flat bags, and applied by flannel bandages to the spine, chest, and bowels; with drink of soda water, or carbonate of soda. In the febrile, the treatment I have recommended in my last letter is the best."

In conclusion I will observe, that the alkaline salts being carbonates, appear to exert a very peculiar power in allaying gastric irritation, more so in some cases than opium or sulph. morphine, or effervescing draughts, or the nitric acid—cases of which I should have adduced, had not my paper already trespassed too much on the columns of your very valuable journal. Again, except with emetics, there is scarcely any medicine with which the alkaline salts may not be conveniently combined. Of the mode of treating cholera asphyxia in its various stages, the reader need not to be informed that it is no part of my design to speak.

15, Connaught Terrace,
Feb. 20th, 1832.

P.S. I hope, Mr. Editor, I have said enough to make it desirable, that those gentlemen who have tried the alkaline salts in cholera asphyxia, would be so good as to give the particulars to the public. Have any patients died where the carb. sodæ has had a fair trial?

OBSERVATIONS ON THE
MALIGNANT CHOLERA IN ENGLAND,
AND ITS TREATMENT.

By HENRY W. DODD, Esq. M.R.C.S.L.,
Houghton-le-Spring.

THERE never was any period in the medical literature of this country when a man might be less subject to the imputation of that most inveterate of all maladies the *cacoethes scribendi*, than the present. Amongst the many motives and reasons, hidden and asserted, which have been adduced as apologies for addressing the public on the all-engrossing subject of cholera, I have but one, such at least is my protest, to advance,—an earnest desire to promulgate the results of my experience in this terrific disease; and whilst I candidly confess the errors into which I, in common with many a brother practitioner, have fallen whilst walking by the borrowed lights of the "initiated," I shall record whatever I have found new, useful, or interesting, during my acquaintance with the fatal form of cholera which has prevailed to such an alarming extent in this neighbourhood.

When cholera first appeared in this town

we never dreamed of infringing on the prescriptive province of those who had already possessed such golden opportunities of witnessing its ravages in foreign climes;—we bowed like idol worshippers at the feet of those who, amid the chilling blasts of Russia, or beneath the torrid sun of Asia, had looked on as the scythe of death was reaping its rich and rapid harvest; in short, we followed in implicit faith the directions of those who thus assumed the imposing attitude of experience and practical knowledge. We submitted for awhile to this,—we elevated them, in conjunction with public opinion, to dictatorial power,—we specified with laudanum and brandy,—but we failed in curing our patients. It were useless here to attempt to give even a *resumé* of the jarring theories which obtained when the first cholera case occurred,—to paint the stern negator, or the timid exaggerator, whilst this dreadful infliction was yet distant and unfelt. It came at last and found us unprovided for its approach, and ununited for attack. Amidst the continued toil of his profession, the country practitioner is unable to direct his attention, to the exclusion of other calls equally imperative, to the study of a disease so rapid and fatal in its effects; and he was, naturally enough, led to depend on the authority of those who had not only personally investigated cholera long ere it was engendered in this country, but had also, from their appointments, had ample leisure to examine it here, and decide on its identity with that which they had treated abroad. Whether, however, it be climate (which changes and adapts to its own character alike the animal and vegetable world) that has also worked some modification in this disease, I feel not now called on to determine; but certain it is that though the pathological picture of foreign cholera laid before us accorded well with that which has been so fatally exhibited to us here, we yet found the rules of treatment utterly inefficient and inapplicable. The practitioners of this neighbourhood were taught at length to judge for themselves, and found that cholera claims, equally with other diseases, the exertion of our best discriminative powers, and the scientific application of remedies—not to cholera as a disease uniform in its character and symptoms, but variable as any in the long nosological list.

