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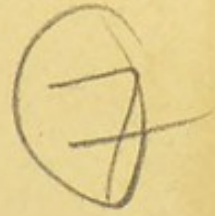
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THOUGHTS



ON

CHOLERA ASPHYXIA.

BY

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&c. &c. &c.

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THOUGHTS

INTRODUCTION

CHOLERA ASYMPTICA.

It may be supposed by speculative persons, that a physician may be more successful in his treatment of a particular disease, if he would withhold himself in proportion as he applies to it, from the study and care of others. In the same manner it has been said, that labour, being divided, may give more conclusive results in the arts, and produce a more perfect execution and elaborate effect in each. This must be very doubtful in reasoning on subjects of medicine in general; but particularly in cases, caused or affected by the power of nervous influence, every one is conversant in the same subject.

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INTRODUCTION.

It may be supposed, by speculative persons, that a physician may be more successful in his treatment of a particular disease, if he would withdraw himself, in proportion as he applies to it, from the study and care of others. In the same manner it has been said, that labour, being divided, may give more conclusive results in the arts, and produce a more perfect execution and elaborate effect in each. This must be very doubtful in reasoning on subjects of medicine in general; but particularly in diseases, caused or affected by the power of nervous influence, every one is correlative in the same subject; all are sympathetic, as well as primary; and each conduces to

explain the indications of others. In the class of those affections called Asthmatic, more certainly, it is probable, than in others, the relative diseases are all sympathetic, or may be expected to become so; and to know one well, may be justly supposed to lead on to a competent experience in others, dependant on similar causes.

If I venture to speak personally of a practice that I pursued in time that has passed, I desire to offer, with deference, a frank explanation of some reasons that now induce me to obtrude my Observations on the public, and still more on the attention of my indulgent friends in our profession.

Having passed a considerable period in the practice of medicine, and been particularly called upon, during more than thirty years of this course, to examine cases of Asthma, or so denominated, I have found it my duty to give a more close

attention to the state of those organs which are known to derive their energy from the eighth pair of nerves, called Sympathetic—from the sixth pair of nerves, and its branches—from the particular influence of the Cœliac Plexus, and the Ganglia, or, as they have been termed, the Little Brains; a series of nerves of extensive communication and undoubted power of excitement over the muscles associated in combinations of action, and of vital importance to the organs of the chest, and the viscera of the belly: thus the tendency of my mind was, to think as much of the condition of the stomach and liver, as of that of the lungs; and this tendency became habitual, from my attention to the subject of the Convulsive Asthma; the first object of interest that had occupied my thoughts in this period of my medical pursuits.

I was led to believe, that, through the

application of various means, which altered the state of the abdominal viscera, and particularly of the liver, the stomach, and duodenum, the pulmonary system of many patients, however faulty in health it had been previously deemed to be, was restored to healthy action. Some patients were then said to be cured of Asthma, and others were gratuitously affirmed to be cured of Consumption. Evidence of this was offered to the public in 1790, and may be seen in my "Practical Inquiry into Disordered Respiration," now in the fifth Edition.

I would not speak more of myself, than to recognise opinions and practice, which, in the fleeting properties of the day, may not be accurately given to the right owner. I beg, therefore, to show occasionally, in the following remarks, how far, and how particularly, the opinions that were conceived in early experience have been preserved in

more mature and diffusive pursuits of study, and may now possibly be allowed a place among the medical utilities of our afflicted country.

But we anticipate that the predisposition, rather than the combined disorder, called Asphyxia, may be soon the only object of our anxiety. The union of *Malaria* with morbid constitutions, affected with Cholera, may be expected to cease. I trust that Providence will grant this amelioration of the calamity, leaving to us the grateful duty only of exerting, under its favour, our best efforts to remove all the causes that may again generate it, or serve to aggravate its danger. To restore the energy of the nerves, and to assist in overcoming the double malady, or in curing the simple predisposition of the English Cholera, I offer the following *Thoughts*.

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THOUGHTS, &c.



SECTION I.

THE AFFECTION OF THE NERVES IN CHOLERA.

IF it were allowable to admit the existence of a Chronic Cholera I should affirm the fact, and be ready to adopt the term, for the purpose of more distinctly marking the peculiar nature of the present epidemic, which appears, in truth, to be invested with a double character. We have the Cholera, as it has been described by the ancient writers, as well as by Sydenham, and the modern physicians. This may not be dangerous in general instances, if treated with skill; but we have also, united with it, a dangerous disorder, with virulent and new symptoms, derived from the sedative influence of the air upon the nerves, already too susceptible of injury, in consequence of their weakness and diseased tone.

Cholera, therefore, takes a chronic or acute form, or both. But it is critical and dangerous only in its acute form, arising from its double character, as qualities of additional malignancy are then united to those constituting Cholera Morbus, and it may be then justly termed Cholera Asphyxia. If it be difficult to arrest the progress of an attack of this combined disease, till the means of removing it can be made to enter the constitution, so as to change its virulent character, it cannot, however, be said that the possibility of such change may not be reasonably expected, when it has been made appear that the means of cure proposed agree fully with the cause of the disease, as shown by the analogy of facts.

In proceeding with our consideration of the progress of this Cholera, we shall find that it is not, in all cases, equally rapid and dangerous; and that even the acute form may admit the intervention of new means, if there be evidence to encourage us in their application. Medicine, it is true, must require more or less of time for its useful operation; but though the morbid cause be working for destruction, it is natural to hope—and rational to act upon the hope—that its dangerous progress

may be checked, and the disease removed, be it Cholera or Asphyxia, inasmuch as the same means of cure are directed by a reasoning pathology in both diseases. But there are cases that allow delay, from the absence of symptoms of fatal rapidity, and the means proposed may obtain our confidence, if they are applied with requisite attention to the facts that will be given in the following remarks:—

THE CAUSE OF CHOLERA.

Whether, therefore, this asphyxia be so rapid as to exclude the advantage of the rational means of security that may be offered, or so protracted as to invite more ample consideration, and more varied attempts of skill, I shall place my expectation of being useful on analogies which the disease presents in all its forms, and the facts, as reported by the best authorities. From these it appears, that it may be distinctly referred “to sedative causes, and
 “ primarily to the inert and morbid state of the
 “ *nerves*, whose energy had been *weakened*, *pa-*
 “ *ralized*, or *destroyed*, whilst the *secretions* be-

“ came more and more morbid from the influence
 “ of the same poison that caused the incipient
 “ debility of their tissues.”

Respecting the origin of certain qualities which are supposed to bring the more severe form of this disease, it is admitted that the doctrine of miasmata, having been conveyed by the air, has been frequently advanced by writers, and has met with general support; and if the malignant nature of such miasmata be added to Cholera, its most dangerous character may be immediately assumed.

I take this theory, therefore, to be well established, and to have been sanctioned by able and diligent observers of the course of this disease, though the contagious nature of it may be still unproved to the conviction of others.

But if a proposition so founded be objected to, it must be still true that the nervous tissue of the body is struck with a certain disease, and we desire to improve the means of cure, by offering some suggestions for this object in the following remarks. Depending on a certain agreement between facts and analogies, we think that these may support the assumed condition of the diseased nerves; and

that from the restoration of energy to these nerves, actual benefit is to be expected under the treatment proposed in the Cholera Asphyxia.

THE NERVES OF THE PULMONARY ORGANS.

If we give our consideration to the probable seat of the first reception of the cause of this disease, we cannot deny that the largest surface, and of an organ the most important to the human frame, is most likely to receive the miasmata of the poisoned air in this epidemic. The nervous tissue of the lungs is most susceptible of an attack, and, making a part of the pulmonary system, is most liable to be first affected by the poison. The sympathetic nerve more particularly extends its branches through the structures of the heart and lungs: and the phrenic nerve, passing through the diaphragm, continues its influence for health or disorder by entering into the abdomen, and connecting itself by anastomosis with the cœliac ganglion. Thus, it may be also said, that the continued development of disease enlarges the seat of the cause, and extends the cause itself, as the nerves receive the malignant principle in the secreting tissues of the viscera of the abdomen.

The scheme of local influence, and progress of the nerves that are in question in this inquiry, begins, we may say, with the fifth and sixth pair that make the great intercostal; but the most important must be considered the eighth, or sympathetic nerve; the par vagum, which gives off very soon in the chest, the recurrent nerves and the right and left branches that form the cardiac plexus; the pulmonic and æsophageal plexuses. This nerve next enters the abdomen, where it seems to take the construction of plexus in the most important manner. We have the celiac plexus, the hepatic, the splenic, and renal plexuses, in forming which, the great intercostal gives its communication and assistance. The ganglions are, then, a new source of nervous power; and, according to Munro, there is in the composition of these ganglions an exceeding intimate mixture of minute nerves and vessels. The plexuses, combined of nerve with nerve, are also new sources of nervous energy, and are fitted to detach again branches to various parts.

