

Dysentery serosa, or Convulsive nervous 'cholera' of Hindostan : an essay, containing a short statement of its progress from Asia, in 1817, to its suspected appearance in England, in 1831 : wherein a new view of the essential principles, symptoms, and operation of that disease is shewn, and a practical, easy, and efficacious remedy illustrated / by Philanthropos.

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*Anthony Carlisle to the
the Author's best wishes.*

DYSENTERIA SEROSA, *W. H. Gray*

9 *Oct. 1838.*

OR

CONVULSIVE NERVOUS "CHOLERA"

Of Hindostan.

AN ESSAY,

CONTAINING A SHORT STATEMENT OF ITS PROGRESS FROM
ASIA, IN 1817, TO ITS SUSPECTED APPEARANCE
IN ENGLAND, IN 1831;

WHEREIN

A NEW VIEW OF THE ESSENTIAL PRINCIPLES, SYMPTOMS, AND
OPERATION OF THAT DISEASE IS SHEWN; AND A
PRACTICAL, EASY, AND EFFICACIOUS
REMEDY ILLUSTRATED.

....." Si quid novisti rectius istis,
Candidus imperti, si non, his uteri mecum."



By **Philanthropos.**

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INTRODUCTION.

AT length, a type of the fatal Disease, which has so long been designated "*Cholera Morbus*," after a *peregrination* of about fourteen years since its developement at *Jessore*, situated about one hundred miles to the north-east of the city of Calcutta, the capital of Bengal, in Lower India, is confidently stated to have manifested itself at a northern English Port, to which the attention of the Government and the public solicitude is necessarily directed.

That this insidious Malady should have progressed with almost uniform regularity, from Hindostan to Europe, after having apparently suspended its march at *Astrachan*, in Persia, from August 1823; and, after traversing *Syria* and *Georgia*, until it again set forward with increased energy at the city of *Orenburg*, situated in the more eastern or Tartarian Provinces of Russia, in the autumn of 1829, presents another singular *phenomena* in the history of *Epidemics*. It seems that no satisfactory cause can be adduced for its appearance at the latter place, either in the form of miasmatic influence, or *contagion*: since *that period*, it has more or less preserved its essential characteristics, or distinguishing form

and virulence, under every variety of circumstance and locality, whether of camp, city, temperature, or season.

It is foreign to the purpose of a brief Essay, having for its object, a design to shew the distinctive symptoms which mark the features of the malignant form of "Cholera," as contradistinguished from the common *bilious Cholera* of this climate, (the former having been stated to have swept off 50,000,000 of the human species, since its first appearance at Jessore,) to enter into a lengthened detail of all the known circumstances which have attended its progress to the European Continent, or to embark in a prolonged discussion, on its *contagious* or *non-contagious* character, which would, probably, lead to no immediate beneficial result, to aid the purposes of science and humanity ;—the grand aim should be, the application of a sound practicable *Remedy*, and that only. Whether its specific operation rests in a direct contagious power or not, the Disease raging at Sunderland, is declared to be *synonymous* in quality with that of Russia—the Disease of Russia, with that of Astrachan, Bussorah, Calcutta, and Jessore ! It remains, then, for profound *Pathologists* to show what the *alleged* pestilential *fomites* of Asiatic Cholera possess in common with other contagious diseases, under the precise form in which it has appeared at this quarter of the Globe.

As the Author of this small Treatise has had an opportunity of witnessing the Disease in India only, he feels he is incompetent to decide, from his own

observation, as to the correctness of the pathological views and reasonings of others on its *identity* in each Climate; at the same time, he gives full credit to the good intentions of the various Scientific Medical men, who have exerted themselves to trace out and define a certain principle of action to this newly formed Hydra in *Nosology*. The result of his own experience, and having suffered under a modified form of the distemper, which in his case was not suspected to have extended from him to others, who assiduously attended him, goes to establish the opinion, that the disease of India, however fatal, did not generally assume a contagious *cast*; but, as it is an admitted fact in Physiology, that Diseases, not originally in their nature *contagious*, may savour of that principle by the aid of auxiliary causes, he is disposed rather to wait and watch the progress of the present Epidemic, than to pronounce a hasty judgment on a point so truly abstruse and delicate. He has known the Disease of Asia to attack sailors and soldiers indiscriminately, missing men in the same *births*, carrying off others who had been separated, and to have vanished entirely, after passing a certain *parallel* of latitude; and, it would ill become him to join the *contagionists* without full conviction—the *rationale* of their theory must first be established by the test of calm reflection and lengthened observation!

