

**A brief sketch of the most striking, characteristic appearances, during life, and after death, of the continental spasmodic cholera : with practical remarks upon its treatment / by W. Cooke.**

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A

**BRIEF SKETCH**  
OF THE  
MOST STRIKING,  
**CHARACTERISTIC APPEARANCES,**  
DURING LIFE, AND AFTER DEATH,  
OF THE  
CONTINENTAL  
**SPASMODIC CHOLERA;**  
WITH  
PRACTICAL REMARKS  
UPON ITS  
**TREATMENT.**

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BY W. COOKE, M.D., &c.

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**LONDON :**  
PRINTED FOR HIGHLEY, AND UNDERWOOD, FLEET-  
STREET; COX, BOROUGH; AND  
ANDREWS, DURHAM.

1891.

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This Pamphlet is intended as a SUPPLEMENT to the Work, (a Second Edition of which has been lately published) by the same Author, entitled—"Caution to the Public; or, Hints upon the Nature of Scarlet Fever. Designed to shew that this Disease arises from a Peculiar and Absolute Virus, and is specifically Infectious in its Mildest, as well as in its most Malignant Form; including Practical Remarks upon Asiatic Cholera, and other Epidemics."





ON  
**CONTINENTAL SPASMODIC CHOLERA,**

&c., &c.

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“Lay not the flattering unction to your soul;  
It will but skin and film the ulcerous place,  
Whiles rank corruption, mining all within,  
Infects unseen——”

HAMLET, SCENE IV.

THE exhortation, which is implied in the passage selected from the works of our dramatic Bard, forms at once a solemn and impressive motto to the pamphlet, which is now submitted to the consideration of the British Public; for while it forcibly and faithfully designates the subtle malignancy of that malady, which has, already, broken out in this country, it conveys, at the same time, a serious reproof to those who still refuse to acknowledge that a *Foreign Pestilence* has visited us.

Although the suddenness of the transition from life to death,—the excruciating agonies of its victims,—the novel, and frightful, combination of every feature, that can bespeak malignancy, of the most intense and deadly nature, in the most concentrated form,—characterize the pestilence that is now walking in darkness, the destruction which is now wasting, at noon-day, within our own streets; yet, extraordinary as it may appear, there are those



who, either from interested motives, or from some fatal delusion, persist in denying the presence of such a malady, while it is in actual progress before them.

In addition to this infatuation, others are observed making strenuous, and persevering, efforts to delude the public mind, through the medium of the daily press, and to induce a belief, that this foreign pestilence is merely an *Endemical Cholera*, an *un-infectious malady*;—hence it becomes the more obligatory, that reference should be made to actual dissections,—to demonstrations,—and to verified documents, as the only infallible tests by which its morbid nature should be tried.

As the perfect identity of the Epidemic, now prevalent in Sunderland, with that, which has, during the last and present year, ravaged many parts of the Russian dominions, has been clearly, and satisfactorily, established by Medical Officers of the highest respectability, who have witnessed this malady abroad—namely, the *Continental Spasmodic Cholera*, in all its varieties; it becomes a desideratum of vital importance, that no one should remain ignorant of facts, the knowledge of which is so essential to their safety; but that the public at large should be informed, in an unreserved, and intelligible, manner, of those particular symptoms *during life*, and of the specific appearances *after death*, which characterize in so extraordinary a manner its morbid nature; and which mark a malady so rapidly fatal in many instances, (even in the very commencement of its career,) as to appal the most experienced, and to baffle the most skilful:—it is, I repeat, a desideratum of the utmost consequence to call the at-



tention of my fellow-countrymen to a sober apprehension of the evil which has already stricken some, and may be awaiting others ; that all may learn its nature, and be equally prepared to avert its visitations by the best means, which experience, and a knowledge of its specific nature, can furnish : and that each may be impowered, as far as his individual means may extend, to direct his neighbour what to employ, and what to avoid, in the treatment of this Pestilence, e'er its terrific and overwhelming poison has so far seized upon, and closed, the vital organs, as to defy the skill of man to arrest its progress, or avert its course.

As a knowledge of the simple, and rational, treatment of this disease (which I have here ventured to suggest) in its earliest, its incipient, stage, may prove of vital benefit under circumstances in which timely medical aid cannot be procured, I have endeavoured to convey the instructions in so familiar a manner, that they may be intelligible to all : in order that the primary, and appropriate, remedial measures may be so well understood by the whole community, that every one may have a certain degree of confidence that his neighbour, whether above, below, or on a level with him, will co-operate with him in acts of mutual preservation.