PREDISPOSITION FROM DISEASED NERVES.

We may inquire, and find it a subject of much interest, if we can satisfy our curiosity by a right inference, into the actual distemper which the nervous cords sustain, when they are affected with a condition which seems so accessible to attacks from aërial acrimony, or the aërial influence of sedative causes of injury. Andral, and other pathologists, may be correct in attributing to the brain and nerves a susceptible character that may give way, and lose its hardness of texture. This is called *ramollissement* by the French anatomists, and seems to have acquired, by their industry, a claim to keep its appellation.

Every structure and tissue of the body appears to be subject to some change or deterioration of its texture under the *ramollissement* that affects it; more particularly, however, this alteration is to be noticed in the nervous system, making a more frequent occurrence than that of the *mollities ossium*.

According to the French writers, an organ may lose its density and firmness, and from apparent

soundness and healthiness of texture in a few days, or in a very short space of time, become a pulp.

This disposition to change is peculiarly attached to the nerves ; and I cannot refrain from adopting the opinion, that this change is a state predisposing to the reception of Cholera Asphyxia.

We are not, however, to consider that the application of a word can settle the whole importance of a morbid state which may be one actual and principal cause of the ready reception of injury from aërial germs of contagion, and the sedative impressions that are conveyed by the atmosphere to *feeble, ill-nourished, and impoverished habits, in foul and close dwellings*. A physician of our own country, eminent for the copious and happy illustrations of his remarks in pathology, has spoken of this softening of the nervous matter, in a way that deserves distinct attention :—

“ A large number of cases of paralysis depend
 “ upon a *softening* of the brain or spinal marrow ;
 “ some cases of fatuity likewise depend upon a softened state of the anterior portion of the brain*.”

* Dr. ELLIOTSON.

The nervous branches, proceeding from the eighth pair—the recurrent nerves, and the cardiac plexus, extend and ramify through the heart and lungs, and all their organic communications: through all of which the influence of this sedative poison is diffused, and transmitted.

By this calamity, a paralytic state is thus permitted to fall on the viscera of the chest and belly, and partially on the powers of the voluntary muscles. If the loss of sense and motion is not inflicted, the more general effect of spasmodic actions, commonly called cramps, is suffered with torture through the external muscles, and limbs of the extreme parts of the body. These painful cramps accompany the morbid actions of the secreting vessels, and the disordered actions of the stomach and bowels, and they seem to be more specially derived from the intestinal canal, and the condition of its coats, than from any other source of nervous sensibility and communication.

CAUSE OF THE CHOLERA ASPHYXIA.

That such is the first seat of the predisposing cause of this asphyxia, is made more and more probable, as the question is considered in combination with the evidence of those analogies that are to be further mentioned. It will not, however, be necessary to carry our remarks into a diffuse and elaborate explanation respecting the seat of its morbid cause. Germs of infection are brought in the air to the pulmonary organs, poisoning their tissue of nerves, previously weakened; and this diseased system of nerves is the first remote cause of Cholera. I assume no exclusive authority for this opinion—it has been largely delivered by others—and has been enforced by very able observers, in a sufficient manner, and cannot be treated as a mere hypothesis. The analogy between the cause of this *acute* disease and the causes of *chronic* pulmonary weaknesses, of slow progress, connecting themselves through the branches, or the various communications of the nerves and plexuses, is manifested by symptoms, to which we must still refer, and which strengthen our depend-

ance upon other analogies which will be made to appear under the treatment that will be proposed.

In speaking of the diseased nerves, I, however, say, that the nature of this asphyxia is not inflammatory; nor is the character of the spasms which occur generally, or particularly, in the extremities or elsewhere, such as to lead us to infer an inflammatory cause. We do not find, in cases of visceral inflammation, as in enteritis, nephritis, hepatitis, that these cramps, or spasms, belong to the inflammatory course of symptoms. On the contrary, my general experience leads me to conclude that a state opposite to that of inflammation actually exists, and causes the muscular spasms in this disease.

The various and multiplied communications which the eighth pair of nerves and the ganglia of the nerves maintain with the organs of the stomach, the liver, and the intestines, must give rise to the most serious reflection, even if the obscurity of the subject should check the expectation of proving all their exact objects and utility. We should not be satisfied with mere conjecture, when any ray of light may afford aid either in the treatment or in the unfolding of the cause of this Cholera. I shall, therefore, appeal to a successful

plan of treating weaknesses of these nerves, and from the analogy of actual cases, draw inferences that may recommend a more effectual treatment of diseased nerves, the cause of Cholera.

I am of opinion, that the force of the stimulant treatment has not been carried as far as it ought to have been ; and I will give, in support of this opinion, a few examples of practice, which, though not connected with Cholera, had been long used in analogous diseases with adequate success. The nerves I have mentioned, and numerous extensions of them, may sustain the loss of energy, causing the lungs to fall into atonic laxity, and debility of action. The alliance of cough, as the aid of nature, under difficulty of breathing, comes then to be exerted, and the patient may be called asthmatic, or consumptive, from a popular, but not scientific view of the symptoms. For in such cases of defect of energy of nerves, the fact is not described, nor the method of cure indicated.

If indeed the symptoms that occur in Cholera may be supposed to obey the influence which the nerves I have mentioned are sure to exert, we must necessarily attribute to that influence injury or benefit to organs, which may thus be precluded from exerting their natural powers, or be irritated

into morbid excess of action. We have before said that the patient may be thus supposed to be affected with consumption or asthma, when no serious complication with such primary complaints ought to have been in question.

More particularly as regards the complicated nature of the present disease, it should be considered, that the subject may be *typhous, depressed by poverty, and the misery of vice*; and, if the influence of foul air be added, the consequence may more suddenly be Cholera Asphyxia; since, to repel the germs of infection, or overcome its power, the whole force of nervous energy may be required to animate the lungs, and invigorate the action of the heart, and large vessels. Cholera may make its attack sooner, and with more danger, if any deficiency of this power exist; and if the energy be not restored before the poisonous influence is extended to the secreting tissues of the stomach, and the viscera of the abdomen, and their coats, disease becomes more fully and speedily established. Effects now become causes—new seats of action are connected with fatal progress, and, a real contagion being created, may be extended from this subject to others.

SECTION II.

THE NERVES—THEIR INFLUENCE.

THE Cholera Asphyxia is the effect of the influence of *Malaria*, falling upon the simple Cholera itself, or the predisposition of diarrhœa, and reduced powers of body. We have spoken generally of the causes of this disease in its double character, we now come to offer more particular facts, that, by their analogy, may lead to further inferences.

The influence, which is afforded by the nervous power to nutrition, may be independent of the action of the brain. (See MAYO, p. 119.) The fifth pair of nerves having been destroyed where it was connected with the ganglion upon the temporal bone, the eye first suffers opacity of the cornea, then of the conjunctiva; and in eight days the cornea ulcerates, and the eye is destroyed. Similar to this effect from the loss of the fifth pair of nerves, is that on the stomach, from the division of the par vagum,

or eighth pair. Inflammation takes place in three or four days, if the patient lives to that time.

From the glands, called conglomerate, an excretory tube issues from each molecule. These tubes generally combine to form a common excretory tube, which consists in a combination of blood vessels and nerves.

The pneumogastric nerve gives fibres to the larynx, the pharynx, and œsophagus, as well as to the trachea and the lungs: they are nerves of sensation and motion; and the application of a stimulant substance may be powerful in its excitement to the trachea or larynx: since there is access to those tubes.

Mr. Vance discovered, and has pointed out the possible external treatment of nerves of the trachea, larynx, and glottis, by direct application of caustic to the nerves of those parts, and without irritating the structure of the trachea and lungs. Having observed that the glottis and neighbouring membranes were subject to irritations and ulcers, that, however, gave no reason to his judgment for thinking that the lungs were affected with inflammation,

he treated the complaint with unaccustomed freedom. The membranes were thickened and full, or the glottis was full and pulpy. The best means in his hands was a solution, in water, of the nitrate of silver, in the proportion of twelve grains to an ounce of water. This was conveyed to the parts by a probang, once in two days. The sponge on the probang received a dram of the solution. The lips of the glottis may be even scarified. By such treatment, the lungs are not irritated. The parts, anasarcous and swelled, are emptied, relieved, and lessened. Thus, it appears, that excitement of the nerves themselves, and their extensions, may be effected without inflammatory irritation being caused to any of the other parts concerned in respiration.