It may be shrewdly asked, why has the Disorder, deemed *Asiatic Cholera*, made its *debut* at a sea-port where direct intercourse with Hamburgh and other

infected places was known to have existed? or why should it appear to have traversed the ocean to that *point*, if not communicable from man to man? In reply, it may be observed, that there has been no evidence of any of the Crews of vessels having had the Disease, and why should they have escaped its *earlier* influence? It may with equal propriety be asked, why did the deadly *plague* of the sixth century, most probably, a similar species of *Distemper*, (although not minutely described by *Procopius*, under the term *Cholera*, and which took its rise in Lower *Egypt*,) traverse the whole habitable Globe for the space of *fifty-two years*, and then suddenly disappear in the midst of its apparently contagious course? It destroyed its victims by *thousands*, generally within twenty-four hours, and yet that Author asserts, that “the Physicians, and those who tended the sick and buried infected persons, continued *free*; and many catching it, they knew not how, and dying instantly.” Again, why did the Disease, termed “the Black Plague,” of the fourteenth century, appear, progress, and disappear, in the same way; or, more recently, that of 1666, offering the same *immunity* to the attendants on the infected? The very convolutions of the sphere under influence of *planetary phenomena*, may, at different periods of time, generate a diseased principle of the earth and its inhabitants, and again return to healthy action—these are mysterious events in the grand scheme of Providence, which cannot be satisfactorily explained, even by the subtile agency of human ingenuity!

It will be observed in the succeeding pages, that the Author proposes to take a very peculiar view of the essential principles of this destructive *agent*, with reference to its *action* on the complex machinery of the human frame. He assumes to himself, perhaps, arrogantly, the task of a *Nomenclator*, but justifiable, as he conceives, on special grounds. In Medical Science, especially, the genuine character of a *Disease* should be expressed by its Name, and not an *indefinite term*:—thus, neither “Cholera,” nor “Cholera Morbus,” are correctly expressive terms, wherewith to designate an important variety of *tropical Disease*, with reference to its essential form, or specific action. In the first place, *Cholera* or “*cholera*,” as derived from the Greek, $\chiολη$, and $\rhoεω$, signifies a flow of heating or angry *Bile*, and *Cholor* from the same source, *passion*. Now, neither bile nor passion have any thing in common with the Asiatic Disease! *Trallians*' definition is certainly more in point, than that of *Celsus*, thus, an “*Alvine flux*,” from $\chiολας$, and $\rhoεω$, why the word “*Morbus*,” has been added, the Author is at a greater loss to account, as it conveys nothing with respect to the real nature of the malady; for in this most horrible of Diseases, instead of there being an *overflow of bile*, there is absolutely a deficiency of that *secretion*, whilst the sufferer labours under an aggravated *serous flux*, the reverse of the common *bilious Cholera* of England. Latterly, “*Cholera Spasmodica*” has been appended, which is certainly more elegant; but, with reference to the preceding positions, not much more illustrative!

In a subject of such vital importance to Society every *step* towards ascertaining the means of lessening the sum of human evil, may be considered worth cherishing, for he who could reserve a single *fact*, from selfish motives, would be an unworthy member of a liberal, enlightened, and honourable Profession ;

“ Homo sum humani nihil,
A me alienum puto,”

was the sublime sentiment expressed by a Heathen :—thus, every man, in his place, should exert himself to arrest the deadly scourge, if really present, by the promulgation of any rational means of relief, and that on purely *public* grounds, which may be deemed as affording an ample apology for this humble undertaking, and its object.

Philanthropos.

London, December 14th, 1831.

SEROUS DYSENTERY,

OR

CONVULSIVE NERVOUS "CHOLERA."

WHATEVER may have been the essential *type* of this direful malady, at its first adventitious appearance in Lower India in the autumn of 1817, it subsequently appears to have assumed nearly a *settled form*, and to have increased in malignity as it progressively visited various populous places, till it reached Bombay in 1818. In 1819, it appeared at Madras in the month of October, and the same year, at Ceylon, an *island* in the Indian Ocean, from whence, it has been asserted, it was conveyed by his Majesty's Frigate, the *Topaze*, to the Isle of France. Be that as it may, the disease which prevailed at that Station, assumed the worst possible form, sparing neither age, sex, nor constitution; in fact, the more robust suffered most severely, having been attacked spontaneously, and the greater number expired under the first *spasm* of the stomach and bowels, before any medical aid could be afforded. This peculiarity, or intractability, may be referred to the influence of *climate*, but it is nevertheless, the converse of that species of the malady which has ravaged Russia and Poland, associating itself to the poorer orders, the aged, diseased, and debilitated. This aggravated feature of the disease, at port St. Louis, was denominated by Monsieur Moreau de Jonnes, the "*Convulsive Colic*," as especially characteristic of its action. The mortality exceeded 20,000 persons, but the governor and medical officers considered it to be purely a

fatal epidemic, and exerted no *restrictions*. It cannot be denied, that some of the crew of the *Topaze*, had suffered from what was termed *Cholera*, during the voyage, but the remainder were perfectly *healthy* on the arrival of the ship at the Colony.

