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OUTLINES

FOR A

PROPER THEORY AND CURE

OF

CHOLERA,

FOUNDED ON

KNOWN FACTS, AND OBSERVATION

OF THE

USUAL HABITUDES OF THE ALIMENTARY CANAL
AND THE ACTION OF REMEDIES UPON IT;

ON THE CONSTANT SYMPATHY OF THE HEART
WITH THE SICK STOMACH,

AND ON THE ORIGIN AND DISTRIBUTION
OF THE NERVES OF THE ALIMENTARY CANAL
AND PARTS ADJOINING;

IN THE

FORM OF AN ACADEMICAL EXAMINATION.

By **JOHN WILKINSON, SURGEON, &c.**

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*To Mr Doctel, Surgeon.
with the Author's Compliments*



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PREFACE.

HAVING, for some time past, been fully convinced that the disease now raging, called Indian or Malignant Cholera, neither is, nor can be, of any other character than the Cholera of Europe, only in a more severe form, the following pages were written to pacify the minds of a few friends, overwhelmed at the idea of this *new* and *terrible* pestilence. I have frequently communicated my ideas both to some Medical friends and others, and I have found none who could deny the grounds on which I rest my opinions, or advance anything more satisfactory. Since, however, I have read several pamphlets lately published, and especially Mr MOIR'S on the Disease at Musselburgh, I am more convinced than ever of being right, and that there is no possibility of accounting for the symptoms that take place in this disease, except from irritation in the alimentary canal, nor, indeed, is there any reason to seek for a more potent cause: and, in corroboration of this, it might not be difficult to prove, that certain substances in the *Materia Medica*, when taken into the stomach, could produce, by their irritation on the alimentary tube, as near as possible, all the most violent effects of Cholera. I have adopted the form of Question and Answer, in order that my reasoning and statements might be the more clear; and I have only to request that those who read this little production may treat me with the same candour, and sincerity, with which I have spoken on a subject, at the present time, of so much importance.

EDINBURGH, 48, HANOVER STREET,

FEBRUARY, 1832.



OUTLINES, &c.

EXAMINATOR.—Pray, what is Cholera? *PUPIL.*—A functional disease of the alimentary or intestinal canal.

Ex.—Why do you call it a functional disease? *Pup.*—Because there is no proof of any organic derangement.

Ex.—Of what then does the derangement consist?

Pup.—Of excessive action of the alimentary canal, of the lower part, usually, in the natural direction; and of the upper part, namely the stomach, in an inverted or unnatural direction, frequently, with great action of the diaphragm and abdominal muscles, violent pain, and depression of all the powers of life. *Ex.*—What is the cause of this disease? *Pup.*—Acrid or irritating matter taken into the stomach, repelled perspiration, especially in hot climates, or other causes unknown.

Ex.—Do you think the disease at present called malignant cholera, the same as the indigenous cholera of Europe, or different from it? *Pup.*—The same, only differing in degree. *Ex.*—Do you think it infectious?

Pup.—Yes. *Ex.*—But our cholera is not infectious, how therefore can they be the same? *Pup.*—Infection, or non-infection, makes no difference; a disease is known by its seat and symptoms, and not properly by anything else.

Ex.—Upon what do you ground your opinion of the infectious character of malignant cholera? *Pup.*—Upon various circumstances, but especially on the direction of its march from Hindostan, through Western Asia, into