The *burning heat* at the præcordia is to be referred to the state of the cœliac plexus, which lies immediately behind the stomach; the stomach being situated more externally, but the pit of the stomach, or the præcordia, is under the influence of the strongest feeling. This plexus of nervous branches has more sensation, and the power of more sensible communication with ganglia and plexuses immediately connected with the stomach,

the liver, and all the organs of the belly, than any other. It is well known, among boxers, that the part, locally called *pit of the stomach*, may be made the seat of a blow inflicting death, if it be hit. It is from the proximity of the cœliac plexus, or from its actual presence, that this blow may be the cause of real concussion, or apoplexy, affecting the nervous chords at their union in this spot. We observe, that this plexus is situated between the stomach and the pancreas. It is certain, that the stomach alone may receive hard and violent impulses without serious injury, or without dangerous impression; and it may bear, in its internal cavity, the very strongest and most oppressive distension from alimentary matters, or other very hard and insoluble substances; but, externally, the impulsive force of a blow is felt as an urgent inconvenience; and if the stomach be distended, or only moderately full, there is reason to believe, that violent and mechanical pressure of the cœliac artery, or the cœliac plexus, may induce loss of sense and motion, and be the cause of death; the stomach, and its contents, being the medium through which this impulse is given.

We are presently to consider the power of iron over the tissue of nerves, and must claim the confidence of the medical inquirer, in cases which can be manifestly traced to paralytic debility of those numerous nerves, trunks, and branches, and magazines of nervous power in ganglia and plexuses, that pervade the viscera of the chest, and afterwards descend through the diaphragm, and in a similar manner infect the nervous extensions below the diaphragm. The affections named *tic douloureux*, neuralgia, asthma, and all cases of weakened or injured nerves, will prove the truth and efficacy of this tonic power, if it be applied.

If the nervous system be affected in so powerful a manner, by any sedative cause, as to inflict upon its members an inability to exercise the function which should animate and excite other structures to action, we are necessarily going to the basis of disorder when we examine this cause. I shall not only assent to this proposition, but also to the reasonings which have been so often urged, and still more frequently adverted to and quoted by physiologists without contradiction*.

* See Dr. WILSON PHILIP.

Under this lesion of the nerves the temperature of the body, and especially of the lungs, in the first place, is lowered, and the quality of the fluids changed. In proportion to the change thus made in the lungs, the venous blood becomes darker ; the surfaces of all the textures are deranged in their secretions, the office of the pulmonary organs having failed in making arterial blood and heat.

A small degree of such deficiency of heat and oxygen causes a proportionate loss of power and due exercise of function in the pulmonary tubes and air cells. A chronic asthmatic affection is thus caused. Phlegm clogs the passages, and a cough is necessarily exerted to clear them. I call this an asthmatic affection, because it may exist without the spasm of convulsive asthma, which is to be added to the symptom of dyspnœa, making a fit of asthma, by arresting the breathing in an acute and convulsive manner. Whatever I may have said and offered to the public on this state of causes, in the year 1800, and since given in five editions of a "Practical Inquiry into Disordered Respiration," I am very indifferent on my claim to any specific pathology. Physiologists of ardent and persevering minds have worked in this garden, with

more or less success, in producing fruit. I beg to leave their claims without competition, as regards the objects of physiological experiments and hypothetical causes. My practical facts will be asserted as having analogy to such causes, and carrying evidence of remedial means united with the pathology of this asphyxia, as affirmed by others as well as myself*.

And under the supposed fact of a predisposition, consisting of a deteriorated power of nervous influence, generally or locally, of lessened energy in the pulmonary tissues, from the poison of miasmata, and in all the visceral canals, and in the organs of the kidneys and bladder, are we not to see the probability of many and various diseases arising from chronic causes of similar influence? In the cases of asthmatical paroxysms, a limited connexion of organs and textures lost their efficient energy; and if the agency of carbonate of iron or any other agency strengthened the feeble nerves, or restored their healthy functions, we may draw from this useful fact inferences

* See MR. BRODIE.

to encourage our expectations of beneficial results in the asphyxia or more chronic disease of Cholera. The nerves, the plexuses, the ganglions, or little brains of nervous matter through the whole series of nervous fibrils, and also the substances of muscles, and of the capillary vessels in minute circulation to the surface of muscular structure may be affected in their actions, and be still susceptible of relief from similar agencies; they may even be more deeply sensible, when approaching the verge of destruction, from loss of organic energy, and be still capable of restorative influence from new-tried means.

I desire* to guard against the persuasion of an inflammatory and febrile condition being the character of the congestions that are observed in some cases, but not often. We must admit the truth of common observation, that inflammation of a mucous membrane is of a very low degree; the pyrexia is mild, the pulse soft throughout, and congestion may be attended with a black surface, which is often seen after inflammation of the intestines, although there had been no mortification, as had been supposed.

* BAILLIE'S *Morbid Anatomy*.

On handling such congested and black membrane, says Dr. Elliotson, you will “ find it pretty firm
 “ and solid, and without fœtor, and no mortifica-
 “ tion. Mere congestion will make the membrane
 “ nearly black. The more frequent the attacks
 “ of inflammation in any mucous membrane, the
 “ more mild they are, and the more early and
 “ profuse the discharge.”

But we are not bound to the supposition, that such inflammatory congestions, noticed under the presence of Cholera Asphyxia, may not exist ; and if, in this disease, the mucous membrane of the bowels were the seat of inflammatory affection, we may find that poisonous agents, of a sedative character, may cause such effect in a low degree.

THE NERVES AFFECTED FROM EFFLUVIA OF ANIMAL MATTER.

Case.

The influence from impure miasmata upon the texture of the lungs has in many instances caused difficulty of breathing, and often an immediate access of asthma ; on other occasions, a feeble exercise of the functions of the lungs has been the present consequence, without an asthmatic attack

at the time; but weakness of respiration has been first perceived, which has been followed by spasmodic breathing that had not occurred before. The impression of foggy and damp air was succeeded many months afterwards by a real fit of convulsive asthma, in a gentleman who had previously had a hearty constitution, and was under forty years of age. This gentleman traced, without any suggestion of medical remarks, the asthma which he then suffered, to the weak state of his breathing, which debility was incurred by his visiting the corpse of a valued friend, from which he was certain that he had inhaled noxious effluvia, not from infection of disease previously attaching to the body, but from the odour of it, when circumstances had occasioned an unusual delay of burial. The asthma thus caused by effluvia, poisoning the nervous tissue of the lungs in the first instance, made regular returns for a long period, and was only overcome by tonics and change of air.

Such have been the causes of that chronic debility of the nerves which has passed often under my observation, and of which many cases were asthmatic. The effluvia of a dissecting room has had analogous influence with other poisonous agents.

A subject, not fresh, and still more decidedly when perceived to be putrid, in the dissecting room, may cause effects similar, as may be expected from the loss of oxygenation to the blood, and the supply of other vitious properties, in union with the continued action of the poison.—*See* the Remarks of Dr. COPLAND.

TONICS.—IRON.

During the course of more than thirty years, I must have bent my observations pretty closely and generally to the influences which were operating before my eyes on the nervous system, and its dependencies in action through the textures of the human frame. The large scene of practical observation which fortune had spread for my instruction in this town, and its connexions at a distance, has not been wholly neglected. I may have had reason to modify some opinions offered in a work that passed through five large editions, but I have not seen reason for expunging any. The same confidence on which I acted at the early period of 1795, has maintained its force upon my mind, even to the time at which I now write. A retrospect of what has been done by other writers of more acuteness probably than myself, through

the agency of rust of iron, or carbonate of iron, comes to confirm me in the credit I may claim. I look to the treatment of the disorder of nerve, called the tic douloureux; and I must say that the ingenious physician*, Dr. Carmichael, has lost no advantage of reputation by boldly offering the practice which he adopted for the removal of that cruel infliction. This neuralgia and convulsive asthma are cognate complaints; and our lamented and patient friend, Dr. Pemberton, derived no more ease under his suffering of this neuralgia, from other agents, than from carbonate of iron.

Case of Convulsive Asthma.