At the Island of Bourbon, notwithstanding the strictest quarantine orders were observed, the same species of epidemic reached *St. Denis*, but only 295 persons were attacked, and of that number, but 175 fell victims; and, it was proved by the most indubitable testimony, to have been more than a fortnight advancing 300 *yards*, and then entirely disappeared. This may, possibly, have arisen from the precautionary measures taken, or it may have derived its influence from a less congenial state of the atmosphere, towards the *extension* of the disease!

Nearly all the islands in the Indian Seas were progressively visited by this scourge of mankind, but it is a fact worthy of observation, that the crews of vessels full out at *sea* were seldom or never attacked. The island of Java suffered dreadfully on the visitation, which was in the year 1821. It has also been stated to have accompanied the invading English army into the Burmese empire, in 1823,—shortly afterwards it penetrated in every direction throughout central India, and all the adjacent kingdoms of the eastern hemisphere, including *China*.

From *Jessore*, which, by its *locality* is especially calculated to produce *malaria*, like the valley of Lower Egypt, from its situation on the river *Ganges*, it diverged to Calcutta in the month of September, (the autumnal or wet season,) in 1817. At this latter city, the Author collected frightful details of its ravages, but here again its capriciousness was marked by assailing chiefly, or nearly exclusively, the *poorer* orders, the native infantry of the army, sailors, and depraved characters—most of those attacked fell under the *first stage* of the disease—early

bleedings, with calomel in *large doses*, combined with opiates, warm-bathings, stimulants, &c., were chiefly resorted to, but with comparatively little avail; and, it is here important to remark, that *excessive purging* of a serous character has more generally attended the disease of *India*, than that of Europe.

Between the period of the year of its first appearance at Calcutta, and October, 1818, this convulsive form of Cholera visited the provinces of Benares, Garrukpore, Delhi, and Bombay. In all these stations, nearly a similar method of treating the disease has been observed, but, alas! with comparatively a small share of success.

In the *Alfred*, a country ship, on entering the straits of Malacca, several of the seamen, (Lascars) and *three* out of four European sailors were attacked, one was bled freely at the commencement, and *died*; the other two, who were not bled, recovered—five, or seven, out of eleven Lascars, died. Two of the officers were attacked, one drank off more than a pint of brandy at the *accession* of the disease, and soon revived; there was a *remedy*! The other was treated medically, he had secondary fever, but recovered; the vessel stood out to sea, and the disease *vanished*. This was nearly three years after it had first ravaged the Peninsula.

On board of the *Abercrombie*, on her passage to India, off the coast of Malabar, the crew were *partially* attacked with Cholera, in its *worst* form, none having been ill before, and the vessel had not touched at any place, for a long time previously infected; *twenty-four*, the whole number assailed, *died*, out of 140 persons, those who were seized never left their hammocks alive! It raged *seven days*, and as soon as the vessel left the coast, (the *parallels* of 72 and 73 degrees, wind S. W. and W. S. W. from the shore,) the disorder entirely disappeared, and no *other* person suffered during the rest of the voyage, or afterwards

for many months, that could be traced. Here, there is an evident illustration of the effects of land tainted atmosphere, or *malaria*, producing *convulsive Cholera*. In post mortem examinations, topical congestion of the *brain* rarely appears in India, except in very full habits; this may be accounted for, by the violent purging carrying off the serum of the blood by *stool*, almost from the *onset*, and in such cases, *Cholera* may fairly be classed as *dysentery*, in another *form*; for, whether the venous blood be conveyed away in excess without previous separation of its parts, or whether the serum from that blood, as a vital component part, is hastily removed from the system by a violent process, is immaterial, the *effects* to the sufferer would be alike, or nearly so!

It has been stated already, that in cold climates the *Convulsive Nervous Cholera* has proved more fatal in the *secondary*, or typhoid state, than that of *collapse*; thus it frequently becomes necessary to save the patient *twice* by the adoption of the most active, if not frequently *violent* means. Indeed, the highly stimulating treatment to which they have almost invariably been subjected, is of itself fully sufficient to produce that *violent re-action*, which has generally been attended with *fatality* in the second stage. The grand object is to relieve the first *spasm* induced by the disease; and, the only chance of saving *life*, lies in the prompt subjugation of that spasm, but, an equal degree of danger is created by producing over excitement to that nervous system, which has already been so sensibly shook, or paralyzed, by the sedative action of the malady. It must be evident, then, that the means to be applied, require to be managed with extreme caution, and even nice discrimination.

Having given this short narrative of a most malignant form of disease, which, to all appearance, had its first rise in a *terrestrial* cause; and, many eminent men having

staked their reputation, that a type of that disease has actually appeared in this island, without any opportunity having offered to detect its importation beyond *surmise*; it becomes imperatively necessary to make known the genuine symptoms of the purely Convulsive Cholera, or *Serous Dysentery* of Hindostan.