Europe, and its becoming epidemic in this country, in the midst of winter, when the usual causes of cholera are absent. *Ex.*—But how do you prove that it has its primary seat in the alimentary tube, when men of great eminence in the medical profession assert that it has its seat in the nervous system, and especially in the spine, or in the capillary vessels? *Pup.*—Men of eminence may assert what they please, *I cannot believe mere assertions*; I think that the nervous system must be affected in all diseases; but as cholera consists of *purging, vomiting, sickness, and pain*, if there be *no pain in the intestinal canal, and no vomiting, and no sickness, and no purging*, then, I say, there is no cholera. Besides, the seat of the disease in this case is so evident, that if we deny it, we may deny the evidence of our senses on any, or every other occasion; and those who would place it elsewhere rest their reasonings on *mere assumptions*, totally devoid of proof. *Ex.*—Do you deny then that the spasms of the extremities *arise* from the spine? *Pup.*—No; but I deny that the *cause* of them is in the spine. *Ex.*—You stated this instant that you think the nervous system affected in all diseases; now, in an infectious disease, which you believe malignant cholera to be, is this not an admission that the nervous system is primarily affected? *Pup.*—Yes, it is so; but it is not an admission that we can know that cholera is present while it yet resides in the nervous system, and has not shewn itself in the organ usually affected. *Ex.*—Must all diseases, then, shew themselves in some organ, before you admit that they exist? *Pup.*—I think all organic diseases must, as I stated before, that I think they are known only by their symptoms and seat. *Ex.*—Have you ever seen spasmodic cholera since it appeared in this country? *Pup.*—No. *Ex.*—How then do you form your judgment of its character? *Pup.*—I form my judgment by the de-

scriptions in our medical books; by having seen, both *separately, and together*, cases of colic, diarrhœa, spasm, and vomiting, and having removed them; by the known habitudes of the alimentary canal, and the effects of remedies upon it; and by descriptions of cases of malignant, or spasmodic cholera, by those who have seen them. *Ex.*—Then, since you will have the disease seated in the alimentary canal, and not in *the head, or the spine*, nor, I presume, in the *capillary vessels of the lungs and skin, &c.*, as some have supposed, Will you state in what part of the canal you think the irritation, or cause of irritation exists? *Pup.*—I think it may exist in any part from the top of the œsophagus to the lower extremity, or in the whole at once. *Ex.*—What would you expect to take place were it seated in the lower part of the canal, namely below the stomach? *Pup.*—I would expect increased action of that part of the canal, with more or less diarrhœa, spasm, and pain. *Ex.*—Might not these effects be produced by a great encrease of the secretion, or overflow, as it is called, of the bile? *Pup.*—Possibly they might. *Ex.*—Do you suppose an *overflow of bile* absolutely necessary to produce the effects in question? *Pup.*—No. *Ex.*—How would you get rid of an *overflow of bile*, did you suppose it present? *Pup.*—First, by a sedative, to allay nervous irritation, and then by mild purgatives, combined, if necessary, with sedatives and stimulants, to carry off the offending cause from the canal, just in the same manner as though I did not suppose the existence of any extraordinary quantity of bile. *Ex.*—Upon what principle can a powerful sedative medicine arrest violent morbid action going on in the liver? *Pup.*—Upon the principle of allaying, or lulling asleep for a time the energies of the nerves which supply the organ, for we know that when there is no nervous energy there is no action. *Ex.*—

What would be the result were the action of the lower part of the canal to continue long severe, without extending to the stomach? *Pup.*—Inflammation and its consequences. *Ex.*—And what the result, should it extend to the stomach, or originally commence there? *Pup.*—Purging, and vomiting, with sickness, and if long continued, great pain, with spasm partial or general, paleness and coldness of skin, depression or extinction of the energies of the heart, and of the other vital powers. *Ex.*—And how does it happen that vomiting brings on these fatal symptoms so much more rapidly than diarrhœa? *Pup.*—Vomiting is not merely an increased action, like diarrhœa, but it is a morbid, or diseased action. It is a principle in Physiology, if I am not mistaken, undisputed and indisputable, that the other vital powers, the lungs and the brain, depend for support on the energies of the heart; and reciprocally the heart and all the other organs depend for support on the energies of the brain, and spinal marrow; it is, likewise, equally clear to me, that *in sickness of stomach and vomiting, the heart always sympathises with the stomach*, and that by this means its energies may be depressed even to total extinction: Now, with the knowledge of these facts before us, we can easily see whence all the rapidly fatal effects of cholera may proceed, without seeking them where they cannot be found, and that with violent vomiting and sickness, or even, perhaps, sickness of stomach alone, the energies of the heart sink, the powers of the nervous system fail, and with it the whole man perishes. *Ex.*—Is there any evident nervous connection between the stomach, heart, and lungs? *Pup.*—Yes, very evident. *The pars vaga* of the eighth pair of nerves, by one continuous cord, unites, and gives nervous energy to the pharynx, the larynx, the lungs, the heart, the œsophagus, the stomach; and unites with the nerves that go to

supply the liver and all the lower bowels. This, I apprehend, is sufficient to account for the terrible commotion amongst these organs, and their ruin, which soon ensues, if the irritation and commotion of the stomach is not immediately allayed.