Very recent opportunity, under the eye of the intelligent and learned Dr. Bostock, has given me evidence of the carbonate of iron being both effectual and safe, in the most tender subject of convulsive asthma with congestion, manifested both in the abdominal viscera and pulmonary organs. Miss Isabella Yates, a child of six years old, niece to Dr. Bostock, had suffered these attacks every month or six weeks for five years. In all her attacks, besides

* See also Mr. HUTCHINSON.

those symptoms that are usual in convulsive asthma, she was affected with a sense of great heat and soreness in the throat. She had not taken the carbonate of iron. I have not been surprised, on some occasions, at a reluctance being felt at making this oxide a remedy, in delicate subjects in asthma. But in this patient, so tender, and of such sensibility, and under the pressure of the actual fit of convulsive asthma, I found no objection ; and I hold that even such a subject may experience the happy removal of spasms and dyspnœa from the use of carbonate of iron, in the most severe fits of convulsive asthma. A paper of six grains of this oxide was given every three hours, in the height of her distress, and when the mother entertained the most fearful apprehension, from the urgent severity of the attack. From the first dose, of six grains, relief was perceptible, and in three more doses the breathing was easy, and the acute attack entirely removed.

I give these examples as affections of the nervous structure particularly demanding tonic treatment, modified, if occasionally necessary, as applied to the lungs or other organs. If the treatment be familiar to the experienced physician, he will still allow that use may be made of its application on the present

occasion, since the means are so decidedly tonic and stimulant as to have been appropriate to well-ascertained cases of diseased nerves, the predisposing state on which *Malaria* falls, and produces Cholera Asphyxia.

I shall give a more full and instructive instance, in the following case, of a patient who, many years ago, had the opinions and advice of several medical men, who all considered his case to be pulmonary consumption far gone.

NERVOUS DEBILITY OF THE LUNGS.

Case.

Mr. T. Gray, being then a member of a numerous family, was twenty years ago well known, and is now living in health, in Mount Street, pursuing his business, of a dealer in horses. This young man was greatly affected with cough and expectoration, at times accompanied by painful dyspnœa. This had been his disorder for more than a year, when his reduction of flesh and strength having gone on, to the alarm of his friends, he applied for the opinions of various physicians. Relief was not obtained; and the fact of a rapid consumption, which had

been the subject of apprehension to his family and friends, was authorised also by his medical advisers. They indeed had left him with the prospect of an incurable disease of the lungs. When I was applied to for my advice, I had the possible advantage of still hoping, with a new opinion respecting his case. The progress of pulmonary consumption must have been undoubted, if the symptoms I now saw had been accompanied with pyrexia and a febrile pulse from the beginning of the disease. A febrile pulse, at this part of its progress, with inflammatory symptoms of pain, or of tubercles, must have marked the phthisical habit. Guided rather by sanguine hope, than a clear view of the origin and causes of this complaint, I ventured to take the symptoms with favourable expectation. I attributed his pulse, now ranging from 90 to 110, to have become so quick from the actual weakness of the organs of respiration; I considered that this weakness, and laxity of muscular fibre, were connected with a more than proportionate morbid debility of the nerves themselves. His large expectoration appeared to be muco-purulent; his night sweats were caused by the defect in nervous energy. If it were a fortunate conjecture that, in the first part of the

progress of this disorder, such nervous debility had been passed over without adequate consideration ; and that symptomatic, but vague appearances were too much relied upon, I might have some hope of advantage from a tonic treatment ; and particularly as a spasmodic action was still apparent in the dyspnœa that affected him. In this view, Mr. G. might be said to be suffering a nervous debility of the lungs, without destruction of substance.

This hope was in fact realized. The means used were entirely of forms of iron, bitters with tincture of iron, the myrrh mixture of Griffith, rhubarb with carbonate of iron. We soon observed considerable amendment from this plan, on which the patient regularly advanced to recovery, and may now be seen in Mount Street, in perfect health.

Thus every instance of nerves acquiring energy, and return of health, from the use of iron, and excitant means, gives to our views a new light, and to our objects of inquiry fresh encouragement of purpose, in treating Cholera Asphyxia.

It was only five or six years ago, that the fol-

lowing case of nervous oppression occurred. It so much resembles the attack of Cholera Asphyxia, as stated by Mr. Orton, that I shall beg to give also his picture of an attack of that sudden disease.

NERVOUS DEBILITY, AND SUDDEN OPPRESSION.

Case.

Mr. H. F., a gentleman, not more than twenty-five years of age, and well known, had made a free use of the luxurious table that he supported, and was taken from his seat to a sofa in a state of giddiness, sickness without vomiting, loss of pulse, and inability to stand or walk. His countenance was sunk, and his power of speaking gone. The distance from his house in Grosvenor Square to mine was so small that I was very soon able to see him; and was in time to give my opinion, that he should not lose blood. I had been intimately acquainted with his family and himself, and derived confidence from my particular knowledge of his habit. All the mustard that could be directly obtained, was mixed with hot water, salt, and black pepper, making a fluid, but thick mixture. He was capable of swallowing this by table

spoonsfull. He had thus taken, in the course of an hour, several spoonsfull, and made efforts as if he would puke. Spiritus Ammoniaë, ℥ij, was then added to two more spoonsfull. He then soon heaved, with more effect, throwing off some contents of his stomach. We proceeded to administer Cayenne pepper, with tincture of senna, and rhubarb, with progressive recovery of power, and he was well the next day, having slept much, with manifest advantage.

According to Mr. Orton, a person is walking in perfect health previous to the attack: “ in an
 “ instant he perceives all the objects around him
 “ appearing to turn round, and fading from his
 “ sight: he falls down, retches, and his pulse is
 “ found to have disappeared from the wrist.”
 Mr. Orton’s remark is, “ If there be an inflamma-
 “ tory state, it must be of the erythematic kind,
 “ affecting the stomach and intestines; and the
 “ morbid appearances are found to be in a great
 “ measure confined to the villous coat,” as in
 gastritis erythematica. “ They are of a dark red
 “ or crimson colour; and there are no adhesions
 “ of the intestines to each other, as frequently is
 “ found in common inflammation of them. Then

“ the state of the system under these affections is
 “ usually one of great debility in all the func-
 “ tions.”

PARALYTIC DEBILITY, AND OPPRESSION OF THE
 GANGLIA OF THE ABDOMEN.

Case.

A peculiar influence from nervous paralysis of a more general character affected the nerves and plexuses, and ganglions, as I conceive, in the following instance :—I had often seen Mr. K. in the course of several years, and I had thus obtained a general knowledge of his habits and constitution. Upon occasions, when he was particularly oppressed with his severe complaint, I should, upon such grounds, have said, that he was affected with internal gout, connected at the same time with congestion of the liver, and with gravel in the urinary organs. These symptoms were, however, always equivocal, and frequently changed. They might have been assigned to hysteria, and uterine irritation in a female. I had however clearly satisfied myself, as to what remedies were essentially required for his relief, to give support to his frame, and to make a pulse, which was often imperceptible to the feel. The most heating

cordials, more or less united with opiates, were sure to answer the indications. I shall give the detail of symptoms under his general attacks, as observed, with familiar care by Mr. Hunt, of Brook Street.

“ Mr. P. K. has been the subject of morbid sensations about the stomach, hypogastric region, and pelvic viscera, several years. Not severe in degree in more than one of the several parts at the same time; but he has constantly dyspeptic symptoms, with extreme flatulence in the stomach and intestines; the secretion of urine variable, and greatly influenced by the sensations of the nerves of the lower belly; at times deeply brown, at other times in larger quantities, and limpid. Secretions from the liver often black, and sometimes reddish brick-dust colour. Also, he has had severe pains of the left side, and loins. His irascibility, also, is augmented often by the apparently morbid state of the ganglionic nerves, and even to a state bordering on phrenzy, succeeded by great depression, both of his spirits and animal powers, even to such a degree, as to cause apprehension of his sinking—a state really to be feared, from the frequent failure of his pulse.”

Pains flying or dispersed over the chest. A dead pain across the arch of the colon. A sharp pain, as if knives were driven into his stomach. Pain, distressing the left side, with enormous quantities of wind. The pit of the stomach most particularly suffers pain.

All his symptoms indicated loss of energy in parts within, and the pulse gave very striking evidence of want of power, from the failure of nervous excitement.

In this state, the congested liver was carefully attended to; calomel and aperients were duly administered; but no increase of power was derived from any means, without the attendant, or frequent interposition of the strongest, and even most heating draughts, or other forms of medicine, after the following example:—

R. Carbonat. Ammoniae, gr. x.
 Pulv. Tragacanth. Compos. gr. x.
 Tincturæ Capsici, ʒss.
 Olei Terebinthin. ʒss.
 Tincturæ Camphoræ Compos. ʒij.
 Misturæ Camphoræ, ʒxij. m.

That the assemblage of symptoms in this disease might have been attributed to hypochondriasis, or

some other disorder in its varying attacks, I admit; but the force and pungency of the remedies afford to my reasoning a positive fact, proving, from their success, and even the necessity of their administration, how much the nervous tissue required their aid, under its loss of power. It was owing to the application of such treatment only, that the secretions were renewed and put forward, and the kidneys, and liver, and bowels, were brought into successful action. Nor is this case less marked as an instance of morbid nerves, because an imprudent use had been long made of spirits and other agents of destructive sedative power. A different means of stimulation only remained to animate the nerves under their prostration of strength; and, as in the acute disease of Cholera Asphyxia, to revive the circulating system, and the secretions, that had become dormant, and nearly dead.