To my professional Brethren throughout the Kingdom, I feel assured, that the history of its various stages taken from personal observation and inspection, and the peculiarities of the post-mortem examinations, will afford the most intense interest, as they point out the seat of a disease which will be found to



differ most distinctly, and specifically in its morbid symptoms, and appearances, from every malady hitherto known in these Islands. They will afford, likewise, indications of that treatment, which may in future be pursued, not only in reference to the first (the cold or collapsed) stage, and to the ultimate recovery of the patient,—but they will, in an especial manner, instruct us in avoiding those remedial measures, which, in the subsequent stage of febrile reaction, may have increased (from our being unacquainted with those morbid appearances which dissection has disclosed,) that specific inflammation, which needed no superadded excitement; and thus have, unknowingly, accelerated a disorder already so rapid in its destructive career.

As my own locality to Sunderland has enabled me to ascertain facts, from which most practitioners at a greater distance have been necessarily excluded, I feel it more incumbent upon me to lose no time in imparting to them all the information which I have obtained, respecting the characteristic features of this extraordinary pestilence; thus enabling every Medical man in this country, whenever it may be presented to him, to recognise its character by possessing a knowledge of its leading features, and to employ those means which have appeared, after mature reflection, to be sanctioned by the post-mortem examinations; for I may without hesitation declare, that few, if any practitioners however experienced, without being warned or apprized of its nature, would be able to decide from the incipient symptoms the real character of this disease; which, to be treated with any



prospect of success, should be detected at the commencement of its career, at which important juncture, the only opportunity is offered of arresting those morbid indications, which alike precede, (though with greater rapidity and intensity) in most instances, the severe and fatal form, as well as the milder type of Continental Spasmodic Cholera.

The chief facts herein mentioned, have been personally witnessed by me in the Hospital established for the relief of this disease in Sunderland ;—for this privilege I am indebted to the liberality and kindness of Drs. Daun and Gibson, to whom, as well as, to several enlightened practitioners in Sunderland, I feel under considerable obligation, for many accurate descriptions of various cases, as well as, for the relation of those post-mortem examinations, which did not fall within my own personal observations.

As the identity of these cases with those, which occurred during the prevalence of Continental Spasmodic Cholera in Russia, and elsewhere, has been proved by demonstration ; it would be both unseasonable, and unprofitable, to enter, at the present crisis, into an investigation of the manner, by which this sweeping pestilence has found its way to these shores. Its rapid, fatal, and progressive, career ; its malignant, and infectious, character have been too well authenticated, to require any further, or particular, notice in this place.\*

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\* See Copies of Information communicated to Government, relating to this disease, published by order of the House of Commons, 27th of June, 1831.



To be able to recognise its earliest appearances, in any town or district into which it may gain entrance,—to apply our best remedial administrations for its removal,—to separate, and seclude, the infected from the uninfected,—in the hope of arresting its infectious progress, by such salutary precautions as are in our power, should be our first, our present care. As the morbid seed has been sown, the mischief committed, and the work absolutely begun, and in progress, we should not permit our attention to be diverted from the system of conservation by subtleties of doctrine, or by futile enquiries.

Let us, then, promptly and effectually concentrate all those remedial and precautionary measures, which the rapid and destructive nature of this disease demands. The beginning, then, is the appointed time—the critical juncture—when these exertions may be made with most prospect of success. Our practical motto should be, “*resist at the beginning*,” and the basis upon which this system should rely, is the *conservative principle*. For, unless the foundation be laid here, we are, I fear, building upon worse than sand. Let us then pursue, with uncompromising firmness, one leading object, and we shall do much to eradicate the canker, which may ultimately corrode the very vitals of society; and I confidently trust, that an accurate knowledge of the specific character of this disorder, supported by rational treatment, founded upon the peculiar symptoms during life, combined with the morbid appearances in death, may furnish the most probable means of attaining these desirable ends.



In proceeding to describe the symptoms, and general features, of this disease, it is not my intention, upon the present occasion, to enter into a minute detail, which belongs more properly to a plan, designed to take a full, and comprehensive, view of its aggregate morbid indications, throughout all its varieties; but to pursue a more simple, a more practical course, and to endeavour to state, in a faithful, and intelligible manner, those symptoms only, which are most constant, and which are strikingly characteristic of the cold, or collapsed, state of the malady now under consideration.