In the first place, it is needful to premise, that all *nervous*, weakly, and timid persons, and those of vitiated habits, aged poor people, living in unhealthy and damp situations, with scarcity of food, clothing, or fuel, and free drinkers having deficiency of electrical heat, are more especially *pre-disposed* to such a disease, and they are the most likely to suffer from its earliest effects. The first symptom is generally an unaccountable tremulous sensation over the whole nervous system, like vibration, with sickness of the stomach, inclination to *syncope*, anxiety or pain about the præcordia, cold clammy sweat, without rigor, (the latter being always a prognostic of all other pyrexial or inflammatory affections,) which may be viewed as a peculiar feature; an *intermitting* and scarcely perceptible pulse, great anxiety, giddiness, the tongue swollen and glairy, copious vomiting, and purging of a liquid resembling whey, rice, gruel, or thin frothy size. Sometimes a sensation of burning heat in the *spinal region* and back of the head, the pit of the stomach, or epigastrium, whilst the external surface of the body is corpse-like, and of a leaden colour. In more aggravated cases, the voice falls to a *whistling whisper*,* a total suppression of urine takes place, the abdominal muscles are corrugated and bound like cords over the intestines, the eye sinks deeply beneath a livid circle, the blood drawn from a vein is *black* and never *buffs*, respiration laborious, cramps and spasms of the legs follow in rapid succession, and extend to the trunk of the body, which assumes a *purplish*

* Vox Cholericæ.

or *blue-black hue*; and, whilst the tongue is deadly cold, the sufferer complains of inordinate *thirst*, and the greatest desire for *cold water*, and this desire is generally an *early* and prominent symptom, although the *air* given out from the lungs is like cold vapour. These symptoms, with all their characteristic horrors of a speedy dissolution, do not destroy the tranquillity of the mind, but the patient seems sensible of his *state*, the termination of which is generally within twelve or fourteen hours, long previously to which, he has assumed the hippocratic countenance and form of *death*, but many are cut off almost *instantly*, the blood forsaking the external vessels, and the pulse at the wrist ceasing speedily, after the first onset.

On examining the *stools* of those who have suffered under the preceding forms of attack, and (after the first *faecal* matter has passed off) they generally have been found to consist nearly, if not entirely, of *serum* coagulating by the tests of *heat*, and the *mineral acids*; here then, is a practical illustration of the peculiar action set up in the system, which, in proportion to its violence will necessarily shorten the duration of life, and account for many of the other *morbid* appearances. Many patients die from the effects of the *spasm* produced, but by far the greater proportion perish through the alvine discharge, this is borne out by the number who have fallen in India in the first stage without any *re-action*.

Post mortem examinations have not always afforded any *decided data* wherewith to mark the real character of the disease, but the whole mass of blood has invariably been found more or less disoxygenized, whilst the almost total absence of inflammatory symptoms in any of the vital organs, has afforded another difficult problem for solution, congestions of the venous blood have been found in the brain, lungs, stomach, liver, and kidneys, and in the *cavity of the spinal chord*, in the violent spasmodic cases and sudden

deaths. In the generality of *severe* cases, the spinal marrow was fully dissolved, and in some few instances, had acquired a very pale green or slight blue colour, and in others, extremely yellow. The *left cavity* of the heart and the aorta has been filled with black or hydrogenated blood, but no traces of inflammation—the heart softened in its substance, and of a *livid* hue ; hence, it may not be deemed presumptuous to assert, that the essential principle of action in this most extraordinary malady, consists in its powerfully *disoxygenating quality*, rendering the blood speedily unfit for the sustenance of the vital functions !

Having shewn the characteristics of Indian Convulsive Cholera, and, that they bear, in the purging stage especially, a close analogy to an aggravated form of Dysentery ; we are led to the following inquiry :

What are its essential principles, or, on what class of *organs* or *vital function* do they exert their impressive influence ?

All the facts adduced tend to show, that the whole class of nerves are *primarily* affected ; and, if the *electric* principle of animal heat is interrupted in its passage to or from the brain, or abstracted by some attractive quality of the earth producing the disease, the shock to those nerves must be apparently inevitable.

The essential principle of Indian Cholera is analogous to that which is productive of the worst form of *tertian fever*, a disease well known in Lower India and its islands, and the secondary fever of Asiatic Cholera, is purely of that type ; we have the cold stage, the intermitting pulse, the same disoxygenized quality of the blood, failure of the external senses, and tranquil condition of the mind, of the first stage :—thus, whatever is calculated to abstract *caloric* or vital heat from the brain in the living body, is also calculated to produce intermitting fever, which is always most prevalent in marshy and damp situations, the *hydrogen* generated in large quantities attracting the electric

heat of the human subject, the *latter* possessing the greater affinity for that principle.

