. The tongue, which had never presented any remarkable appearance, was now florid and dryish. He had slept two hours, with the exception of a few minutes, when he turned in bed. He had passed urine abundantly, and had but two motions since 2 P.M.; the last, though but slightly stained, had, for the first time, a feculent odour. Pulse 80, of moderate strength. He complained of great exhaustion, and extreme soreness and weariness of extremities; also more or less of pain in the region of the stomach, of which he had complained at every visit I paid him. He vomited once, after too large a draught of whey. The medicine was ordered to be taken every four hours.

Nov. 4. The following is the history of the night of the 3rd, from the father's notes. He had a slight motion at 9 $\frac{1}{4}$ P.M.; went to sleep at half-past; awoke at 11, and had some whey. There was then slight wandering. He went to sleep at a quarter to 12; and awoke at 1 A.M., and took medicine. He had a motion, much improved, at 1 $\frac{1}{2}$ A.M.; he took some beef-tea; at 2 $\frac{1}{4}$ A.M. he had a little soda-water, then fell asleep, and slept till 4 A.M. He took a wineglassful of beef-tea, fell asleep immediately, and slept till 5 $\frac{1}{4}$ A.M. The bowels were moved; he took medicine; then dozed, and moved again at a quarter to 7 A.M. He did not ask for drink above once during the whole night.

11 $\frac{1}{2}$ A.M. The countenance was improving. There were blotches on the cheeks like ecchymoses. Pulse 72. There was slight thirst and headache. The bowels were still loose. Urine was abundant. The pupils were natural.

9 P.M. He continued much the same. Pulse 72. The skin was not particularly hot; the tongue was clean. He complained of great soreness all over the body, and slight headache. He had slept at intervals during the day. He had had six motions since 11 $\frac{1}{2}$ A.M. He had eaten a piece of biscuit, and a little toast soaked in beef-tea. The medicine whey, beef-tea, etc., were continued.

Nov. 5, 9½ A.M. He had passed a very tolerable night, and had no wandering. He had had six motions since 9 last night; they were now unequivocally tinged with bile. He complained of intense soreness and headache. The pupils were natural. The urine was abundant. Pulse 72. Tongue clean. Thirst moderate. A drachm of compound tincture of cinchona was ordered to be taken three times a day in water.

8 P.M. He had had six motions since my last visit. The pulse was still 72. The tongue was clean. The skin and head were cool. He had had some disposition to eat. He amused himself this afternoon by looking over some favourite books. Half a drachm of compound tincture of camphor was added to each dose of the bark.

Nov. 6. There was nothing worthy of remark, except that the evacuations had assumed a perfectly bilious appearance.

Nov. 7. He had a perfectly healthy stool to-day, and took a light nourishing diet with relish.

Nov. 12. He was gradually gaining strength.

On the 9th, a rose-coloured eruption made its appearance, which extended pretty generally all over the body, and declined on the fourth day. It had the appearance of typhoid fever eruption, as was also remarked by Dr. Cormack, who saw the case.

CASE II.—Charles D., aged 7, brother to preceding, had relaxed bowels all day on the 5th November, which the parents did not know until evening, when the child appeared very ill, and he told them he had been many times in the day. Having medicine in the house, his mother gave him a dose of sulphur-mixture, and he went to bed at 9 P.M. He slept till 3, when he had a call from the bowels, and was sick. He then took another dose of sulphur-mixture. In half an hour he fell asleep, and slept till 8 A.M. He was then again relaxed and sick.

At 10 A.M., Nov. 6, I was requested to visit him. His mother had dressed him; the little fellow was sitting in a chair, with his head reclining against its back. His lips and hands were livid and cold. The dark areolæ round his eyes

were very pronounced. He had had a motion, and was sick just before I arrived. These evacuations were characteristic of the disease. He passed no urine.

I saw him at 1 P.M., and at 7 P.M. His urgent symptoms had abated. He was neither so sick nor so relaxed, but the evacuations were the same. He had severe pain in the abdominal region, but no cramp of the legs.

10 P.M. There was more general warmth of surface. The countenance was better; his bowels were now nearly quiet. He said he felt better, and that the pain in his belly was gone.

Nov. 7th, 9 A.M. He had had a very restless night, with delirium, constantly getting out of bed, and wanting to put on his clothes. He had rejected everything that he had taken during the night. At 5 A.M. he fell asleep, and slept till 8 o'clock. He then had a dose of medicine, which he retained. His bowels had not been moved after my visit last night until this morning. In this evacuation there was a little colour. The first urine was passed this morning at 4 A.M.; he had not previously passed any for twenty hours. It amounted to about an ounce and a half, of sweet odour, and pale yellow colour.

5 P.M. He had been asleep nearly all day, and had no sickness. One feculent evacuation had passed.

Nov. 8th. He was nearly convalescent.