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### **SYMPTOMS.**

*Continental Spasmodic Cholera* generally commences with a universal, and oppressive, sensation, of languor; succeeded sooner, or later, by nausea, aversion to food, and total loss of appetite; attended with a sense of burning heat at the pit of the stomach; with the most excruciating pain in the organ itself, accompanied with excessive vomiting; violent spasmodic contractions of the muscles of the abdomen; convulsive motions, and cramps of the hands, and of other parts of the body;—chilliness, and rigors ensue;—dryness of the fauces, and excessive thirst;—these alarming symptoms are followed with violent pain, and cramps, over the abdomen, with copious, and exhausting evacuations, from the bowels, of a white, serous fluid, resembling rice water, or thin glary gruel, in which traces of mucus are seen;—a similar liquid is ejected



from the stomach ;—spasmodic cramps, accompanied with intense pain, now seize the extremities, especially the flexor muscles of the legs, and thighs, which rapidly extending to the trunk, blend with the spasms of the abdominal muscles, and form an aggregate state of extreme suffering :—at this stage, every symptom seems to threaten a fatal termination, with a rapidity, and severity, that baffle all description ;—the pulse, which was, from the commencement, quick, and feeble, now suddenly becomes fluttering, thready, and sinking ;—an icy coldness steals over the body ; the skin assumes a livid hue, and is besmeared with a cold, clammy, exudation ;—the fingers, and toes are tinged with a bluish colour ; the nails appear more intensely blue, as if they had been dipped in a solution of indigo ;—the skin of the extremities appearing shrivelled :—the eyes are sunk in their sockets, and surrounded with a dark areola ; the eye-lids half closed ; the pupil directed upwards, and outwards ;—the conjunctiva is pearly white ;—the muscles of the face are so shrunk, as to depict great emaciation :—the tongue cold as ice, and of a dark purple hue :—the voice thin, feeble, and whispering :—the urine totally suppressed. At this awful period the circulation becomes gradually withdrawn ; the pulsation at the wrist is lost ; at the axilla, and finally, at the large arteries of the neck, its total cessation ensues ; and the action of the heart appears entirely stopt :—the vomiting, purging, and cramps, generally, at this time, cease ;—the trunk, and limbs, become still, and fixed ; and the whole body resembles a livid marble statue :—all now wears the icy coldness, and



the silence of death :—yet the intellect remains unimpaired ; for the spirit hears, sees, perceives, and understands ; and though the eye is dim, and denotes great exhaustion : still its expression is placid :—the voice, though faint, is audible, and expressive :—the chest no longer moves in unison with respiration :—and sensation, and volition, remain :—consciousness continues even to the moment of dissolution, though the involuntary organs appear irrecoverably fixed in the coldness of death, not for hours only, but in some instances for days ; even when the sufferer feels no hope of recovery ; for hope has fled ;—yet complaint, or murmur, is seldom, if ever, heard, in this confirmed state of collapse.

Some patients die in the space of a few hours from their first seizure ; so rapid, and severe, is the course of this Pestilence ; others survive twelve, and twenty-four hours, and even for days, in this state.

One female, whom I visited on the 15th of Nov., having been, (according to my informant,) in the collapsed state for three days, and whom I re-visited on the 17th, survived till the morning of the 18th ; the blood, that was taken from her on the 15th, did not coagulate ; but assumed a gelatinous form,—its texture was loose, and resembled tar, with a livid, metallic hue. I regret to say, that no post-mortem examination of this case could be attained.

Those that recover from the first (the cold, or collapsed) state, are found, soon after re-action takes place, with an excessively rapid, and feeble, pulse ; with a fever, of the typhoid cast, (the true Choleric Fever,) and occasionally, with a recurrence of the



most aggravated symptoms of the first stage ; with a brown, foul, dry, tongue, and with excessive thirst ; the countenance flushed, and sinking :—the conjunctiva no longer white, but suffused with blood ; stupor frequently takes place at this crisis ;—when such patients die, death occurs in the comatose state.

It has been observed, that a greater number die in this, than in the first stage.

These appearances form the principal assemblage of symptoms, which distinguish this malignant malady ; the most striking characteristics of which, are the colour, and the nature, of the fluid, discharged from the stomach, and bowels ;—the intensity of spasm ;—the icy coldness of the body, and tongue ;—the cessation, and, in some instances, the extinction, of the circulation ;—the livid colour of the skin ;—the blueness of the fingers, and toes ;—total suppression of urine ;—the *intellect unimpaired*.

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The following diseased appearances were discovered, in a post-mortem examination of a patient, who died in the collapsed stage of Continental Spasmodic Cholera.

#### POST-MORTEM EXAMINATION.

**EXTERNAL APPEARANCES.**—Eyes deeply sunk in the sockets, skin universally livid, that of the extremities of a bluish tint, the nails being of a more intense blue ; muscles strongly, and rigidly, fixed ; fingers, and toes, some firmly contracted, while others



were as rigidly extended; muscles of the face unusually shrunk, and denoting extreme emaciation.