Ex.—Is it your opinion that the cause of irritation might be applied originally to the œsophagus, and not even so low in the alimentary canal as the stomach?

Pup.—I can see no reason to the contrary; for as irritation begins sometimes in one part, sometimes in another, it might, for any thing we know, as well commence in the œsophagus, as in the colon.

Ex.—And what would be the consequence, according to your theory, of its commencing here?

Pup.—It is certainly no easy matter to determine; but, probably, from the *pars vaga*, in its descent to the stomach, being wrapped around the lower part of the œsophagus, in a greater body, and still nearer the heart, [a degree of sickness so intense might arise, as, with little or no vomiting, almost instantly to extinguish life.

Ex.—But this theory of yours might tend to overthrow our opinions, regarding the increased quantity, and irritating qualities of the bile, in this disease?

Pup.—I cannot help that. The bile is an accessory secretion, and any increased flow of it, must, in my opinion, be much more frequently *the effect*, than *the cause*, of irritation in the alimentary canal, particularly in temperate climates, and in persons of regular habits.

Ex.—Would you expect inflammation to occur from excessive sickness and vomiting in cholera? *Pup.*—No, certainly, I would expect death; I would never expect inflammation to occur from an excess of the very cause constantly employed in medicine; and with the best effects, to subdue both local and general inflammation.

Ex.—In the cure of this disease, would you employ bleeding and vomiting? *Pup.*—I think very rarely.

Ex.—Why would not you? They have been said to produce good effects. *Pup.*—In the commencement, vomiting may be less injurious; in no stage do I think it can be decidedly useful; and, *in anticipation of the violent effects of re-action, in persons of vigorous constitution,* bleeding, at the first onset, may be also not improper; but *generally* to bleed in the advanced stage of a disease, of which the predominant symptom is extreme exhaustion of the vital powers, is surely but a *mockery* of medicine, and an *outrage* against all sound reasoning. We bleed when the nervous power is energetic; but here it is sinking away, like a dying breeze that scarcely moves the slender thread of the gossamer. We bleed when the heart beats strong, and the arteries are plump full, and deluging some unfortunate spot with the hot vermillion stream of life; but here the heart is weak, the arteries shrunk and pale, and every organ shivering under the chill blast of death. *Ex.*—But do they not say that they bleed in the state of collapse, to draw the blood from the large vessels where it is accumulated and oppressing the heart? *Pup.*—Oh! yes, yes, they say that; but those large vessels in which it is accumulated are veins, and they cannot draw it out of them, except through the arterial system, which is already perishing for want of blood: but having written books, *like Sangrado*, in which they boast of “*la frequente saignée, et l’usage de la boisson,*” they will, doubtless, say, that if the disease is not cured by their plan, *it ought to be cured!*

Ex.—Then pray what remedeis would you propose? *Pup.*—Sedatives—stimulants—effervescing draughts—mild purgatives and gentle astringents. Ether may be used as a sedative, in the quantity of a tea-spoonful; the best sedative, however, is opium, and the best form of it is the liquid, such as the common tincture or laudanum, as in this form, its effects are most rapid; besides, solid opium

frequently contains impurities, which might derange the stomach. Opium acts instantly on the nerves, but more slowly on the heart, and, unless in great quantity, rather increases the action of the heart. The hot stimulating tinctures are good, especially those of cinnamon, and ginger, and essence of peppermint, which I prefer; also alcohol in the form of brandy. Effervescing draughts counteract vomiting, and relieve thirst, and in a case of this kind should be taken in a small quantity of water; they may be made of supercarbonate of soda, and tartaric acid, in twenty or thirty grains each. The best purgatives are, castor oil with a few drops of laudanum, rhubarb in powder, or tincture, and magnesia. The tincture of kino, or catechu, may be used as astringents. External heat, if necessary, should be applied with the least possible fatigue to the patient. The food should be mild and easily digested. My medicines are but few; but a few well chosen, and properly applied, will do more good than a great many.