This is the most rational theory of the cause of intermittent fever, as sustained by the aid of chemical science. The robust and healthy, or those possessing a large portion of caloric, or being better able to bear the loss, by having the means of restoration, are seldom attacked with intermittent, or but slightly so. The subjects chiefly selected by the disease termed "Cholera" are the poor and weakly, or those, who, by their nervous construction, are predisponently susceptible. Is there not then an affinity of principle without reference to the question of degree?

The active principle of a disease, *sui generis*, capable of producing Asiatic Cholera, or *Serous Dysentery*, is received into the system by the *respirative* organs, and those organs, as has been shewn by dissection, become the *primary* objects* of its impressive influence, and who would *deny*, after the effects shewn, that new principles are quickly generated, which as quickly remove the natural heat of the body. The rapidity of the succeeding symptoms can only be satisfactorily accounted for under this hypothesis. In irritable, vitiated, or diseased habits, it immediately exercises its effects with greater or less force on the *par vagum*, in direct communication with the brain and thoracic viscera; thus, the whole vital organs are immediately susceptible to its action, the heart becomes paralyzed, and stagnation of blood in the cellular tissue of the lungs is the result. In desperate cases of sudden attack, *death* may be produced by the return of venous blood, and its becoming *congested* in the vessels of the brain, as shewn by dissection. Opium, spirits, and heating stimulants, in such cases, must be fatally injurious, and have hastened death in many instances!

The nervous exciteability being checked in its course

* Generally under Asphyxia.

along the spinal canal, a suppression of *urine* takes place, from spasmodic contraction of the bladder, on the same principle that suppression of urine is the frequent result of other *spinal injuries*, generally producing *paralysis* of that organ. The urinary secretion is thrown back on the kidneys, and a sensation of burning heat is sometimes felt in the loins. The substance of these organs have been found swollen, and in a state of *serous* congestion,—the bladder empty and dishrivelled.

These diagnostics do not satisfactorily furnish any arguments in support of the action of a *specific animal poison* in this eastern disorder; but the converse, as *Baron Larrey*, Professor Antomarchi, and others have shewn, it is not communicable in the same way that morbid matter acts, in engendering disease by inoculation, *et cetera*. To throw off the exciting cause, whilst the nerves retain their sensibility, nature sets up an inordinate, or newly formed secreting action, and the serum of the blood being easily separated in the stagnated condition of the circulation, is thrown off by the alimentary canal in excessive quantities. This fact is shewn by its *disuniting* immediately from blood drawn. It is equally evident, the exciting influence of the nervous system on the mass of blood in the heart and arteries is suspended by the loss of its *caloric*; and thus, the absence of that fluid in all the extreme vessels can be accounted for, and the absence of the buffy or inflammatory appearance explained. Hence, large bleedings, generally, are inadmissable, unless at the very accession of the disease, in young or the more vigorous subjects, which, if not pushed too far, will tend to excite re-action and accumulating *heat*!

The secretory surfaces of the thoracic and abdominal viscera, have rarely shown any marks of inflammation in those who have died of Asiatic Cholera, but, on the contrary, have invariably been found flaccid, mucous, or

lividly pale, shewing the extraordinary action to which they had been subjected by the natural efforts to expel the stimulus of the disease, and those efforts more frequently destroying the victim, by removing violently the very means of producing a salutary *re-action*, in the irreparable loss of large quantities of the serous fluid;—separate by any process, *sudden* and *violent*, the serum from the red blood of the healthiest subject, and what would be the result? inevitable spasm, and speedy dissolution!

The great tendency to separation of the vital quality of the blood in its component parts, in persons attacked by Convulsive Cholera, is the effect of suspended circulation, and the absence of stimulus in the *nerves*, produced by a specific action of the disease on those sensitive organs and the lungs, without stopping to define that, which, from its very nature admits of only doubtful *proof*; and, thus the *pathognomic* symptoms which would justify the general loss of blood in a *hot* climate, may preclude that very practice in a *cold* one, and the balance of the circulation be more easily restored in the former; thus, Dr. Burrell's treatment,* (*ad circumstantia, sub judice,*) may have been perfectly correct; but, wherever there exists great previous debility, age, and other disease, such practice is not warranted by experience, and in all cases where *topical congestion* is suspected, the safest course is to abstract blood *locally* by cupping glasses, applied to the chest, nape of the neck, and loins,—whilst *friction* is continued to the rest of the body and limbs.

The exciting stimulus of the true *Asiatic Cholera* exists in a morbid principle, or miasmatic effluvium of an electric character, first generated in the *Delta* of the Ganges, producing a malignant epidemic of a new character, and more nearly allied to the deadly *tertian* of that climate, combined

* See Dr. Burrell's Report on the benefit of early and free venesection in his practice in India.

with Dysentery in a new form as already alluded to, than any other of its known diseases, which, by a concatenation of circumstances, has sometimes partaken of a contagious character, and again resumed more of its original form of *epidemia*, putting on different appearances in different individuals; and, like the low marsh fever of *England*, (which is frequently accompanied with violent purgings of another character,) selecting its victims in an equally capricious manner. Would any experienced Medical Practitioner deny, that low Typhus Fever frequently assumes the appearance of a contagious type, a certain susceptibility or even constitution of air, mind, and habit, being necessary for its developement; and, why should not Indian "Cholera" be governed by the same *phenomena*, without its first principle being essentially contagious?