INTERNAL APPEARANCES.—Brain exhibited no peculiar morbid appearance:—the cavities of the chest contained no serum; the lungs had an infarcted appearance, and were gorged with dark coloured blood, which exuded at the posterior part of their lobes:—the cavæ, (the great returning vessels of the blood to the heart), were distended with dark coloured blood, more resembling tar, mixed with liquid lead, than the vital fluid;—the same kind of blood was found in all the cavities of the heart;\* the organ itself was found of a dull, leaden, hue, and unusually firm:—Diaphragm rigid, and contracted:—the inner membrane of the cardiac portion of the œsophagus or gullet was of a pink colour, upon which were seen numerous arterial vessels ramifying:—the inner membrane of the stomach of a dull red; this morbid appearance was most intense towards the pyloric or lower orifice, and beneath the circular fibres of the stomach; which being more contracted than usual, indicated the natural division of this organ into its two portions:—the rugæ were præternaturally prominent, and undulating; upon the ridges of which, arterial vessels, distended with florid blood, were ramifying; these formed a strong contrast with the lurid hue of the general specific inflammation of the stomach;—a glary mucus be-

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\* In one post-mortem examination of a patient, who died comatose in the stage of febrile re-action, the aorta was discovered gorged with blood of the same gelatinous consistency, and of a dark leaden-colour, resembling that found in the cavities of the heart, and in the two cavæ:—this remarkable morbid appearance was communicated to me by a Physician of great respectability at Sunderland.



smeared the whole internal coat ;—darkly discoloured patches appeared here, and there, near the lower portion of this organ, between the rugæ ;—the rugæ themselves being studded with flocculent apthous ulcers, from which, flakes, or shreads, of coagulable lymph were easily washed ;—the apthæ did not appear to penetrate deeper than the inner membrane ;—similar, though fainter, morbid appearances, were seen upon the inner membrane of the upper portion of the duodenum ;—the pylorus was firmly contracted ;—the substance of the stomach, and of the duodenum, was thickened, pulpy, and yielding to the slightest pressure of the finger ;—the small intestines were in many parts contracted ;—the arch of the colon was in the same state, especially at the cruræ of its arch ;—the same semi-gelatinous mucus, that was found in the stomach, coated the inner membrane of the small, and large intestines ;—the kidneys unusually firm ;—pancreas hard ;—liver firm, yet healthy ;—the spleen gorged with black blood, and firmer than usual ;—the psoæ muscles peculiarly rigid ;—the ducts of all the abdominal viscera closed ; and the urinary bladder firmly contracted, and not larger than a shrivelled fig ;—the peritoneal coat of the stomach, and duodenum, of a roseate hue.

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Having thus endeavoured to represent to my readers, a clear and faithful narrative of the most important, and constant symptoms, and of the diseased appearances of this formidable Pestilence ; the insidious



advances of which often proceed without alarming the patient, and sometimes even without exciting the suspicion of the practitioner, through the various stages of malignancy, and of increasing severity, till they terminate in fatal and irretrievable evil ; I shall immediately proceed to call the attention of my professional Brethren, and of the public, to the seat and nature of this disease, and ultimately to that mode of treatment, which I here submit to their consideration.

It may, with considerable confidence, be advanced, that neither the history of Pathology, nor the records of Morbid Anatomy, can furnish a narrative of any malady, with a combination of symptoms so fearfully rapid, and deadly, in their consequences ; and with diseased appearances, indicative of such active malignancy, as the documents which the cases just recited of this Pestilence afford.

Had the patient, to whose post-mortem examination allusion has been made, died under suspicious circumstances, or had she been a solitary instance of death caused by the disease, now prevalent in Sunderland ; the diseased appearances of the stomach might have been deemed of sufficient consequence to have warranted a judicial enquiry ; so intense was the inflammatory state of the stomach ; which, when superficially viewed, might perhaps have been considered to resemble the appearance of the inner coat of this organ, when a mineral poison had been taken.

In the present instance, there was not the slightest ground for suspicion, as diseased appearances, precisely similar, have been detected in the post-mortem



examination of other patients, whose death was occasioned by Continental Spasmodic Cholera.

As the identity of the Epidemic in Sunderland with this foreign Pestilence, has been established, to the satisfaction of every one, whose mind is open to conviction; and as the post-mortem examinations furnish the grounds of this enquiry, in reference to the treatment of this malady; it would be a culpable waste of time, and words, to enter into any circumlocution respecting its origin, course, &c., for it has been laid down as a general rule, for guiding, and facilitating, our enquiries for an immediate producing cause, by an authority as yet undisputed, that we should not deny its existence, though it may not be apparent how such a cause can produce the effect, or even though it may be difficult to conceive its existence under the circumstances of the case; in such cases, we should rather appeal to experience, when possible, than decide, *à priori*, against the cause, and try whether it cannot be made apparent.