The father of these children was attacked suddenly with sickness and diarrhoea. He took a full dose of the medicine and went immediately to bed. In a few hours he rose perfectly well.

CASE III.—Sarah C., aged 27, was perfectly well on Nov. 6th. At 3½ A.M., on Nov. 7th, she was seized with bowel complaint. She described her sensations as "a boiling in her inside." The bowels were relaxed a great many times on this morning. She went out for a walk, thinking it might do her good; and was out an hour and a half. When she returned she was very giddy and relaxed. She went to bed at 7 P.M. and slept till 11, when she was roused with pain and relaxation, and did not sleep after this. The bowels were relaxed all the night, without pain.

Nov. 8th. She continued relaxed all the day.

Nov. 9th. She could scarcely rise from her bed in the morning to attend to her children, as she felt so exhausted. At 9 A.M. she sent to a druggist for medicine. Before the messenger returned she was very sick. The Board of Health mixture was sent. Every dose was rejected, and the bowels continued relaxed all day. The evacuations, as described, were quite characteristic.

At 3 P.M. she had severe pains in the shoulders, back, and chest, which came on like cramps. She had slight cramps in the legs.

The above is the history of the case before application was made to me, in part obtained subsequently from the woman herself, and in part from the messenger who came to my house at a quarter-past five. This person said she was very dark about the eyes; her lips were blue; she was cold; her feet and hands were blue and cold. She vomited and was purged at short intervals, and had cramps in her legs. I gave the sulphur-mixture, and ordered a dose every quarter of an hour. In three hours and a half, the messenger returned, saying that the bowels had not been moved since the first dose of the medicine was taken, but the sickness continued. Her appearance was much improved; and, under the use of bottles of hot water, warmth had returned to the surface. I continued the medicine. I ordered the female attendant to report to me at half-past 10. She did not come.

Nov. 10th, 9 A.M. The attendant arrived, saying that the bowels had not been moved all night, but that the sickness was still distressing. In all other respects the patient was better. I ordered a neutral effervescent mixture to be taken every quarter of an hour, and medicine to be continued every two hours.

I first visited her at 12 $\frac{3}{4}$. She was lying in a very exhausted state, with a feeble pulse and sunken countenance. She had been sick but once since half-past 9, and said she felt considerably better. She had not passed any urine since 4 P.M. yesterday.

7 P.M. The sickness and diarrhœa had returned. She had passed about an ounce of urine. The evacuations from the bowels were faintly tinged.

9 $\frac{1}{4}$ P.M. The messenger said that she was better. Ordered to continue the medicine.

Nov. 11th, 10 A.M. The sickness did not entirely leave her till 11 o'clock last night, when she fell asleep, and slept till 1 A.M. The bowels had been relaxed four times during the night, without pain. She was not so thirsty. The motions were improving. The urine was very small in quantity, and not more than an ounce during the night. She was now passing the most of her time in short snatches of sleep.

Nov. 12th, noon. She was dozing comfortably. Her pulse was feeble—90. Thirst was moderate; there was no sickness; the bowels had been moved; the evacuations were nearly natural in colour.

Nov. 13th. She was in a very feeble state, but had no unfavourable symptoms.

Nov. 14th. She was taking bark, and getting on well.

NOTE.—Many cases of diarrhœa, with and without vomiting, have occurred during the last six weeks, all of which have been treated by sulphur; in some few cases a small quantity of opium has been administered in conjunction with the sulphur, but I am inclined to think, from a more extended experience, that it might be omitted altogether.

Some persons have doubted whether the cases reported as successfully treated by sulphur were true cases of cholera; the above histories, however, may possibly remove this doubt.

CASE IV.—July 2nd, 1854, J. R., 21 years. Went to bed much as usual on Saturday night at 11 $\frac{1}{2}$. Had no supper, but bread-and-butter and water-cresses for tea at 6 o'clock. He slept till 3 A.M., and then was roused to be relieved in the bowels. Large quantities passed. Relaxed every half-hour or less after the first call. Cramp in the bowels, legs, and hands, came on about 5 A.M. Motions white, and vomit like dirty water. This man applied at my surgery at 9 A.M. Sunday. He appeared very exhausted, and his countenance was very

livid and sunken. His hands were purple, his skin was bedewed with a clammy sweat, his wrist was pulseless, his tongue was warm, he had passed no urine from the time of his attack. He had been sick on his way to my house. I gave him a dose of the sulphur-mixture with opium. He vomited immediately afterwards. In ten minutes' time I gave him a dose of the sulphur-mixture alone; this remained on the stomach. I sent him home in a cab, and gave directions to his brother who accompanied him to get him to bed, to apply bottles of hot water to his feet and about his body, and to administer the medicine every quarter or half hour.

