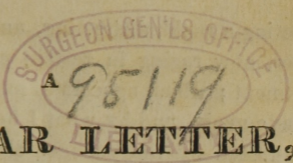


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CIRCULAR LETTER,

FROM

DR. BENJAMIN WATERHOUSE,

TO THE SURGEONS OF THE DIFFERENT POSTS,
IN THE SECOND MILITARY
DÉPARTMENT

OF THE

UNITED STATES' ARMY. *

————— [on Dysentery]

BY "THE RULES AND REGULATIONS OF THE ARMY," it is made the duty of the chief of the Medical Staff of the Army, or a Department of it, "to correct all abuses, and prescribe and enforce such regulations as may be considered most conducive to the comfort of the sick, and the interest of the service, with the approbation of the General commanding the Army, or Department." Under a sense of this duty, I am impelled to transmit to you my thoughts and advice re-

* The military Department over which Dr. Waterhouse is Director, comprehends the States of *New-Hampshire, Massachusetts, Rhode-Island and Connecticut.*

specting a rapid, distressing, and very dangerous disorder, now raging in certain places within this Department; which appears to me, by the observations I have made, and by what I hear, not to be too well understood by the younger class of practitioners.—The distemper to which I allude, and to which I would direct your serious attention, is

THE DYSENTERY.

*It is full forty years since this formidable distemper may be said to have raged in the quarter where this is written; so that few practitioners hereabouts can be said to have had deep experience in it. The apprehension that it may reach the post under your medical care, has induced me to send you this cautionary letter.

The DYSENTERY often attacks so suddenly, and so violently withal, that the physician can hardly tell which are the salutary efforts of nature, struggling to restore health, or which the ragings of an insidious disease, running every minute from bad to worse; and it is generally too acute to allow him long to hesitate, there being few diseases where an error in the beginning occasions more fatal consequences in the end.

Sydenham, Pringle and Cullen, are standard writers, and in the hands of you all. The whole medical world have been in the habit of looking up with peculiar respect to the history of diseases given by the skilful Sydenham. He tells us that Dysentery is a convulsive motion of the intestines, caused by a caus-

* Cambridge and Charlestown.

tic, ulcerating humour lodged in their coats,* occasioning a frequent inclination to stool, and a frequent discharge of mucous, bilious matter, tinged more or less with blood; with vehement severe gripings, and a feverish commotion. He says that it sometimes comes on with the ordinary symptoms of fever; but more commonly the pain in the bowels comes on first, with costiveness; the stomach and bowels are oppressed with flatulency, and there is a distressing, painful descent, as if the bowels would be forced out with every discharge. In most cases this disease begins with gripings, and a frequent inclination to go to stool, yet little or nothing is voided; but a teasing irritation of the rectum accompanies the efforts to discharge its contents. As the disorder advances the stools become more frequent, the gripings more severe, and the tenesmus more distressing. With these symptoms there is a sickness, and sometimes vomiting.

Sir John Pringle, and all other good practical writers have copied this description. These are besure, some of the essential marks of Dysentery, but every season does not produce the same degree of violence in each; and every individual has something peculiar to himself, giving a shade of difference to the disorder.

Sydenham tells us that Dysentery, is always dangerous, and, if unskillfully treated in the *beginning*, frequently proves fatal. He says, expressly, that if the patient has been dosed with *hot medicines*, the fe-

* Sydenham is more respected for his facts, than his theories.

ver rages, the tongue is covered with a thick white mucous first, and then it becomes dry and black; then follows *prostration of strength*, marked by the coldness of the feet, and death follows in a day or two after.

Cullen announces, in his concise style, that "Dysentery is a contagious fever, in which there are frequent mucous, and bloody stools, while the natural alvine *fœces* are, for the most part, retained, accompanied with gripes and tenesmus, the matter voided being chiefly mucous, sometimes mixed with blood."

Cullen does not, however, appear to have known so much of this disease as of many others. He speaks not with his usual intelligence and confidence. Dysentery is not a very common disorder in Scotland.