Feeling fully convinced that the malady, which is the immediate subject of our consideration, is the result of an active morbid poison upon the human frame; and being justified, from the post-mortem examination, in concluding, that the specific inflammation of the stomach indicates the seat of the disease; and that all the other morbid appearances, as well as the symptoms, arise from the malignant quality of this poison, I shall merely observe, for the advantage of the non-professional reader, that these deleterious agents differ very essentially from the mineral, and vegetable, poisons. The effects of the latter are in



proportion to their quantity ; while those of the former depend upon specific quality.

Morbid Poisons possess the power of exciting unhealthy, and injurious, actions, when applied to the human frame. These occasion specific inflammation upon any secreting surface, (such, for instance, as the stomach), by which a similar poison is produced ; in short, they have the specific property (according to the nature of their quality) of producing a series of actions, that terminate in the deposition of a peculiar fluid, which, being absorbed, is capable of infecting the individual, by whom it is absorbed, directly, by such absorption ; and of infecting any other individual indirectly,—namely, by a repetition of the same series of specific actions ; and experience, in the laws of epidemics, has established this momentous fact, that if the fever be of a typhoid, or malignant, kind, (which is the result of such taint) it is infectious, and may be communicated through the medium of the air, under certain circumstances, to the un-infected. These facts are verified in Typhus, Plague, Scarlatina, &c. In applying these physiological facts to illustrate the disease, under consideration, we are furnished with strong presumptive proofs of the infectious nature of the Fever of Continental Spasmodic Cholera.

The light, which has been thrown upon the seat, and nature, of this disease, by the post-mortem examinations, has directed me to the contemplation, and adoption, of the treatment of this formidable, and fatal, pestilence ; the outline of which is now submitted to the consideration of my professional Brethren.



The degree of confidence, with which I am enabled to announce it, has arisen *solely* from the approval it has experienced from Sir Henry Hallford, who, in reply to a Letter, in which the outline was transmitted, observes:—

“I agree with you, in all you say of treatment, founded upon the post-mortem examinations, with which you have furnished me; and, I do you justice only, when I acknowledge, that your reasoning upon the pathology of the disease, and the treatment, to which such reasoning leads, is correct, and satisfactory.”

Before making any remarks upon the treatment, I beg leave to observe, that our first object should be, to procure, and prepare, proper houses for our indigent neighbours, before they are seized with this pestilence; ready to receive them on the first appearance of infection, and furnished with every necessary that their situation may require:—that they may thus be separated from the un-infected, and placed within the sphere of those salutary, and restorative, means, which their own homes cannot afford. They should likewise be warned, *not* to have recourse to spirits, or any heating, and stimulating, medicines; but to take warm diluting drinks, and to keep their beds, until proper medical aid can be obtained.

1st. It may reasonably be inferred, from the diseased appearances, and symptoms, of persons, dying under the collapsed, and febrile stages, of Continental Spasmodic Cholera, that the *proximate cause* of death is *inflammation of the stomach*.

2nd. That this inflammation is of a *specific nature*; the result of a morbid poison.



3rdly. That the intensity of the spasmodic pains, and cramp,—the rapid cooling of the body,—and the extinction of the circulation, are tests of the degree of malignancy of the virus, and of the constitutional irritation.

4thly. That the *character of the fever is malignantly typhoid*.

The nature of the disease being ascertained, we ought to adopt that treatment, which the symptoms, and the morbid appearance unitedly indicate.

In the first place, it is necessary, by way of introduction, to interdict the use of spirits, and stimulants, throughout every stage of this disease.

The treatment, at the commencement, consists in clearing out the alimentary canal; which may be accomplished, in a *manner the least irritating*, by castor oil, to which thirty drops of laudanum should be added in anticipation of spasm.

In order to allay irritation of the stomach, and to keep off pain, and cramp, it is an object of great moment, that the nervous system should be kept under the constant influence of the sedative effects of opium: to attain this practical point, twenty drops of laudanum may be administered every four hours, in any mild liquid, or in the form of medicine, herein indicated.\*

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\* R Olei Amygdal :

Mucilag : Acaciæ aa 6<sup>tas</sup> dr<sup>ss</sup>

Decoct : Hordei 5<sup>tas</sup> un<sup>ss</sup>

Træ Opii g<sup>tt</sup> XL. M : cap<sup>t</sup> 4<sup>tas</sup>

partem hujus misturæ 4<sup>tis</sup> horis.



Should the irritability of the stomach forbid the employment of liquid medicines, opium should be given, in conjunction with soda, in the form of pills.\*

As the attention of the practitioner should always be directed to the degree of pain, and spasm, he should, upon any increase of these fearful symptoms, promptly have recourse to the hot bath, and exhibit the opiate pills every two hours. The patient, on leaving the bath, should be placed between blankets, before a fire, and sedulously attended to.