12 noon. Had been sick twice. Bowels not moved. No urine, skin warm. Pulse returned, very small and thready. Countenance beginning to flush.

1½ P.M. Much the same, no motion, once sick.

5 P.M. Sick twice since 1½. No motion.

7 P.M. Sick about once an hour. No urine. Countenance flushed, skin perspiring and warm, complains of uneasiness of stomach, and slight cramps in the hands, ordered sulphur-mixture every two hours. Sinapism to the abdomen, and soda-water to drink.

10 P.M. No sickness, but occasional retching. Bowels not open. No urine. A profuse warm perspiration.

July 3. Passed a tolerable night. At 5 A.M., after an interval of twenty-four hours, urine was passed to the amount of 5 oz. acid. sp. gr. 1.025. Highly albuminous. Tubular casts in great abundance. Dumb-bell crystals very numerous. No excess of urea. Has had two or three colourless watery evacuations since last night; no sickness. *Vespere*: Has passed a coloured evacuation of moderate consistence, better in every respect.

July 4th. Doing well. No albumen in the urine. On the eighth day from the attack he was quite well.

The advantages of the sulphur remedy are numerous and cogent; the chief are,—1st, its cheapness; 2nd, its abundance; 3rd, its simplicity; 4th, its readiness of access;* 5th, the

* The shepherds in Scotland resorting to it an instance.

freedom from danger in its use; 6th, its applicability to all ages.

It is, of course, unnecessary to exhibit the sulphur in the form prescribed by me; it may be combined in a variety of ways with equal, and probably greater, advantage.

An adjunct of no small use in the treatment of cholera is the administration of alum whey as a beverage. This, sweetened with refined sugar, is both useful and refreshing to the patient; indeed, in some severe cases, it was the only liquid allowed for a few days.

The reasons for the adoption of whey as a diet drink are sufficiently obvious without commenting on them. I do not know whether it has been employed by other medical men, but, if it has, I should be glad to be informed with what success or advantage.

There is one peculiarity in this epidemic which did not mark the last, and which, I think, calls for some notice. After the severe symptoms of an attack have subsided, I have found, in several instances, a continuance of vomiting and diarrhœa, chiefly of a bilious character. To combat these symptoms, I have used with great advantage the following mixture:—

R. Creasoti	m. xvj	
Chloric Ether	ʒij	
Mucilage	ʒss	
Water to	ʒiv.	Mix.

One tablespoonful to be taken every two hours while necessary, the sulphur medicine being continued.

The amount of testimony in favour of the sulphur treatment might be extended over a considerable space of paper; but it is my intention to make it very brief, preferring the most recent experience at home and abroad, of which I have obtained information. My friend, Mr. Edward Riggall, who has been engaged with me in treating the recent cases of this epidemic, has kindly drawn up the following remarks, the result of his independent observations:—

“I was, before trial, somewhat sceptical as to the *superior*

value of your formula for the sulphur mixture in cholera over other methods of treatment; but have now witnessed many in which the characteristic symptoms of that complaint have rapidly vanished after the administration of but few doses of the medicine; and have met with no case in which marked relief of the vomiting and purging was not sooner or later obtained.

“Several remarkable testimonies to its efficacy have also been given me by attendants upon sick persons who have (to use their homely, but expressive phrase) ‘been struck with death’ during the present epidemic, August, 1854: passing in a few minutes from apparent health to a condition of which a ghastly, shrunk, dusky hue of the countenance and general surface, some cerebral confusion, succeeded and relieved by vomiting and purging, or either, and rapid exhaustion were the obvious general signs. In some such instances (examples of which I have observed) a single dose of the medicine, aided, when vomiting is severe, by ten or twenty minims of laudanum, or sedative solution of opium, and the application of a mustard poultice over the stomach, has, when promptly administered, entirely removed the complaint in an hour or two, leaving only exhaustion and abdominal soreness, remediable by rest, mild cool nourishment, and cinchona.

“The beneficial results of the administration of sulphur with soda are so remarkable, that I think it your duty once more to urge upon your professional brethren a fair trial of it, and the importance of securing a genuine preparation for that purpose, since the difficulty of correctly appreciating the *relative* value of the above therapeutical facts can only be met by observations on an extended scale, particularly in the severest forms of the epidemic in India and the colonies.”