It has been proved on rational theory, that this miasmatic cause (in the absence of a more definite term) produces, by an unusually speedy process, a *paralysis* of the whole nervous system, and that from such direct action, it is not taken in by the *absorbents*, but, that its proximate effects on the lungs, brain, heart, and whole alimentary canal, illustrate a *sudden shock*, under which all their natural functions are suspended; such a shock must inevitably produce immediate tendency to a febrile condition of the organs of *sensation*, which assumption is borne out by the urgent diagnostic of *thirst* and internal heat at the epigastrium, or spine, whilst the surface of the body is deadly *cold*. The little remaining caloric is condensed, as it were, in the *nerves*, whilst the medium of communication between those organs of sensibility and the circulation appears to have ceased, or become extensively obstructed, as insensibility to the most urgent stimulants and the impaired state of the external senses so fully demonstrate. In opposition to this view, it may be urged, that the nerves cannot be in a state of febrile

diathesis, whilst the mind remains undisturbed; to this assumption it may be answered, that the inactivity of the circulation presents a very satisfactory reason in *physiology* to account for the mental tranquillity existing in the first stages of the disease, which ceases as soon as symptomatic fever succeeds.

The vomiting, in Asiatic Cholera, arises from sympathetic irritation of the stomach, as the *villous coat* of that organ has not shewn any traces of inflammation, in several cases which came under the writer's personal observation. The rapid transmutation of the serous portion of the blood from its crassamentum by an unusual secretion into the intestines, from the causes before mentioned, may be viewed purely in the nature of an hæmorrhagic discharge, changing its usual principles by the peculiarity of the action produced, carrying off rapidly the *oxygen* from the remaining portion of the blood.—How can the blackened condition of that fluid be satisfactorily accounted for, excepting under this hypothesis? If the oxygen remained in the system, the blood would still retain its *florid* colour:—again, the oxygenating principle of that blood is not likely to be taken off by the *exhalent* vessels, when their functions, by the other processes set up, must, under a languid or stagnant circulation, have become suspended. All these circumstances duly considered as *cause* and *effect*, tend to show, that in the true convulsive Cholera of *Asia*, the serous part of the blood is quickly separated, and as quickly passed off by the intestines, and, unless this process is checked by re-action, or some sudden *stimulus* greater than the exciting stimulus of the *disease*, death, without re-action in the stage of *callapse*, must be taken as the certain result, and this is the *pathological* termination of this species of serous Dysentery—the secondary stage is that of fever, and fever only!

THE CURATIVE MEANS.

The following Indications are submitted as the most rational methods of treating this direful malady :

First, by the regenerating influence of heat.—*Secondly*, by the stimulus of cold.

1. To reduce the spastic irritation of the *nerves*, and relax the irritable contractility of the *muscles*.

2. To restore the circulation and caloric principle of the living body.

3. To preserve as much as possible of the *vis medicatrix naturæ*, to aid the preceding intention.

4. To check the inordinate discharge of the *serum* by stool.

5. To restrain the restored circulation within due bounds, that the urgency of the re-action, under the altered condition of the blood and mass of fluids, may not produce violent typhoid fever, equally fatal as the first stage of *Convulsive Cholera*.

6. To restore the healthy tone and functions of the body, after the dangerous symptoms have subsided.

And lastly, *To produce a more impressive stimulus, or shock, than that occasioned by the exciting principle of the morbid action, and thus cut short its effects.*

In endeavouring to effect the preceding intentions, two modes of treatment present themselves:—first, the relaxing influence of artificial *heat*—secondly, the stimulus of excessive *cold*, regenerating caloric on an electrical principle.

By the early application of the warm bath heated to 108 or 110 degrees Fareinheit, as early as possible, and abstracting blood in *moderate quantity* under the immersion, at the same time, administering *musk* combined with *ammonia* and *opium*, to be succeeded by powerful

friction under heated blankets, with powerfully stimulating liniments, &c.

The combination of calomel with antimonial powder in *extra* large doses.—Calomel, ten grains, antimonial powder, one scruple, powdered *opium*, (*after a moderate general or local bleeding*) three grains mixed, taken every four hours.—If followed up with strong musk mixture, combined with camphor and ammonia, warm brandy and water, &c., till free sweating is induced; the spasm will generally give way in young subjects. Warm *air* baths have been recommended by very able practitioners, but they are not always accessible.