It was a difficult point to determine, uncertain as we are yet of the manner of its approach, what constitutes a choleric atmosphere; but I observed that the reports from Sunderland, before cholera was declared to be present in this town, followed closely the changes of the weather which occurred at that time; warmth proving more corrective than promotive of the malignancy of

the cases; proving, at least, that temperature possesses some influence over the character of this peculiar malady. About three weeks afterwards, when cholera showed itself in this town, and amongst the workmen of the Hetton Coal Company, I was led to remark the unusual absence of continued fever at this period of the year, and more particularly during weather when we find typhus prevailing to a considerable extent. Now, if it were possible to invent a patho-barometrical scale expressive of the influence which the mutations of the atmosphere have over the health of the inhabitants of certain places, it would not draw too much on our imagination to suppose (where all is presumptive) that the extreme unseasonableness of the weather prior to and during the presence of this epidemic, has carried the vitiated state of the air beyond the degree producing typhus, and rested at that peculiar condition capable of propagating the form of cholera which has swept off so many of the operatives of this district. Probably in the end our discussions on this subject may terminate by considering cholera but a modification or more violent form of typhus.

I feel some hesitation in advancing anything in disproof of the now very prevalent opinion of the contagious nature of cholera; perhaps future contact with it, and a more dispassionate inspection of its workings and progress, should it ever again become a visitant amongst us, may elucidate this undecided question. Few of the continental writers, and amongst the rest Broussais, believe it to be a contagious disorder; and though the terms infection and contagion are, by the bulk of the profession, used synonymously, yet I am here inclined to give to each a distinctive signification. Cholera, in my opinion, is an infectious disease, inasmuch as it is received from a column of pestilential matter arising in, or borne to, certain districts, where it is attracted or detained by local causes hitherto unknown and undefined. I say undefined, as there has been so little regularity as to the kind of place where it has raged, contrasting it with those naturally productive of other endemic complaints; and cholera has been equally fatal amidst the isolated hamlets on the banks of the Tyne and Wear, as amongst the idle, depraved, and dissolute inhabitants of the crowded alleys of the sea-port town. As to contagion, using it in the sense of its derivative, I believe it to be totally inapplicable to cholera. Staggering instances have been adduced, where I have thought it difficult to withhold my conviction of its transmission by human intercommunication; but I have, in every case, been able to satisfy my own mind, that the patient had received the virus from an infected atmosphere, subjected to its

operation at some distant point, whilst labouring under one or more of the predisposing causes which I am about to define.

The disposition to accept the choleric poison may be either *natural* and *hereditary*, or it may be *accidental*. That there is a natural predisposition in some families to be infected with this disease, I have very little doubt; for I have seen many examples of the father, mother, and successively their children, succumbing to the overwhelming malignancy of its course, whilst other families living in their immediate vicinity, and having unchecked intercourse with them and other infected persons, have escaped. The individuals so attacked have always been of a leuco-phlegmatic appearance; indeed, I have never yet seen one of a healthy, sanguine, or florid complexion, die of cholera, and as I know many who have been attended by other practitioners, the same remark holds good.

The *accidental* predisposing causes are—grief, watching, fasting, want of cleanliness, innutritious and irregular diet, the depression which succeeds the excitement from drinking ardent spirits, utero-gestation, and parturition; in short, whatever produces diminished energy of the nervous system, and lessened vascular action to the surfaces. Almost every case which I have been called on to treat or visit in conjunction with others, I have been able to trace to the intermediate operation of some of these causes, without appealing to the theory of contagion, when it is but assumed to exist.

The mode of an attack of cholera is not always the same, though its specific action tends in every case to depress the powers of life; but at what point or condition this resistive force is sufficient to oppose itself to the acceptance of the virus, I am unprepared to define. Those of a sanguine temperament, I assume, possess more of this resistive power than those of a pale complexion and languid circulation—i.e. putting aside the consideration of accidental causes which may affect them; but should any one, although naturally constituted and defended against the insidious approach of the disease, fall, through the operation of any of the accidental causes before enumerated, below *par*, whilst breathing a tainted atmosphere, he will, in all probability, be infected with cholera; but, on the other hand, as long as his body retains sufficient energy—as long as the tone of his system rises superior to the depressive agency of cholera, he may breathe this pestilential matter, without danger of becoming one of its many victims.