CASES.*—I.

Ex.—In the case of a diarrhœa which has continued for a day or two, but without vomiting or pain, what is your remedy? *Pup.*—A dose or two of castor oil with 8 or 10 drops of laudanum, and a few drops of laudanum after each liquid evacuation, might possibly remove it.

CASE II.

Ex.—A person is seized in the night, with violent pain in the abdomen, with a feeling of coldness all over, and sickness of stomach, but no vomiting, without evident cause, or any other apparent illness: Pray how would you procure relief? *Pup.*—I would give half a glass to a glass of brandy, in an equal quantity of hot

* These are the outlines of real cases, and not merely supposed ones.

water with sugar, and 20 to 50 drops of laudanum, as the case might require ; the person might probably soon fall asleep, and feel no more of it, but a gentle purgative afterwards would be proper.

CASE III.

Ex.—A lady having eaten a large quantity of fruit, and being attacked next day after breakfast, with severe purging, she takes in the evening a large dose of salts and senna, in order to carry it off ! She becomes worse and worse during the night, and is next morning attacked with sickness and vomiting, with severe pain of stomach and bowels ; in the forenoon she takes 20 drops of laudanum in a glass of water, which is almost immediately vomited, and becoming, in the afternoon, so exhausted, that she thinks she is dying, she sends to request that you will come immediately to see her : What line of practice do you pursue ? *Pup.*—In the first place, finding the stomach so irritable that every thing is thrown out as soon as it is swallowed, I instantly apply, over the pit of the stomach and abdomen, rather more than a drachm of laudanum, rubbing it on softly with the hand, until it is nearly dry : and in fifteen minutes, I give her an effervescing draught, with 20 drops of laudanum, which is retained ; she soon falls asleep ; there is no more evacuation for several hours, and the vomiting entirely ceases ; she next swallows a small dose of rhubarb, magnesia and ginger, with some essence of peppermint, which is also retained ; effervescing draughts are given to relieve some nausea and thirst, and evacuation taking place by the medicine, the opium is applied once or twice more to relieve pain ; the same purgative is repeated in smaller quantities, and some essence of peppermint with a few drops of laudanum if required ; and warm wine and water, and the most un-

irritating food: in two days she is out of bed, and walking about, though still languid and weak. Her recovery is perfect in several days more.

Ex.—It is not very common in purging, sickness, and vomiting, to apply opium over the skin of the belly, Will you say what is your theory for this mode of its application? *Pup.*—My theory for this mode of applying opium is, I think, as just as any other in medicine. We know that a powerful emetic, or cathartic, applied over the stomach, in the liquid form, produces respectively vomiting, and purging; then why should not opium produce its sedative effects here also? But the practice does not rest merely on analogy, it rests on a knowledge of the origin and distribution of the nerves of these parts. The nerves which give energy to the muscles and skin of the abdomen come from the *last six dorsal nerves* (namely, six last nerves of the back); and from the origins of *the same six nerves*, in union with the great sympathetic, are sent off the nerves, which form, in the abdomen, a nervous mass called *semilunar ganglions*, and from these semilunar ganglions proceed the nerves which supply partly the stomach, and all the rest of the bowels. Now, it is quite plain that, if opium can produce, which I am certain it can, its specific effects on the nerves of the skin, the whole nervous mass in the abdomen will be immediately affected just as certainly as if the sedative had been applied directly to them. Besides, nothing can prevent its application here; if the skin is in its ordinary state, it can scarcely be absorbed; therefore its effects must be sure, though less permanent, and an over-dose the less dangerous.

CASE IV.