The Second and Third Indications are embraced in this mode of treatment—*spirits* must *never* be applied by friction, nor *externally* at all, as they carry off caloric (*vital heat*) by evaporation, excepting the oily spirit of turpentine, strongly impregnated with camphor and strong liquor of ammonia, or oil of thyme.

The Fourth Indication is to be attempted by the administration of strong anodyne, or sub-astringent injections into the bowels—camphorated spirit of wine, half an ounce—oil of turpentine, an equal quantity—laudanum, two drachms, in half a pint of thick gruel, every four or five hours, in extreme cases.

Milk, in which highly toasted, but not burnt, bread has been *boiled* and then strained, and a little brandy added, will generally remain on the stomach, as well as very strong, lean, beef soup, *without* any vegetables, and warmly seasoned with pepper prepared in the same manner, and is superior to *spirits* and *cordials*—pure sulphate of zinc,* three to five grains—Cayenne pepper, three or four grains—powdered *opium* *two* grains, for a powder or pills to be swallowed in any *thick* substance, and only very *small*

* Or sulphate of Copper, *one* to *two* grains.

draughts of *cold water*, taken for an hour, is an excellent medicine to abate the violent *serous* purging of Asiatic Cholera—*three* may be taken in twelve hours—if thrown up, the constringent *effect* on the *stomach* remains.

An emetic of sulphate of zinc, or copper,* at the *accession* of the disease, has, to all appearance, cut it short—very little or no fluid should be taken after it—a *scruple* of the *former* is a moderate, half a drachm to two scruples a full emetic dose—after its operation, a table-spoonful of æther with a scruple of camphor may be swallowed; and, where the person attacked has been of a previously languid, or weak habit, from forty to fifty drops of laudanum added, and the dose repeated within an hour.

By a combination of such means, and their *judicious* application, (*mutis mutandis*) the fairest prospect is held out of relief by the joint aid of relaxation and *stimuli* of the heating kind, but their application also requires the exercise of great caution, and deliberate consideration to effect the objects of the succeeding, or Fifth Indication, which, it has been shewn, are of equal moment. Brandy, opium, and all the heating stimulants may be used with greater impunity in *India* than in *Europe*, and it cannot be too often borne in mind, that, in *Russia* and *Poland*, by far the greater number (more than *two thirds*) have died in the Secondary Stage.

The Fifth Intention—By free *local* bleedings to remove the effects of congested blood returning into the circulation; blistering over the region of the stomach, epigastrium, &c.; by full doses of calomel combined with antimonials, and opium with musk, &c.; if spasm exist, gentle aperients, the mild black draught, with æther or spirit of ammonia—castor oil, with laudanum—rhubarb, with antimonial or James' powder, &c. By these means, the

* *Emetic*, five to seven grains, drinking little during the operation.

secondary fever will be mitigated in its dangerous tendency, until the period arrives when tonics may with safety be administered. The mineral acids, (the *nitric* and *muriatic*) combined, and given freely, are excellent in the secondary fever of patients who have suffered from East India Cholera—Opium may be added to them with the greatest advantage.

The restorative intention is to be derived from the rational aid of a light, nutritious animal diet—By the moderate use of generous wines, brandy, &c.—abstinence from fruits, acids, vegetables, and all fermenting substances—the sulphate of quinine, and other bitter tonics, in combination with *nitric acid*, which, from its oxygenating principle, is especially indicated—chalybeates—the carbonate of iron, in *full* doses—moderate exercise in a dry air—tranquillity of mind.

With a view, it is presumed, to produce counter-irritation in the deadly stage of *collapse*, the *actual cautery* has been recommended, but this, truly savours of a semi-barbarous practice, and Dr. Lange may well have found it repugnant to even the less sensitive feelings of the Russians. It becomes men of Science to originate *ideas*, and to adapt their conclusions to the penetrative sagacity of modern intelligence. Judgment is the result of reasoning faculties, properly applied, and as Dr. Lange has failed to show on what *principle* he applied the actual cautery to the spinal region, it behoves enlightened English Practitioners to pause, before they adopt it. It is equally incompatible with reason and rational theory, that the *external* application of a *heated iron* to a *fixed spot*, should restore to the nervous system that *caloric*, the loss of which, has produced the stage of morbid insensibility,—the *rationale* of such a doctrine would be preposterous! The inhalation of nitro-oxygenated gas into the lungs is much more likely to restore the vital powers. Animal life and function

cannot exist in vigour, without the organs essential to that existence and power are restored to their proper equilibrium of action. The *nerves* may be (as admitted) the original source of *vitality*, but their dormant power in this fatal disease, must be acted upon by a process at once compatible with Physiological Reasoning and Chemical Science!

THE DIRECT STIMULUS OF COLD.