In districts where cholera has raged as an epidemic, and I may mention particularly the High Downs, a colliery village in

this neighbourhood, scarcely one individual has escaped being affected with some of its milder premonitory symptoms; this I attribute to the varying constitutions of the persons forming this little community, and the actual capabilities of resistance which each possessed; some succumbing at once to the more violent form of the complaint, whilst others remained uninfected, till some accidental cause, very often the effects of inebriety, rendered them capable of being so. We are all alike subject to the influence of this pestilential vapour, but the labourers of this district are placed under disadvantages from which the operatives of other classes are to a certain degree exempt; and toiling, as they do, from early youth, breathing vitiated air at an excited temperature, are more liable to an attack of cholera than he who lives in well-ventilated rooms, and enjoys better means of restoring the waste, which the comparatively less exhausting nature of his employments has produced.

It is almost impossible to determine what length of time the cholera poison requires for incubation and perfection. I believe it may lurk in the constitution for days and weeks, even when the exciting cause is removed, but when once thrown into operation, its course is rapid and violent; in some instances, not more than eight hours intervening between its first demonstration and the dissolution of the patient. In others, where the constitutional and actual powers of the individual are stronger, its appearance is more gradual, and I have observed that the consecutive fever is fiercer in the direct ratio of the mildness and graduated approach of the primary symptoms. I here suppose the treatment by stimulants not to have been pursued.

I shall not attempt to give you a picture of a case of "true cholera," as it has been designated. Such is now well known to all your readers, professional and otherwise. My only object is to give a detail of treatment, such as has been pursued by the general practitioners of this neighbourhood—a class of the profession which has done more than any other towards the advancement of a more perfect knowledge of cholera, by adding from time to time a series of facts, tending not only to our success in opposing its extension and fatality, but also elucidating the mysterious workings of this novel disorder. I assure you, Sir, it is not our interest to excite unfounded alarm on the subject of cholera. We have been harassed and taken from the routine of our other duties, without the same prospect of remuneration, and the only reward which is likely to accrue, and I grant it is a soothing one, is the consciousness of having given relief to the miserable sufferer, whose

only greater obnoxiousness to this disease was his penury and want, and the fate which denied him the comforts of his richer brother.

Treatment.

As I stated in a prior portion of my letter, when cholera first appeared here, I, like others, pursued the stimulating plan, and, I am sorry to add, most of the first few cases terminated fatally; though in the second case which occurred here (it was presumed to be mild cholera) I bled, and the woman recovered under the exhibition of camphor and opium. Laudanum and brandy, with other stimuli, such as ammonia and the volatile oils, were tried in almost every case without success; and few practitioners, I believe, ever dream of giving them now. Venesection is undoubtedly the best remedy, and when there is depression short of collapse, with vomiting and dejections of sero-mucous matter, without any other more serious symptom of cholera, bleeding acts almost magically in arresting the profuse discharge from the bowels, and the operation of some mild laxative will afterwards effect a cure. Rhubarb and magnesia, or castor oil, I think the best; a natural stool is soon produced; the circulation recovering its equilibrium, an equable heat is diffused over the whole surface of the body. This is the mildest form to which the term cholera may be applied; but when we find a patient lying motionless, except when roused by the excruciating spasm of the extremities; the wrist pulseless; the fingers crimped or corrugated; the face pale and ghastly, with that peculiar turning up of the sunken eye, where the white eye-ball is alone seen through the half-closed lids; the whole surface of the body cold and chilly to the touch; with the other well-known diagnostic marks of cholera, the application of our remedies must be more prompt, or they fail. The first indication here is, undoubtedly, to restore the circulation to the surface. The hot-air bath will effect this as well as anything else; stimulants avail nothing: whilst awaiting their operation, we but lose the time which may be better employed. The air-bath cannot in all cases be procured. Frictions to the surface, more particularly on the course of the spinal column, will be found more beneficial than anything, or the application of mustard sinapisms *over as much of the body as can be effected*. As soon as blood can be procured, a vein in the arm or neck must be opened, for I conceive the abstraction of blood to be more peculiarly advantageous, as it prepares the way for the exhibition and operation of internal remedies. Should our efforts be successful in rousing the dormant action of the brain, and, secondarily, a more plenary