SECTION III.

TREATMENT OF CHOLERA ASPHYXIA,
AND OF DISEASED NERVES.

STIMULANTS AND TONICS.

HAVING seen the convenience of the arrangement of this epidemic into two forms of attack, according to the suggestion of Mr. Orton, we may very safely pursue our plan under the treatment that necessarily applies to both.

It can scarcely be doubted, that the two diseases are greatly intermixed*. They appear to be much confounded from mere identities of character; a confusion so decided as to have raised contradictory sentiments, even among medical authorities of experience, in treating and observing each. It appears probable, that the *second*, or most *severe* form, may include cases of *increased* force and

* See the observations and comments of Dr. JAMES JOHNSON on Cholera, and the duties of the public and parochial societies.

extended danger, of which the symptoms were at first limited to the character of the more mild disease, called Cholera Morbus. It might give light to our views, if we were to make a comparison of the symptoms of each; the common Cholera, and the Cholera Asphyxia. The common Cholera may be given in detail, with much convenience; and we recommend to the medical inquirer to examine the signs it affords, and he will reason himself, we believe, into the fact that, in the extreme force of this disease, and from the effect of its exhaustion, its worst symptoms may personate the symptoms of the Cholera Asphyxia*.

The heart, from the loss of energy which the nerves have suffered, pneumogastric, phrenic, or whatever name may be given them, becomes weaker and weaker in its action. Congestion, through all the organs we have enumerated, is no longer matter of theoretic speculation, but actual fact. We are come, then, to the necessity of the most speedy means that can, by any possible chance of skill, be capable of exciting re-action. When the aid of every fibril of nerves should be obtained, those nervous branches which correspond

* See p. 55.

with the heart, from the organs within the chest, or those below the diaphragm, from their combination with ganglions and plexuses, must be excited as far as possible; every particle of renewed secretion will afford proportionate excitement to each nerve that may have assisted to produce the change; the plexuses and ganglions may be expected to co-operate with fresh power, their natural energy growing into renewed use, with the effect of every new stimulant application.

Under this stimulant treatment, a favourable perspiration may be expected to appear, first on the head and face; and this sweat, if the appropriate means be still continued, will be afterwards extended to the lower parts of the body. It is then to be expected, that action will be also restored to the urinary organs, and a flow of urine may probably take place. These fluid discharges of the kidneys, and the skin, may be contemporaneous or successive, and are in their effects, whether singly or together, the most important of the critical signs of recovery.

In reckoning upon such favourable results, we may not accurately calculate, but we may say that, as two out of three was the average loss of lives

under previous treatment, by this application of means, two out of three may be expected to be saved. Such, I assume, may be the first probable advantage in our progress. But reasoning from analogy would encourage the hope of still greater success over the power of this epidemic; because we may assert, that the endeavour for removal of the disease had never before been made by placing the lever upon the right fulcrum. The ground on which it should have been placed, we affirm to have been the nervous tissue; the sympathetic nerve, and its connections, that have been enumerated, making the principal basis; and if this be the only proper *fulcrum*, the only *lever* that can act upon it with effect is the varied and exciting tonics, and stimulant influences which have been adverted to, and are still further to be the subject of our remarks.

The viscera of the chest and abdomen, particularly the heart, and the tissues of the stomach, liver, intestines, and kidneys, are the organs that now suffer the loss of vitality, with the loss of nervous power. This is the simple fact. The nervous power is only to be revived from the agency of the stimuli, which are peculiarly appli-

cable to this service. All analogy with cognate diseases defends and asserts this truth, whilst bleedings, effervescing draughts, and aperient salts, with calomel, have been, it is true, excluded by the judgment of good observers. But every agent that cools the tissues of the viscera, and takes the heat from them, adds to the asphyxia; and every agent that may give heat, and excite the nerves, must be applied without reserve.

PECULIAR STIMULANTS.

Having seen the utility of stimulant agents, and observed the reported effects in the hands of others, I desire to urge their application; yet I think it unsafe to use, amongst the stimulants of the stomach, brandy, or other spirits, which, to a certain degree, may at first excite the nerves, but may very soon diminish the energy of the brain; and so far influence that of the whole nervous system, as to indicate the most dangerous sedative power over the vitality of all the tissues. It appears that this effect has been inferred from the experiments of Mr. Brodie, whose accuracy is not questioned. If medical agents cannot be advised, as beneficial stimuli, it should be carefully con-

sidered, when means are proposed that they may not increase the malady; which is to be apprehended, if opium and brandy be administered. The stimulants, to act upon the nerves, as most appropriate to their condition, should exclude alcohol, but may be unlimited amongst alkaline and aromatic, terebinthinate and heating agents; and all fiery influences that may be made to touch and excite the nervous fibrils, and the cords themselves, of nervous matter, and these may safely, and with hope of good effect, be applied.

BLEEDING.

I must coincide with those observers of this disease who have condemned venesection. If it lessen the violence of the symptoms, it, at the same time, weakens the force of resistance of the vital powers, without opposing the principle of the malady*. The failing of nervous energy is only to be remedied by excitants, as peculiar as the loss of power of the nerves has been. It has not happened that such loss of power was derived from the compression of the nerves at their origin in the brain.

* See Professor THOMPSON.

Bleeding has not been required to take off a compressing weight in the brain, since, on the contrary, it has been proved that the horizontal position of the body has been too often required for the present sustaining of life; and the upright posture has equally often caused the sinking that has threatened, or even produced death. The contrary influences are the necessary agents to support life, when life is capable of being sustained, in cases so critical and urgent. The stimulants of ammonia, heating aromatics, turpentine, capsicum, melaleuca, or cajeput oil, steel, &c. have afforded testimony that excitant qualities are alone capable of giving hope in the emergency so urgent.

THE ACTUAL CAUTERY.

It has been said that stimuli of the nerves are required as peculiar, as the loss of energy is remarkable in these nerves, through all their branches in the pulmonary and abdominal organs. We have good authority for the fact, that the spinal cord, and the nerves going from it, suffer *ramollissement*. If these are affected with softened texture, we may confidently assume that the ganglia through their course, and the nerves more specially con-

cerned in this malady, suffer an altered condition of their texture also, by becoming soft; and this is the peculiar character of their disease, requiring a peculiar influence from the qualities of the exciting agents that are to be applied. The cautery I believe to have been recommended on the most probable grounds of analogy. I have no doubt that the stimulation of the cords, and its branches, may in this manner be effected with great advantage.

It has been observed that the cautery has been both advised, and actually used with benefit. This practice is ancient, having been recommended by Cælius for asthma*. It agrees with the pathology of the diseased condition of the nerves, and supports the rationale of such practice; of which I do not doubt good evidence was established of efficacy in the asthma, and convulsive affections. (See the Remarks from Mr. Vance's authority†.) The following observations are taken from the authority of Mr. Fleming, of Barochan:—"He spoke of the

* See *Practical Inquiry into Disordered Respiration, &c.*

† See Section II. p. 14.

“ actual cautery in Cholera, which he much pre-
 “ ferred to other modes of treatment in India.
 “ He also highly approves the application of moxa
 “ over the spine or præcordia in the stage of col-
 “ lapse. Success attended this treatment in the
 “ most hopeless cases. In applying the moxa over
 “ the spine, he saturated a small quantity of cotton
 “ wool in spirits of wine, rolled up to the thickness
 “ of the finger, it was then placed over the spine
 “ at the nape of the neck, for a length of nine
 “ inches; and having set fire to it, as soon as it
 “ produced an adequate vesication, they removed it.
 “ When over the præcordia, he prepared small
 “ pellets of cotton, to the number of three or four,
 “ and having placed them at some distance from
 “ each other, set fire to them.”

Applications of the cautery have been recom-
 mended also by the authority of Dr. Barry, but it
 does not appear that they have been pursued. To
 this practice, however, our reasoning gives credit,
 inasmuch as the morbid state of the nerves ap-
 pears to call for such irritants, and all excitants, as
 specific remedies, in their condition.

UNION OF CAUSES.