THE most powerful known stimulant in its direct action on the living *body*, is the sudden application of excessive cold, which, by its condensing power on the electrical machine of the human frame, is the most calculated of all others to generate *caloric*, the essential principle of *re-action*—thus, ICE applied to the *head* and *chest** of a person under an attack of *Cholera Convulsiva*, will, in a few minutes, check the most violent vomiting and purging, an authenticated report, in support of which *fact*, transmitted by his Majesty's Consul at Venice, is in the possession of the writer of this Treatise.† A resistance is set up instantly in the system by the *impressive shock* felt, which lays the basis for regenerating *heat*, and this without reference to the stage of *collapse*, for Doctor Blumenthal has found *boluses of ice* taken into the stomach, in quick succession, of all others, the most efficacious means dis-

* Or an early application to the soles of the feet.

† Shewn by him to Dr. Russell at the Council Board, Nov. 28, 1831; and the following is an extract:—"I thank you for your information on the remedies for the Cholera, which is approaching slowly to this quarter of Europe. The family of a gentleman, whom we intimately know, has been successfully treated with the ICE to the head, heart, and stomach, and small draughts of cold water from time to time."

covered for allaying the vomiting and checking purging! Here, then, is an experimental *fact*, worth a hundred *theories*, in support of the preceding views—Iced water has not only been injected, but drunk with marked success, and an effect produced quite different from that created by heating *stimuli*, and large doses of *opium*, in the absence of secondary fever, without hazarding the increased evil of *congestion*, but, on the contrary, curtailing it. An eminent Physician at *Vienna* treated his own *sister* on these principles, and, although her case was pronounced *hopeless*, she speedily recovered—since then, he is stated to have “invariably employed the same remedy, and has not lost a single patient, and a lady at *Trieste* had also a sister at *Vienna* saved by the ice applications.”

Since the preceding pages were penned for the press, the Author has read, with the highest satisfaction, the truly scientific, statistical, and professional letter,* written by a friend, Dr. Lefevre, Physician to the British Embassy at St. Petersburg, to Dr. Mober, whose views as to this disease being derived from a terrestrial source, are corroborative of his conclusions, in addition to the support of that learned report on the subject, written by Mr. Annesley, when in India.

The similarity of appearance in persons attacked by malignant “Cholera,” and those killed suddenly by *lightning*, in the black, livid, or purple *hue*, is most marked—lightning kills by its instantaneous abstraction of the *electric* principle from the human body, not by its stroke or concussion, as is falsely imagined, and, although the *effects* are more instantaneous, the *result* is similar; in the absence of matter for direct proof we must reason by analogy.

The fourth object indicated in the curative process, and

* Vide “Times,” December 14th.

not the least important of any in checking the *serous purging*, is principally effected by the extraordinary power cold is known to possess in producing a *salutary spasm* or contractility of relaxed or ruptured vessels; in internal and external hæmorrhages, at the same time destroying their irritability or preternatural excitement; and that contracting spasm produced on an extensive scale, as opposed in its essence to the relaxing spasm of Cholera, cannot but be beneficial; thus, *two intentions* are effected by *one process—cold*, acting on a condensing principle on the exhaled vapour of the earth during summer, produces electrical heat, and by the agency of hydrogen, combustion, termed lightning. MAN is an electrical body, a grand conductor, made up of the four elements—why should he not be more subservient to their influence, than to the capricious action of the surmized principles of mere animal contagion?

The sudden diffusion of heat manifested in those cases subjected to the stimulus of *cold*, as detailed, savours of practical illustration in support of the premises. The remaining intentions are to be looked for by avoiding general blood letting in all reduced habits, (even where practicable) and by controlling the exciting *media* for producing a putrid form of fever, generally ending in death, rendering the cure doubtful; and, if the disease partakes of an *infectious* character, tending in that form, and not in the first, to propagate its influence.

It having been proved by experience, as was liberally admitted to the Author by one of the most enlightened Physicians of this country, and the highest in official station, that the highly stimulating practice had apparently failed in producing a satisfactory result in the hands of all the able men who had tried it; it cannot but be creditable to pathological science, as it is due to humanity, for the most obvious reasons, to investigate the *merits* of each with

impartiality of feeling and ingenuousness.—Let idle disputation give place, and reason take her seat, whenever a *practical theorem* is offered for attention ; and that however *cause* and *effect* may be enveloped in mystery, or seemingly opposed to each other, it is due to candour and the evidence of our understandings, to rise superior to partial views and hastily pre-conceived prejudices. Whether the disease at present exerting its sway at Sunderland, in a slowly progressive form, is *indigenous* or not, if it assumes the characteristic diagnosis of the Serous Spasmodic Cholera of Lower Asia, it should be treated on similar principles. The *preventive* remedies are regularity of living, cleanliness, warm clothing, avoiding the action of damp air, passions of the mind, especially fear of the *disease*, excesses, and calmly submitting to the inscrutable decrees of an all-wise Providence :

That very Law which moulds a tear,

And bids it trickle from its source ;

That Law preserves the earth a sphere,

And guides all nature in her course !

THE END.