action of the heart and larger vessels, and more particularly where the spasm continues to an extreme degree, the *croton oil* will be found to abate the violence of the latter, and restore the secretions, more rapidly than any other medicine which I have yet seen given. Calomel I have tried more recently, and where the vascular action of the surface is more perfectly established, it answers every object proposed, viz. by restoring all the secretions. An intelligent practitioner in this neighbourhood, who has been very successful in the treatment of cholera, and principally depended on the use of calomel, stated to me that he never felt secure of his patient, even when all the more pressing symptoms were removed, until he saw the mouth affected.

Where the vomiting and purging are excessive, that highly-lauded specific the mustard-emetic may be employed with advantage; but where nervous irritability is overpowered, it is, in my opinion, useless. Capsicum, too, I have seen given after bleeding; but I can scarcely say whether the good effects which followed were the result of relieving the congestion, or from some specific agency of the capsicum itself. A host of other remedies have been tried, and enjoyed an ephemeral reputation. Indeed cholera, like hydrophobia, has been a sort of "debateable land," where the ranks of the *materia medica* have each met and struggled for predominance.

To conclude this paper, which has already exceeded its prescribed bounds, I believe the *lancet* to be our sheet-anchor in the treatment of cholera; it speedily and surely removes the congested burden which oppresses the heart and larger organs; by relieving the circulation, it directly causes the restoration of a natural temperature on the surface of the body, and it gives the only fair chance to the practitioner of applying the principles of his profession to many symptoms which are not uniformly presented in every case of cholera morbus.

Much, I believe, may be done towards preventing the further extension of this fatal disease. It has been named, and truly so, the "poor man's disease." These three words breathe volumes to the wealthy and luxurious; and could they but once behold the widow mourning over the appalling remains of her husband destroyed by this horrid malady, such a scene would do more than any oratorical appeal for the interests of those who are left behind, and are still subject to its fatal influence.

The most important object to be considered with the view of preventing cholera, is to keep the person clean and warm. The poor should be provided with flannel next the skin--the coarser and more irritating

the better; here, fortunately, their advantage and economy coincide. All excitements are hurtful, particularly that arising from the pernicious practice of dram-drinking. In short, give the poorer classes plenty of food and warm clothing, and cholera morbus will soon cease to be epidemic.

Houghton-le-Spring, Feb. 22, 1832.

P.S. A singular fact respecting cholera has reached me since writing the above. At the small sea-port of Hartley, in Northumberland, the disease has been excessively fatal; the persons who made the coffins, together with the women who officiated in laying out the bodies of the deceased, all reside at Leaton-Sluice, only separated from Hartley by a bridge; yet not one of them has been affected with any of the symptoms of cholera, nor has any case occurred in that part of the town.

ON THE
NATURE AND TREATMENT
OF
CHOLERA.

By HENRY PENNECK, M.D., *Penzance.*

As the alarming disease which has been called "cholera" is widely spreading among us, and no means hitherto adopted have had much, if any, effect in diminishing its fatality or in checking its progress, allow me to occupy a page of your Journal with a short sketch of an Essay which I published some time ago, but which does not appear to have yet fallen under your observation.

In that Essay was first promulgated the opinion, that the cholera is a *specific* form of fever; and a mode of treatment was recommended supported by the fairest analogies. The theory, I presume, has made its way, if I may judge from the *original* papers with which some of your correspondents have favoured you, and from the reports of the speeches on the subject in the different societies. When the treatment has been as well received, I shall feel less disposed to complain of want of acknowledgment. That I may not too much trespass on your columns, I will hasten to give you some account of my Essay. In August last I transmitted that Essay to Petersburg, through the Russian Ambassador; and as I had not received an answer, and the disease was already landed on our own shores, I published it in November. I began by an examination of the symptoms and appearances on dissection, both in India and Russia; and felt no hesitation in referring the disease to the family of fever, and showed that the first stage of cold blue