The miasms in the air will add to predisposing disease*, and together the disease may be virulent in a greater degree, and even fatal. This *malaria* will affect some, and not others. We may possibly say that it may even visit some, and not others. Its influence is from the union of the aërial qualities, or germs of infection, with the predisposition of the frame attacked; and no character of predisposition can unfortunately be more favourable to this junction of malignant causes than that of the Cholera in its common form. But aërial germs of influence are not precluded from a junction with other predisposing diseases, *viz.*—with typhus and diarrhœa. This, however, is not contagion, but an union of causes—the addition of a new influence to a settled and morbid condition of nerves.

We have, therefore, considered that certain affections of the nerves, *ramollissement*, not improbably, may have been predisposing to the disease called

* See the excellent philosophical Papers of Mr. ADDISON, on *Malaria*, &c.

Cholera Asphyxia; and we do not contend against the probable fact, that such predisposition is very often English Cholera Morbus. Internal states of poverty, filth, and foul air, are the nidus of this Cholera, or predisposition. If to this state be added the *malaria*, frequently visiting different parts, Cholera Asphyxia is formed.

DIARRHŒA.

Under my own observation, the tendency to diarrhœa has been for several months past unusually strong in this town. Instances have occurred with and without vomiting; but the looseness has not yielded to those usual remedies—chalk mixture, opium, and ipecacuanha, tincture of catechu, &c.; and treatment of severity, with rhubarb and aperients, has not had any good effect longer than a few days; but capsicum, to the amount of six grains, every four hours, accomplished the cure. The same benefit was experienced in the case of Mr. Woodruff, who had been capable of receiving temporary relief only from the usual remedies for purging, and occasional sickness; but no change of means amongst those usually resorted to for diarrhœa was successful. The diarrhœa would not

be absent longer than three days or four. He then took five grains of capsicum every five hours, and the looseness was removed; and, after several weeks, no return had been experienced.

TREATMENT.—STIMULANTS.

Opiates should only be employed to secure their stimulant influence, avoiding carefully their sedative effect; and the same remark will apply to the use of spirits, which act upon the brain and nervous system in the same way, allowing for some exceptions in particular habits. But the dangerous sinking and prostration of power can only be averted, or opposed successfully, by direct stimulants, internally given and externally applied. These will be applicable, though modified as the habit is more or less excitable, and the cause more or less powerful. Dr. Lange, sanctioned by Sir W. Pym, Dr. Barry, and Dr. Russell, advise that external irritants should be applied along the spine, and at its junction with the head.

The pathologist, who looks to the tissue of nerves as the diseased structure, to be treated on the first principle, will not neglect the consideration of the use of galvanism, particularly

if he assent to the possible identity of powers in galvanism and the nerves*.

The *spasms* internally, and of the limbs, must surely be taken as symptomatic, and as evidently dependant on the general defection of power in the nerves; but if they be sympathetic with the internal injury of those visceral organs only that are most distressed, they must be treated accordingly, by administering heating and stimulant remedies internally. We know that the sense of heat, and even of burning heat and soreness may exist, and be removed with other symptoms of convulsive affection of the nerves, as experience has shown, in the administration of muriated tincture of steel in spasms of the urethra, and in ischuria or strangury, and as we have also proved by the case of Miss Isabella Yates, whose paroxysms of convulsive asthma were always accompanied by heat and soreness of the throat, which affection gave way, and was entirely removed, with the other symptoms, under the use of carbonate of iron†.

* See Dr. WILSON PHILIP and Dr. DAVY.

† See p. 25.

STIMULANTS AND TONICS.

It was proved* that, in those who laboured under Cholera in India, only one-third or one-fourth of carbonic acid, which ought to have been expired, was actually expelled in the air. But the functions of the lungs in other cases were restored by galvanic currents passed through the chest, and by stimulating with ammonia volatilized, so as to impregnate the atmosphere with its fumes.

When, in the most moderate progress of this epidemic, a third of the sufferers died, it appears to have been a very rational duty to apply the most urgent stimulants, during the very brief interval allowed for action and relief. And it cannot for a moment be admitted that the agents which were *not stimulant*, either by immediate fact, or by circulating in the frame to produce this effect upon the organs of oxygenation, and to excite the pulmonary and successively other organs, ought to have taken up the time of the men of skill who attended.

* See Dr. I. DAVY; also Dr. PROUT's Observations.

Of stimulants suddenly diffusible, ammonia, and volatile oils, are advised as most powerful.

Dr. Thompson assumes the fact of a complete paralysis of the nervous system having been produced by a most powerful virus, or poison, exhaled from the bodies of the sick, “not unlike the
“bite of venomous serpents, and the action of
“certain vegetable poisons on the living human
“system; and to this paralysis he attributes all
“the other symptoms.” If it be our opinion that this be too unsparing a description of the contagion, as it may have been, I cannot refuse my whole assent to Dr. Thompson’s deduction,—
“That the first object should be to sustain the
“habit under its impression, and to rouse the
“powers of the circulation.” Here I return to the assertion, that the specific influence of stimulants should be applied to the surfaces where the nerve had first sustained injury; to the stomach, where the nervous paralysis was felt on the first attack from the poison falling on the mucous tissues, and having been rapidly dispersed over the branches and fibrils of the eighth pair of nerves.

It appears to me, as it has done to others, that the digestive organs are all materially influenced

in their health by the relative power which the nerves and muscles exert, to promote digestion in the stomach, and to co-operate with the secretions generally to this essential object. We see it manifested in the sympathies of these organs with the external muscles of the limbs. Violent spasms attack the stomach and bowels at the same instant with the gastronomii muscles, and cease in both at the same time.

It appears also, from the observations of Dr. Pelham Warren* and Mr. Brodie, that the secretions are specially governed and excited by the nerves.

The grievous *anxiety of the præcordia* is felt in Cholera, as well as in other minor diseases of a chronic character. The sympathetic nerve in its course, and in the ganglion before the diaphragm, and behind the stomach, is the seat of this feeling, which is only to be remedied by the excitement of the nerves. The nervous energy must be restored, or *vertigo* and *syncope* will be added to the anxiety of the præcordia. In the application of Prussic acid, the nerves may be so far poisoned,

* The GULSTON Lectures, MSS.

that, under a proportionate diminution of their power, giddiness, vertigo, and loss of sense, may be the effect; and thus the *aura* of a mephitic vapour may infect the branches of the sympathetic nerves as they receive it on the surface of the lungs, and convey it through the diaphragm, to be dispersed, and to infect the heart and vital viscera below; the ganglions, or little centres of brain, conducting to this influence as it spreads. The nervous energy is more and more destroyed in its progress; and it may be said that, in combination with this product, more mischievous miasmata issue to the next human system, that is equally qualified to harbour them, and from body to body, favoured more or less by predisposition of animal matter, and local circumstances of filth, poverty, and closeness.

Deprivation of nervous influence produces spasm; and dyspnœa is produced by dividing the eighth pair of nerves. But these nerves may be weakened in their energy, and gradually grow so far deficient in power of excitement, as to be the cause of dyspnœa without an artificial cause*. We then see the effect in asthma, or a continued dyspnœa,

* See the Case of Miss R.

or possibly hydrothorax, more or less uniting with other symptoms, so as to occasion to the patient the opinion of his having consumption.

When *calomel* has been administered, it has no effect, unless combined with stimulants, when the powers of life were greatly reduced*. It were therefore more safe to avoid every agent that might subtract from the powers of life that remain; and to rest upon the chance that stimulants may give, of restoring the secretions, and, according to the result, to assist by other means the growing relief.

I have reason for thinking, that, amongst the stimulant agents of tonic power, *Turpeth mineral* may be efficient in acting against congestions, or in union with capsicum, in promoting secretions which may pass away congestions: and I recommend the following form, in pills or powders:—

R. Pulv. Capsici, gr. vi.

Subsulphatis Hydrargyri. gr. iv.

Ol. Terebinth. gr. ij.

Misce; fiat Pulvis horis tertiis sumendus.

* See Dr. COPLAND.

SECTION IV.

PREVENTION.

IDENTITY OF THE DISEASES CALLED CHOLERA.

*THERE can be little doubt of the same diseases having fallen under reporting medical men, who, from the questionable character of their symptoms, gave to them different names. And it would appear that the terms of *Cholera Mitior* and *Cholera Gravior*, as suggested for consideration by Mr. Orton, would very well have supplied distinctions under which the profession might have ranged their diseases with great convenience. I will here introduce, for comparison, the symptoms said to constitute each disease.

Cholera is usually in proportion to the heat, and therefore is most prevalent in the middle of summer, and in August†.

* See Section III. p. 36.

† HOOPER, and popular Writers.

DESCRIPTION OF COMMON CHOLERA.

1st. *Symptoms*.—Soreness—distension and flatulence of the stomach and intestines—cramps.

2nd. Then severe vomiting and purging of *bilious* matter—heat—thirst—hurried respiration—quick, weak, and fluttering pulse.