A mustard poultice should be applied over the region of the stomach; the mildest diluting drinks should be given, and bladders of hot water applied over the heart, the large superficial vessels of the neck, arm-pits, &c., as well as to the extremities.

The use of the hot bath is recommended with the greater confidence, and earnestness, having personally witnessed the instantaneous, and permanent, relief it afforded, when cramp, and spasmodic pains, with rapid sinking of the pulse, and cooling of the body, existed in a most alarming degree. To this remedy the recovery of the patient might principally be attributed, as opium had failed in removing the spasm.

It will frequently, however, happen, that all these symptoms become suddenly aggravated; in this instance, the same measures must be had recourse to, namely, the *hot bath, and opium*. The quantity of

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\* R. Sodæ Subcarb : exsiccatae : gr̄ x.

Opū crud : gr̄ l.

Mucilag : Acaciæ q. s. f Pilul :

4<sup>th</sup> vel 5<sup>th</sup> horis sumend :



the latter ought to have no limit, but the absolute abatement of the spasmodic pains, and cramp; until that object be attained, the patient should take a grain of opium every hour, in the form stated above.

If, in defiance of all these exertions, the patient should sink into the collapsed, or cold state, the remedial means should be varied. At this crisis, the discretion, as well as the judgment, of the practitioner, is particularly required: for although the situation of the patient is imminently dangerous, it is not hopeless; and though the means will become limited, our efforts should not relax. Here it must be remarked, that as the cramps, spasmodic pains, and vomitings, generally cease, the use of opiates should be suspended. Sleep seldom, if ever, occurs in the collapsed stage, when it does, it is considered favourable, being a symptom of re-action.\*

The hot bath can no longer be employed from the rigid, and helpless, state of the patient; yet our attempts to restore the circulation, and the temperature, of the body, by the application of external heat in the most efficient and convenient form, should be unremittingly persisted in, the surface of the body should be, at intervals, spunged with a warm solution of the chloride of soda, for the purpose of removing the clammy exudation of the skin, which should be rubbed carefully dry with warmed cloths.

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\* Opium should not be resumed during the collapsed stage, unless pain and spasm return. Bland diluents, and panado, should be exhibited from time to time, as soothing applications to the stomach, rather than in the character of food and beverage; as the vital and involuntary functions appear as confirmedly suspended, as in cases of torpidity.



Friction, by means of hot flannels, should be constantly employed, taking care that the skin be not irritated, or abraded, as it loses its firmness of texture, in this stage of the malady.

Such, then, are the exertions which it is necessary to make, until you obtain an alteration in this awful train of symptoms.

Should re-action take place, a fever of the severe typhoid character is quickly developed: this, however, must not occasion any change in the principle of the original treatment. It is necessary, therefore, that it should be resumed, and be adapted to the exigencies of the case; always remembering, that the stomach presents, on a post-mortem examination, the same specific inflammation, which exists in those patients, who die during the collapsed stage. As, however, considerable congestion of the brain has been demonstrated to exist when death has occurred in the febrile stage, and, as it becomes advisable to avert the comatose state, which is the invariable precursor of dissolution; it is obvious, under such morbid appearances, that attempts should be made to relieve this oppressed state of the brain, by some active, and decisive measure; namely, by applying two or three dozen leeches, behind the ears,—by using the evaporating lotion to the head, and by a blister to the neck, as soon as the suffusion of the conjunctiva, and stupor appear.

Although this treatment, in reference to the congestion of the brain, is clearly indicated by the post-mortem examinations, as well as, by the symptoms during life; nevertheless, it appears from what has



occurred at Sunderland, and from the authenticated statements from the Continent, that "more are carried off in this stage, than in the first, or primary attack of the disorder, namely, in the cold stage."

It is difficult to determine, whether to attribute this to the malignancy of the Choleric Fever, or to the stimuli, that may have been exhibited, in reference to its typhoid character.

To discuss this difficulty, would lead me into a theoretical enquiry, which is foreign from the purpose of this pamphlet; yet, I must beg leave to observe, from what I have witnessed in the usual treatment of this stage of the disease, from my own personal experience, and after a careful consideration of the subject, that I am strongly inclined to believe, that the congestion of the brain is a superadded symptom, which it may, perhaps, be in our power to avert more frequently, by avoiding the use of all stimulants, and by waiting upon, rather than by exciting, the morbid irritability of the system.

Particular attention should be paid, during the whole course of this disease, to the evacuations, for by these alone, the precise state of the inner coat of the stomach, and duodenum, can be learnt; for although these are white, and resembling rice-water, or thin gruel, at the commencement, yet, they will be found to vary very materially: thus, at one period, shreads of coagulable lymph will be found floating upon their surface; at another, a glary mucus, tinged with blood.