An opinion has been uttered, but not among the oldest practitioners, that the complaint of the bowels, now prevalent in the vicinity of Boston, is not the genuine Dysentery, but a Typhus fever, accompanied with Dysenteric symptoms.* I should not have noticed this, if it had not the tendency of diverting the attention from the actual source of this distemper. It is the same disease which the Greek physicians have mentioned two thousand years ago : and of which Sydenham and Willis have given us the first good history ; and that not by copying from the Greeks, but from nature. There is a wonderful sameness in the diseases of the human frame, as to their general state and character, in every individual. Several varieties happen

* Some have considered it as a putrid fever, and regard the affections of the bowels as only symptomatic.

in Dysentery, according to the season, peculiarities of situation, and constitution of the individual; yet every where, and at all times, is Dysentery *essentially* one and the same. Water, hail and snow, are alternately a chrystal and a fluid.

You need not waste your time, or distract your attention by guessing at the remote causes of dysenteries or epidemic fevers. We learn from the highest authority, that the pestilence "walketh in darkness."—The enemy approaches unseen. We are pretty well convinced that epidemic fevers depend not on any of those changes in the air that are pointed out by the thermometer, barometer, or hygrometer. These widely spreading maladies, as well as endemics, or local disorders, seem as if they arose from some secret movements, or alterations in the earth, or on its surface—that is, on some new combinations in the soil, or some effluvium from a deeper situation, affecting not only the air we breath, but the water, which we use for every thing. Epidemics seem to accompany or follow a blighted state of vegetation. They seem also to accompany an abundant harvest; but whether in the series of cause and effect, is not fully known. As to myself, "I'm weary of conjecture."

It appears that neither Sydenham, Pringle or Cullen has paid sufficient attention to the function, state and condition of the *skin*; and to its remarkable sympathy with the state, condition and function of the stomach and bowels. The skin is an organ extremely sensible to the vicissitudes of heat and cold, dryness

and moisture. Its condition affects not only the circulation, but the *sensorium commune*, and through it the stomach and every part of the body. It is to the external skin, and to the internal membranes of the stomach and intestines, that all our medicines are applied. The physician can only judge of the condition of the "*homo internus*" by the aspect of the eye, the appearance of the tongue, and the *state of the skin*. A sagacious and experienced physician shall be able, in a dark room, without seeing the patient, merely by feeling the state of the skin, to form a pretty accurate judgment of the stage, and progress of the dysenteric disorder of the intestines.

In considering the Dysentery, we must bear in mind that the œsophagus, and stomach, and whole tract of intestines are covered with a *mucous* membrane. This membrane is defended by a natural mucous which is more abundant in that part which has the appearance of velvet, and where the glands secreting the mucous are more abundant. Whenever this mucous is abraded, the intestine becomes extremely irritable, and a morbid increase of the peristaltic motion of the intestines follows.

The mucous membrane is one of the sentinels placed to guard life. Whenever it is inflamed, more violent symptoms appear than if the part was a thick muscle. It is in fact, an inflammation *sui generis*, and requires a peculiar treatment. If a thick muscular part is inflamed, we can, at once, remove that inflammation, by taking off its tension, by bleeding: but if

the mucous membrane, lining any internal cavity, more especially of the intestines, be inflamed, we cannot take off its tension by bleeding, without hazarding life. We see proof of this, always, in the ulcerated sore throat, and often in puerperal fever, and almost always in dysentery. The inflammation of the mucous membrane differs from the inflammation of a thick muscular part in this;—it does not pass into suppuration and consequent granulation, but runs directly into ulceration, which is a mark of extreme weakness in the part diseased. Again, when the mucous membrane is running rapidly through the process of inflammation, the pulse is from 120 to 140, and is always accompanied with a *depression*, or *prostration of strength*, which is often injudiciously confounded with *weakness*. This may need explanation, by an example. A strong and healthy man, being in a close room, where charcoal is burning, shall feel sick, become faint and dizzy, and, unable to support himself erect, shall fall senseless on the floor; and if left there will soon die; yet if you remove him into the open air, he shall, at once, revive, and in a few minutes be as strong as ever. This sudden depression is denominated *prostration of strength*: whereas, if a man has lost much blood, or been confined in a dungeon, or long deprived of sufficient food, or has been suffering under fever, he shall be too weak to support himself in an erect posture. Here it is beyond the power of man to immediately restore him, as in the former case, to his pristine vigour. Nothing but nourishing diet,

tonic medicines, and length of time, can restore him to his former strength. Now this is *weakness*. If you keep these distinctions in mind, it will shew you the difference between the use of tonic drugs, and the removal of a local cause.