Ex.—In another female, young, of vigorous constitution, but rather bilious habit, a case occurs somewhat

similar to the last, but less violent; it takes place without evident cause except cold, and in the midst of winter; she requires your aid, Have the goodness to say how the progress of the disease is arrested? *Pup.*—It being in the evening, and the person not in bed, she takes immediately 30 drops of laudanum, and 50 to 60 of essence of peppermint, on a piece of sugar. The irritation of the bowels is soon allayed; and in going to bed, she takes a draught of rhubarb and magnesia, with a little ginger, a tea-spoonful of essence of peppermint, some syrup, and 15 drops of laudanum, in an ounce of peppermint water. This produces evacuation in a few hours, nausea continuing but no vomiting; and the medicine being repeated several times more, and in smaller quantities, at proper intervals, attention being paid to any urgent symptoms that occur, and an astringent composed of tincture of catechu, essence of peppermint, and tincture of opium, being given as necessary, in about four days she is better.

Ex.—Why do you give the tincture of opium on sugar? *Pup.*—Because when so given, it cannot easily be prevented from descending into the stomach, it requires no effort, and begins to act on the nerves the instant it touches the top of the gullet. *Ex.*—Why do you employ a purgative as soon as possible after the sedative? *Pup.*—To oppose the morbid irritation of the alimentary canal by a counter-irritant, which may carry it off in the natural direction. *Ex.*—Why do you prefer rhubarb? *Pup.*—Because it is mild, certain, and also astringent. *Ex.*—Why magnesia? *Pup.*—Because it unites with every kind of acidity in the alimentary canal, and all its combinations are purgative. *Ex.*—Why so fond of essence of peppermint? *Pup.*—Because it is very powerful in relieving pain and flatus in the bowels, and also very stimulant, one tea-spoonful of it being stronger than three of brandy.

CASE V.

Ex.—Some years since, a boy, whose bowels were usually rather irritable, after a slight encrease of evacuation the preceding day, was attacked, at four in the morning, with violent diarrhœa, sickness, and depression, which continued unabated till eight o'clock, when he was observed. At this time the evacuations were watery, with eyes sunk, giddiness, great pain of bowels, skin pale and cold, pulse at wrist scarcely perceptible, inability to stand upright for a few minutes. Castor oil, and also calomel, being given, and vomited; a medical gentleman having been called, but not appearing at half-past nine, and all the symptoms being now worse, with hiccup and indistinct vision superadded: being now obliged to attempt something to save the boy, Pray what did you do? *Pup.*—I gave immediately an injection of starch, containing a drachm of tincture of opium; and from this time the violence of the symptoms began and continued to abate, the pulse rose, heat returned; he had effervescing draughts, some castor oil, and then rhubarb, and he scarcely stirred for six hours. He had very little food, evacuation took place in the evening in the natural way; and, finally, when the doctor came to visit him next day, he was out of bed, and opened the door to him himself.

Ex.—What conclusion is to be drawn from this case? *Pup.*—That it was as bad as *three-fourths* of the cases called spasmodic, or malignant cholera. *Ex.*—But there were no spasms of the extremities? *Pup.*—There were none, or else they were not perceived, nor do they always exist in the malignant; but there were pains enough in the bowels, and these must be admitted to be as severe as any other, seeing they do their work with such immeasurable rapidity. *Ex.*—But might not *bleeding or*

a vomit have *removed* what might be termed here the state of collapse, had they been employed instead of the opium? *Pup.*—Oh! certainly, they might have *removed* it *entirely*,—possibly in an hour! *Ex.*—But if spasmodic cholera is not a dreadful pestilential malady, almost incurable under any circumstances, how do you account for nearly half the cases being fatal? *Pup.*—Partly from the disease running its course so rapidly that assistance is not procured until it be too late; in hot climates, partly, perhaps, from a circumstance that is either known, or ought to be known, that sickness of stomach is always vastly more intense in a hot atmosphere than in a cold one; partly from a peculiar susceptibility to its attacks of persons whose nervous energy has been exhausted by fatigue, or other depressing causes; and partly, in this country at least, from the disease being regarded, by every one, rather with wonder and terror, than treated as a disease which, if taken in time, may be frequently cured upon sound principles.

END.