These symptoms cease gradually after two days, or three, in common and not violent cases; but the patient is left in an exhausted state, and much debilitated.

3rd. In violent cases, there is great depression of strength—cold clammy sweats—great anxiety—short and hurried respiration—hiccoughs—irregular and sinking pulse, followed by death—not unfrequently in twenty-four hours.

The above description applies to our “common Bilious Cholera,” distinct from the “Spasmodic, or the Asiatic and Spasmodic Cholera.” Of the more severe Cholera, I shall give the description of Sir William Crichton, from Dr. Bisset Hawkins*.

* See Sir WILLIAM CRICHTON'S Report of the Symptoms.

1st.—General uneasiness—head-ache—giddiness—great languor—oppression at the chest—pain at the pit of the stomach and sides—very weak pulse—frequent vomiting of undigested food and watery fluid of particular odour, with phlegm—frequent purging and severe pains—cessation of urine, or scanty—excessive thirst—cramps from the toes upwards to the body—voice feeble and hoarse—eyes dull and sunk—features changed, and as of a corpse—coldness and blue tinge of extremities—also of the whole body—the lips and tongue blue—cold perspiration—the patient soon exhausted by vomiting and purging—spasms greater, and attack the vital parts—pulsation of the heart scarcely sensible—pulse ceases—some interval of ease—dies in twenty-four or twenty-eight hours.

Surely every means of prevention, as well as of cure, when possible, is a duty upon the State, which devolves to every private person, according to his competence*. The means have failed too often,

* See the sharp admonitions of Dr. JAMES JOHNSON, and of other Writers, in the Medical Journals, and in the *Times*.

after the full development of the disease ; and it is still uncertain, even if the small proportion of the persons who have been restored, from the number attacked, owe their recovery to the method of cure directed and pursued. Let it be considered how far, since the coming of the epidemic, both evacuant and refrigerant means have been pursued, which are now justly condemned as injurious or nugatory. We may now believe that varied plans of support and stimulation would have increased greatly the list of cured.

It has been well suggested, that, as a preventive means, every thing that is stimulant and cordial is to be preferred to neutral means, or to the contrary qualities. Purgation and bleeding, that have been often practised, must be directly condemned and opposed. The treatment here advised under the developed force of the Cholera, will also offer such materials as may be adjusted to the office of prevention, or opposition to the coming mischief. It is useless, and worse, to go on discussing any force or principle of medicinal treatment that does not include, more or less,

the application of tonic, stimulant, or cordial excitants.

Under the paralysis described, as first falling upon the lungs*, the changes of the blood cannot be accomplished, and the secretions are arrested. There must be congestion and stagnation in the large veins, and sinuses of the head, and internal viscera, and a corresponding sinking of the action of the heart, with final stagnation in the heart, and death.

The vomiting has been likened to that of sea sickness †, in which a prone posture leaves the sufferer to comparative ease, abating nausea and tendency to vomit, which, however, directly return if the head be raised, as in sea-sickness; vertigo always preceding, or diarrhœa nearly always, or both.

Patients affected with typhoid diseases are expected to be confined to the class of the poor; and the Asphyxia has been stated to number its cases amongst this class only. But diarrhœa is, to my observation, capable of finding reception in the higher order of population; and I think that it

* See Mr. SEARLE.

† See Mr. LEFEVRE.

has worn a type and obstinacy of character in several instances, that makes it liable to the imputation of partaking of the nature of the Epidemic Cholera. In many cases, the remedy necessary for it has been highly stimulant ; nor could a permanent removal be effected, without using such stimulants as *capsicum*, in doses of six or ten grains, in some cases united with eight or ten grains of *carbonate of ammonia*, and with twenty grains of *carbonate of iron* in others. And these ingredients have entirely answered, by a very few doses in succession, after all other means had failed. Muriated tincture of steel has been most efficient in cases of diarrhœa, typhus, and cholera.

Though the germ of this disease is more rapidly active than that of other epidemics, yet it has a diminished power of propagation the longer it continues : and thus its decline will be manifested under the opposition of medical care, united with ventilation, cleanliness, warm clothing, and good food ; and especially under the use of medicines of cordial, tonic, and stimulant properties. In addition, it has been seen that habit takes from some persons their susceptibility, when contagion

even is to be apprehended. But this supposed contagion depends upon many conditions for its power. The absorbing vessels are more or less quickly excited to act in different people, and of twenty subjects, one only may receive the contagion*, which also may be more or less permanent on the organic tissues. Women and children may more readily escape than men—the strong oftener than the weak—and more in winter than in summer. The more the germs are diluted, and the less concentrated, the less they may be feared, and it has not appeared that the disease can be transmitted beyond a few feet in the open air.

Still, in close places the germs accumulate, and being so concentrated are said, but it is doubtful, that they may attach to persons and things. Respiration, after all, affords the channel for attack; but that only to the injury of subjects who may be predisposed by indigence and foul dwellings, and are of fearful and feeble minds and habits, whilst those who are strong, and bold-spirited, and well ventilated, washed, and fed, need not fear its effects.

* See Mr. DE JONNES, and Mr. CROWDY.

I think that the following Case of Sir Charles Mordaunt may sufficiently mark the distinction between the hectic waste of a consumption and the chronic decline of nervous powers, causing reduction of strength, or partaking possibly a predisposition to Cholera, *under different external forms.*

DEBILITY OF PULMONARY NERVES.

It was in the year 1805 that I was desired to attend a Warwickshire gentleman, who was an object of great interest to his county, and to a large circle of private friends. He had been affected with cough and asthma for a considerable length of time, so that he had carried, for the last two years, all the marks of a consumptive habit. He had profuse expectoration and sweats, but not at regular hectic periods. He suffered pains of the chest and sides—a troublesome tendency to diarrhoea—and the most distressing dyspnoea in the night, which assumed a convulsive form at periods of a week or ten days. He was so emaciated as to make an unusual picture of leanness; and by his friends he was reckoned de-

cidedly in danger of dying in a few months. Relief, even, was scarcely promised him, but, as a probable source of hope, he was advised, by the highest medical authorities, to go to the warmer climate of Portugal. He pursued this measure, and went, in the most debilitated condition, on board his ship. I believe he was first taken to Gibraltar; he was afterwards moved into Spain and Portugal upon a litter, without alleviation of his pulmonary disorder or weakness. After he had staid in these climates without deriving advantage, till he had lost all hope of benefit, he again committed himself to a ship for his return home. I had his assurance, upon his return, that he had kept his bed all the way, and was carried from it when he came to England, with his linen wrappers adhering to his skin, —such was the state to which he was reduced.

Considerable disappointment at his dangerous state of health was at this time felt by the county, from the necessity of supplying a vacancy in the representation; and at this period I was desired to take him under my advice. It is useless to spend description and many words in reporting

a case that, to the opinion of all observers, was that of far-gone consumption. I had, however, said that this gentleman was likely to acquire an improved condition of strength. His friends seized upon this step of encouragement, and with ardour would have his name proposed as representative for Warwickshire. I was, to my surprise, often and anxiously asked, by the supporters of his cause, for fresh and fresh assurances of his progress, and they showed great surprise and satisfaction, when I answered to many of them, that Sir Charles Mordaunt was *not in a pulmonary* consumption. I had, in fact, conceived expectation of much more progress of his future improvement of health, at the period of this public anxiety, than I had ventured to mention in my first opinion. This honourable and grateful man, in less than two months from his return to England, was himself sensible of increased power of body, without increase of cough, or the other symptoms of equivocal safety. He was therefore now brought into the centre of his rejoicing party in the County Hall, from a distance in Wales where I had recommended him to go, with a course of tonic medicine, and other strengtheners of his stomach, and

that he might be exempt from hurry, and public curiosity.

It was now no longer doubtful that he would be able to stand in his place on the hustings, as candidate to represent his county. He was authorised by my assurances, to expect still more powers of body, and the decrease of symptomatic weakness in parts of it. If, indeed, he were not in a consumption, the expenditure of much flesh and corporeal strength was to be compensated by a different course of raising his system, too greatly let down. I could therefore anticipate more and more renovation of bodily health and strength.

I was present when Sir C. M. appeared in his place, in the County Hall, and expressed, in forcible terms, which I am not capable of intruding upon the reader, the grateful assurance of his recovery to health, and his power of engaging himself to execute the public business of this important county. He omitted no expression of his feeling that could gratify his physician and his anxious friends on this occasion of universal popular rejoicing. Sir Charles Mordaunt was unanimously elected Member for Warwickshire in several successive Parliaments, and died only a few years since.