Dr. Cormack, in his review of my pamphlet, inserted the following interesting quotation, which appears to me worthy a place here:—

“We have now before us a letter, dated 22nd September, 1849, about business matters, written by a gentleman in Edinburgh to a physician in London, to which the following

postscript is appended :—‘ I saw a man to-day from the south muirs, who told me that his wife and he, as well as many of the people of his remote landward parish, had been very unwell; and, from the symptoms which he mentioned, it was clear that they had suffered from cholera, or had been saved from it. They had no medical man near them, and got no medical attendance, yet there were no deaths. As soon as they found cramps come over them, they took a teaspoonful of powdered brimstone, or, sometimes the flowers of sulphur, mixed with a little whisky, to which was added water, if the sick could not otherwise swallow the dose. The man described the cure as certain, and very rapid. Try this on the London folks; it may serve the afflicted, and do you much good.’ This accidental non-professional testimony seems worthy of notice.”

The following quotation is an extract from a letter received from India, written by W. H. Bradley, Esq., of Aurungabad, now, and for many years past, in the service of the Honourable East India Company, and of the Nizam.

“ The cholera has made its appearance in great force, and leaves me little time to myself. The epidemic has set in with unusual violence after the first showers, and has created not a little alarm among the good folks here. Will you tell Mr. Deane* I found the sulphur treatment *most successful*? He sent me a pamphlet advocating its use some time ago, and I have given it a good trial.”

Mr. T. H. Riches, of Greenwich, has written to me mentioning the recovery of the only two cases of cholera which had occurred to him this season, and he adds, “ I have repeated proofs of the good resulting from the use of sulphur and soda in cases of diarrhœa.” The date of his letter is the 8th of August, 1854.

* Mr. Deane, now (1854) President of the Pharmaceutical Society, sent the copy of my pamphlet to which Mr. Bradley alludes.

CONCLUSION.

On looking over what has been said in the preceding pages, I have felt how imperfectly my task has been accomplished. The active employment of a general practitioner's life leaves him little time for severe study; and, under the present system of medical affairs, much less than might be afforded under better arrangements.

The time occupied in dispensing medicines, and keeping day-books and ledgers, should be applied to making a systematic arrangement and record of cases, in studying works on medicine, and reading those on general literature (for refinement of mind is by no means an element to be despised in the character of the medical practitioner), and in the practice of chemical manipulations, materials for which he will find amply supplied to him even in a very moderate practice. Indeed, in the advanced and rapidly advancing state of science, it requires no inconsiderable portion of time to keep pace with the progress of any branch of scientific knowledge; how much more difficult then must it be to the medical man who has to grapple with chemistry, physiology, pharmacology, pathology, and many other ologies which come within the range of medical inquiry, to accomplish a duty great in itself, without the drudgery of ordinary business!

Until our profession, *as a whole*, shall have cast off the trammels of trade, it will neither obtain the merit it deserves, nor secure the esteem of which it stands in need, because the people, generally speaking, look to the physic, not to the physician's talent, as that which is to be paid for. The medical practitioner is therefore associated in their minds with tradesmen, and if his account is asked for in detail, a rigid attention must be paid to the items of draughts, mixtures, pills, powders, and lotions, or he will perhaps hear of it again, and not in the most pleasant manner. His accounts at present must be based on that principle, or the law affords him

no security in case of disputes. Much more might be said on this subject, but let me apply the observations to our present position as regards epidemic cholera.

The result of the peculiar method of obtaining remuneration for services rendered by our profession is clearly shown to be at the expense of additional professional acquirements, and in a commercial country like this, that such a state of things *should* exist is not to be wondered at; but in our enlightened times, as the present are considered, what system can be worse than one which causes a professional man to occupy his time in the business of a pharmacist and a book-keeper, instead of occupying his (now misappropriated) time in the pursuit of practical science, and in storing his mind with useful information? The public are clearly the losers by this system; and nothing can be more certain than this, that at the termination of the present epidemic, when statistical information might have afforded materials for an able digest of all that had occurred during the prevalence of cholera, connected with medicine or otherwise, it will be found, as after 1832, that statistical records will not avail in furthering the advancement of medical science, from the simple fact, that no well-concerted method has been applied to meet this desideratum.

The professional men, as they are at present engaged, have neither the opportunity nor the inclination to devote themselves *as a body* to professional attainments; their mode of conducting business almost precludes the possibility of success in such an undertaking, even under the most strenuous exertions. The great bulk of the practices of this country average from £300 to about £800 per annum; they are generally conducted by single individuals. What an amount of toil and labour has to be borne to obtain these incomes, small as they are; the mental anxiety suffered when much sickness and mortality prevail, or during attendance upon any dangerous cases, can scarcely be conceived by those who are unconnected with the profession. Let any man ask his professional adviser what leisure he finds during the year; he

will then discover the cause of differences of opinion, want of unanimity, uncertain results of inquiries upon important subjects connected with public health, and all the attendant train of evils inseparable from the present state of medical affairs.

The foregoing observations were made in the previous edition, and after a lapse of five years I see no reason for altering any of the opinions contained in them.

It is shown that the state of affairs is not of
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policy, but as a matter of fact. The state of
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