The most favourable symptoms are a diminution of the frequency of the pulse;—natural sleep;—the appearance of bile in the evacuations, and of fæculent



matter ;—flocculent patches of lymph, without blood ; and the evening exacerbation of fever diminished ;—with the restoration of the other secretions.

The unfavourable symptoms are, a recurrence of vomiting ;—dark, foetid, evacuations ;—restlessness ;—pulse accelerated ;—stupor, and coma.

Before closing my remarks upon this part of the treatment, which I have ventured to submit to the attention of my readers, I must not omit to mention, that all the excretions should be buried, and not thrown promiscuously away ; there being strong grounds for believing, that the secretions, from the stomach, and bowels, may propagate the disease, while the specific action of the organs continues ; which the state of the evacuations, if narrowly inspected, will be found precisely to indicate.

The diet should be boiled bread, milk, or gruel ; the drink barley water, with subcarbonate of soda, in the proportion of two drachms to a quart ; or the expressed juice of carrots may be used, when the flocculent appearances of coagulable lymph are seen in the evacuations.\*

I have, hitherto, intentionally avoided making any allusion to two other remedies, which have been employed, in particular stages of this malady ; viz. : calomel, and bleeding ; because I was unwilling to distract the attention of my readers from the chief practical desiderata, viz. : *allaying irritation, and*

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\* The solution of Chloride of Lime should be freely sprinkled in the apartments of the sick, every two, or four, hours, day and night, employing *alternate ventilation*,—this injunction should be strictly attended to.



*spasm ; and supporting animal temperature.* I have given the preference to castor oil, as an aperient, because it is both an efficient, and unirritating, purgative ; and, as the only object for exhibiting any aperient in the commencement of Continental Spasmodic Cholera, is to remove any ingesta, that might be in the alimentary canal, castor oil seemed to possess every property, that the indications required.

Again, as calomel acts *particularly* upon the first of the small intestines, the *duodenum*, as well as upon the stomach, this mineral was calculated to add to the excitement of these organs, which were already, in all probability, under specific influence. That calomel may be useful, in conjunction with opium, in the *form, which this disease assumed in India, where the fever generally partook of the character, and type, of the common bilious fever of the country*, and where it does not seem to have been attended by cerebral, and abdominal, congestions, but *yielded readily, on the removal of acrid bile*, I am, by no means, prepared to deny from the accounts which I have received ; nevertheless, castor oil, as a purgative, in every stage of the disease, as developed in this country, may be considered preferable, in every respect, to calomel, as far as my own limited experience, as well as reasoning upon its symptoms, and diseased appearances, enable me to judge.

With respect to bleeding, I am inclined to consider it a very doubtful, and hazardous remedy ; first, from the severe typhoid character of the Choleric Fever ; and secondly, from the feeble, and accelera-



ted pulse, which accompanies the commencement of the disease.\*

Cases may occur, in which the pulse may be found strong, and hard, yet it would not be judicious to take a large quantity, under any circumstances, at first: if the blood, after it had been taken away eight hours, appeared firm, compact, and opaque, with a concave surface, and inverted at the edges, and was found to have slowly coagulated, then the bleeding might be repeated; but if the blood coagulated quickly, appeared with a flat surface, was semi-transparent, and had a greenish colour, was striated, and everted at the edges, *bleeding, under such appearances, ought not to be used.*

The blood, which I have had an opportunity to inspect, and which had been taken from patients in the stage of re-action, was *loose in its texture, and indicated no marks of inflammation*:—that, taken from a patient in collapse, *did not coagulate.*

As this disease is so full of danger, in its collapsed, and secondary stages, it appears that so active a measure should not be employed, merely because it has been adopted by others, in the treatment of this malignant malady: if the pulse should not demand its removal, bleeding should be scrupulously avoided; and when removed, if it had not the distinctive character of inflammation, the operation cannot be repeated, but without hazard.

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\* Extract of a Letter from a Clergyman, who witnessed the Continental Spasmodic Cholera, at Saratoff, 1831:—"I, myself, saw the patients bled, and dosed with calomel, and rubbed with all sorts of unguents; yet all died, who were attacked by the malady, in the height of the virulence."—*Vide Quarterly Review*, Nov., 1831, No. xci.



To relieve congestion in a disease, the Fever of which is of a malignant type, general bleeding, it may with considerable confidence be stated, should always be viewed as a desperate, and hazardous, remedy. Stronger proofs, than have yet been advanced, of the necessity, or advantages, of so active a measure, being used in the treatment of Continental Spasmodic Cholera, are required, before bleeding should be ventured upon, as a safe, and efficient, remedy.