I had never said that he was to be made a perfectly healthy man, but that he would be capable of active public business in Parliament; and, above all, *that he was not cured of a consumption*, because it had not been his disease.

I believe he must have sat in Parliament eighteen or twenty years, suffering in his last year chiefly from asthma and a local affection.

In this case of debility of the nerves of the lungs, the agents used at the very first, and always resorted to when means were required of relief, were the various preparations of iron, and such tonic remedies as cure the asthma, and debilities of nervous structure, but which would have been destructive in tubercular consumption or hæmoptoë.

TREATMENT.—CONSUMPTION.

I have no doubt that a London physician's practice would often afford instances of nervous debility in pulmonary diseases, so readily called consumption by careless or interested observers. I do not believe that the aid of these trumpeters of medical wonders has been courted or countenanced by our dignified and honourable faculty; but is it not almost a vain

attempt to call by the right name these pseudo-ptthisical maladies? The highest ranks encourage the vulgar appetite for miracles, and give examples of their confidence in impostors upon the town. It is thus that pretenders in medicine abuse the credulity and health of the superior classes, by giving false names to their diseases, when they are permitted to get well under their hands. Consumption cured is very easily asserted, and, if a nervous cough attended it, too readily believed.

ANALYSIS, AND SUMMARY.

It does not appear to be questionable whether inquiry and care should apply under the doubtful existence of a contagion in the Cholera Asphyxia. The State has to secure the people from all possible injury; and, in pursuing their official duty, they must take ground that may offer debateable evidence, rather than endanger security to the public health by neglecting to remove doubtful causes of injury. It is enough that we have heard evi-

dence, appearing to manifest that the sudden or uncertain development of disease may cause fatal disorder, if precautions are not called into exercise.

We must therefore exert the efforts of skill, and follow the suggestions of prudence, when the spread of disease calls for them. We then inquire into causes, that effects may be prevented, or be divested of their fatal character.

In the *first Section* we endeavoured to show the theory of an epidemic now existing—that the inquiring mind may not be without a basis of some abstract truths, that may safely lead it forward to useful inferences, in fact and practice; and the causes of Cholera Asphyxia are stated.

In the *second Section*, a further inquiry into symptoms has shown, that analogy may afford support to useful conclusions. It has been found, that many chronic disorders are dependant on a peculiar paralysis, or loss of nervous power, which gives effect to the influence of poisonous miasmata; and that *Malaria* adds to this predisposition such virulence as may constitute the malignant disease called *Cholera Asphyxia*. Many instances are

adduced from chronic diseases, proving the analogy between disorders indisputably nervous and the Epidemic Cholera ; and that such diseases, though called by other names, were really cases of injured or subdued nervous energy, in which the body had lost the power of exercising its pulmonary function, and of producing its healthy secretions, and had received the morbid substitute of spasms or paralysis. Under such prostration of strength, tonics and stimulants were especial instruments of recovery ; affording the deduction, that Cholera Asphyxia, arising from similar causes of destruction of nervous energy, may be treated with advantage in the same way, but with agents still more powerful and pungent, according to its acute and malignant character. Here are presented for illustration, instances of asthma from animal effluvia, and from other causes—of consumption, erroneously so called—of apoplexy from nervous oppression only, without affection of the brain, removed by stimulants and tonics.

In the *third Section*, analogies are also proposed, with additional examples ; in which the treatment is adduced in more detail.

It has appeared just reasoning to insist on the fact, that as so little success had been obtained over the epidemic by former theories and treatment, it should be subjected to such new inquiry as may conduct to better practical results. It may be said, that the methods of treatment had been hitherto neutral or nugatory, and that the new principle here advanced cannot add to the public injury, by its agency against this disease, either by adding to its fatal tendency, or more contracting its brief duration. Little comment is necessary in enforcing this argument;—the public facts are well understood*. And the facts here given are very intelligible, of cases in which iron was administered in the fits of convulsive asthma, with removal of that disease;—of diseased nerves resembling apoplexy, but not that disorder, and removed by the highest order of stimulants;—of consumption, erroneously so called, but removed by iron and other tonics.

In the *fourth Section* we pursue the subject, and present a comparative detail of symptoms of

* See p. 49.

each disease, the common Cholera, and the Asphyxia; we also offer more analogies between chronic cases of *dilapidated or softened nerves*, with names incorrectly given to them; and cases of that paralytic condition of nerves on which Cholera Asphyxia is founded.

In proceeding to the treatment, we find that it can only be expected to be successful, as it is drawn from the practice in these chronic diseases, and as the principle of these diseases is applied to the practice in Cholera Asphyxia.

We shall lastly propose some Forms and Rules of Medicine for useful application, in the two states of the epidemic, called Cholera and Cholera Asphyxia.

MEDICINAL FORMS.

No. I.

R. Subsulphatis Hydrargyri (Turpeth Mineral), gr. ij.

Pulveris Capsici, gr. v.

Misce ; Fiat Pulvis, ter die sumendus.

This Powder is proposed, under the confidence that the property of the Subsulphate should not be allowed to work on the bowels, more than by slight passage downwards ; the purgative effect is not desirable, and should be checked by Tinct. Opii, if necessary.

No. II.

R. Pulveris Capsici, gr. v. ad gr. x.

—— Glycyrrhizæ, gr. v.

Fiat Pulvis, horis tertiis sumendus.

This Powder is proposed to be tried according to the progress of the symptoms ;—some dilution with warm water will add to the efficiency of all these forms, whatever may have been the vehicle in which they have been swallowed.

No. III.

R. Carbonatis Ferri, gr. xij.

Pulv. Capsici, gr. iv.

Misce ; Fiat Pulvis, mane sumendus quotidie.

We consider that there is an urgent necessity for administering Doses of more than moderate stimulating power when the Cholera Asphyxia is developed. The forms now

proposed are very pungent, but cannot be delayed if they are to be used, when the opportunity is so brief. They should be repeated at short intervals, when the disease has been manifested with symptoms of malignity.

When the predisposition only, or common Cholera, or Diarrhœa, has appeared, the powder of iron and capsicum may be given, either every morning, alone, or united with other means; and if the symptoms of Cholera Asphyxia continue, the repetition should be administered every three or four hours.

No. IV.

R. Carbonatis Ferri, 3ss.

Pulv. Capsici, gr. v. ad gr. x.

Fiat Pulvis.

This Powder to be given as proposed for No. III., according to the judgment of the attending medical man.

No. V.

R. Carbonatis Ferri, 3ss.

Ammoniæ, gr. x.

Pulv. Capsici, gr. v. m.

Fiat Pulvis, horis quartis sumendus.

This Powder is proposed under the judgment and direction mentioned for Nos. III. and IV.

No. VI.

R. Subcarbonatis Potassæ, 3ss.

Fiat Pulvis, cum Cyatho Aquæ tepidæ sumendus.

The mineral acids are *not* proper diluents: but diluents, when the stomach will keep them, are still most proper, and

this alkaline draught, dissolved in water, will usefully combine as a diluent and diuretic. When, at short intervals, and according to the urgency of the case, the forms of capsicum, carbonate of iron, or other tonic, or stimulant agents, are administered.

No. VII.

Muriated Tincture of Iron has been most effective, in numerous instances of Typhous and Typhoid cases, and in Diarrhoea. 3ss. of Muriated Tincture of Iron is therefore recommended in dilution with warm water, every hour, or every two or three hours, in the Cholera Asphyxia; and when the malignant pressure of this disease threatens a short interval of life, for the physician or medical adviser to exert his skill and judgment, it is more urgently advised.

FINIS.

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A PRACTICAL INQUIRY

INTO

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DISTINGUISHING THE

SPECIES OF CONVULSIVE ASTHMA,

THEIR CAUSES, AND INDICATIONS OF CURE.

FIFTH EDITION, CORRECTED; WITH AN APPENDIX.

“ Quis diu expirat? Omnia corporis aut incommoda aut pericula per me transierunt; nullum mihi videtur molestius. Quid ni? Aliud enim, quicquid est, ægrotare est; hoc est animam agere. Itaque, medici hanc meditationem mortis vocant.”

SENECA, *de Suspirio*, Epist. liv.

AUTHENTIC NARRATIVE

RELATION OF THE SUFFERINGS OF THE

PRISONERS OF WAR

IN THE

WAR OF 1812

BY CHARLES

OF THE ARMY OF THE UNITED STATES

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THE NARRATIVE OF THE SUFFERINGS OF THE PRISONERS OF WAR IN THE WAR OF 1812, AS GIVEN BY THE PRISONERS THEMSELVES, AND BY THE OFFICERS AND SOLDIERS WHO WERE WITH THEM IN THE PRISONS.

BY THE REV. W. LEITCH, A.M.

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