Before concluding these pages, I feel it expedient to offer a few remarks upon the *Diarrhœa*, and upon the *typhoid Epidemic*, that have been, and are still, prevalent, in several towns upon this part of the coast; the former has received the epithet *serous*, and many cases of the latter have been introduced by a similar symptom.

As *Diarrhœa*, in this Island, is unaccompanied with fever, cramp, or spasm—irritation of the urinary bladder, or suppression of urine,—all Choleric symptoms; and is merely occasioned by an increased secretion from the glands of the intestines; it may be inferred, that the cases of *serous Diarrhœa* have received a title but ill-defining their characters. It has happened that several of these cases have fallen under my immediate care, and I have been strongly inclined to believe, since I have had such ample opportunity of seeing the common, or milder forms of Continental Spasmodic Cholera, that most of these cases of *serous Diarrhœa*, which were accompanied with fever of a typhoid character, (and, I understand, that this is generally the febrile type,) are varieties of this Continental Cholera.



The symptoms that are peculiar to these cases of typhoid Epidemic, accompany likewise the commencement of Diarrhœa; those that have fallen under my own care, are attended with white, and serous, evacuations from the bowels and stomach; spasms of the extremities, and great prostration of strength, irritation of the urinary bladder, with occasional suppression of urine; these are frequently in attendance upon this complaint; in the more severe instances, a livid appearance of the skin, blueish tint under the nails, and the dark areola round the eye, with rapid emaciation, are strongly apparent in many instances,—the recovery, in these cases, has been remarkably tedious.

Again the period of the year at which these cases of Diarrhœa have occurred, gives them a very doubtful, and suspicious, character.

As excess of caution is an error not likely to do much harm; it would be very advisable, upon the occurrence of any case of serous Diarrhœa, accompanied with fever, especially if it be of a typhoid character, to separate the infected from the uninfected, and try the symptoms by the above tests.

As the milder forms of Continental Spasmodic Cholera, have been very universally considered as merely aggravated forms of the Cholera Morbus, and of the Diarrhœa of this country; and as the distinguishing symptoms of these are so strikingly different, it may be attended with practical advantage, briefly to submit to the inspection of the public their several characters, that a contrast may be made to enable us to judge of their distinctive characters. The following



selections are taken from a popular, and practical, work, upon the Abdominal Viscera :—

*Cholera Morbus* is often very sudden in its attack, and differs in no particular from any *common, or ordinary, Diarrhœa*, attended with sickness, for the first six or eight hours : after this time, the patient discharges, by vomiting, *pure bile*, which also passes off by the *bowels in great quantities*. This is attended with severe griping pains in the bowels, and cramps in the muscles of the legs. The pulse is small and very frequent, and often in a few hours, the patient is brought into a state of considerable danger.

It may be distinguished from Dysentery, and Diarrhœa, by the *matter which is discharged being pure bile, &c.* It may be distinguished from Colica Pictonum, (or Painters' Colic,) by the *bilious evacuations, &c.* The prognostic in this country is favourable. As the danger from this disease does not seem to depend so much upon the quantity of *bile* secreted by the liver, (*which must be considered the primary complaint*) as upon the *disorder* which is produced by it upon the stomach, and intestines, &c.

*Diarrhœa* is a discharge of the contents of the bowels, attended by occasional griping pains, which pains are perfectly relieved by the evacuation, and *there is no fever.*

It may be distinguished from Cholera Morbus, by the discharge not being bile, and also by there being no vomiting of bile.

It may be distinguished from Dysentery by the discharge not consisting entirely of blood and mucus,



by the pain being relieved by the evacuations, and by *the absence of fever*. This disease is occasioned by an increased secretion from the glands of the intestines. It is cured by astringents.

There is but little risk of these three diseases, Cholera Morbus, Dysentery, and Diarrhœa, being mistaken for each other, and still less of their being confounded with other complaints of the abdomen.\*

After the comparison just instituted, I shall leave the matter entirely to be decided by the good sense of my readers, feeling fully convinced, that they will observe a more distinctive difference between the characteristic symptoms, and nature, of Continental Spasmodic Cholera, and Cholera Morbus, and Diarrhœa, than subsists between these last maladies.

This comparative view seems consistent with reason, as well as with observation; it having been remarked, that a series of excitation, and reproduction, regularly succeed each other in all the actions of morbid poisons; as the disease, which forms the more immediate subject of our present consideration, is the result of the action of one of the morbid poisons upon the human constitution, these remarks appear to bear upon the principal point of the question.

Having accomplished the task which I had undertaken, viz., of giving a general outline of the most striking features of this Foreign Pestilence, and of that treatment, which the symptoms, and diseased appearances, unitedly indicate; I now venture to lay

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\* See Dr. Pemberton's Practical Treatise, &c. &c.



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