The nature and extent of the disease in question may be judged of by the appearances after death.—The condition of the internal coat of the intestines indicates that it had been intensely inflamed by its consequences, ulcerations, contractions and gangrene. This is commonly most evident in the colon. Purulent matter is oftener found in the rectum, not from a greater degree of the disorder there, but from its peculiar structure.

The Indications of Cure, and Mode of Treatment.

From the rapid view we have taken of the nature, causes, and consequences of Dysentery, the investigation resolves itself into three curative indications, viz :

1st. To promote a discharge of the natural fœces.

2d. To relax and duly manage the internal spasmodic constriction of the intestines, and the external constriction of the skin; and

3dly. To mitigate and assuage the convulsive motions of the intestines, and the teasing tenesmus; and, at the same time, to obviate a tendency to putrefaction.

It is clear that we must evacuate, gently, the whole alimentary canal from the cardia to the rectum. An

emetic of Ipecacuanha is found preferable to any of the preparations of antimony; as being milder and more certain; and it has this advantage, that if it does not operate by vomiting, it passes off by the bowels, and by perspiration. A few hours after the stomach has become settled from the operation of the emetic, we must have recourse to the important procedure of *purg-
ing*. The united voice of a divided profession leaves no doubt of the necessity of following up the emetic with effectual purgatives. But then the question, the serious question is, the selection of the proper article from the *materia medica*, to safely effect the end we have in view.

The class of purgatives are many and various in their qualities. The selection of them is a matter of great importance in all disorders of the stomach and bowels, and in none so much, as in dysentery; and yet, how little attention is paid to their choice? In the course of my life, I have known some practitioners, who, if they had no salts, used jallap; if no castor oil, took aloes; and no manna, used senna; and if none of these, rhubarb; or calomel, and even gamboge; without once considering, that drugs which evacuate the bowels, operate on very different principles. This is too important a matter to be passed over without discussion.

Every body knows that the intestines have a natural vermicular motion, which, commencing at the bottom of the stomach, goes on throughout the whole intestinal canal. But every one does not know that

this motion is more essential to life, than the motion of the heart itself; for it continues after the heart is struck with death, and even after the head is separated from the body. This motion is called the *peristaltic motion*. In Dysentery, this vital motion is morbidly increased, and irregular, even to spasm. It is also unnaturally increased by certain drugs called *purgatives*, which stand in the middle way between nutriments and poisons. Now jallap, senna, aloes, rhubarb, gamboge, and perhaps calomel, operate the evacuation of the intestines by increasing this peristaltic motion of the bowels, which natural motion is morbidly increased in dysentery; whereas the thing aimed at in this rapid disorder, is, to discharge the contents of the intestines, without increasing inordinately their peristaltic action.

There is another class of purgatives which empty the intestines upon a quite different principle, viz. by increasing the secretion from the glands of the intestines, and thus producing copious watery discharges, and that without increasing, or but slightly increasing, the natural peristaltic motion, and, of course, without giving much, if any pain, whereas the former class occasions a good deal. Under this head, I place, by way of pre-eminence, the Sal Catharticus Amarus, or Epsom Salt (Sulphate of Magnesia.) To the same head belongs manna, castor oil, and the extract of butternut (*Juglans Cinerea*.) I am inclined to the belief that well levigated calomel, in as large doses as 15 or 20 grains, may be ranked

likewise under this head. But this preparation of mercury operates very differently in different people.

Under this head of mild, but effectual purgatives, we may rank certain fruit perfectly ripe. But how seldom do we find, in this northern region, autumnal fruit in a state of perfect ripeness; or up to that line of maturity which stops short of rottenness. In the south of France, ripe grapes have been celebrated by the famous Tissot, in dysentery; but who ever saw ripe grapes in Massachusetts, or, I like to have said, ripe any thing? We eat almost all our vegetables in a crude and unripe state. Even our common garden currant, which is the grape of Corinth, is seldom fully ripened with us. We eat our corn green, and so we do our beans, and cucumbers, and melons; and, for the most part, our apples, pears and plumbs. Our potatoes, and garden roots, generally, are gathered for use long before they are ripe; that is, before their vegetative life has ceased to maintain the firmness of their organic structure. This matter, but little attended to, needs some explanation.

There is a *life* in vegetables as well as in animals, they being alike organized, and equally capable of growth. A sound apple, a sound grape, a sound berry, as well as a sound egg, are not so many dead bodies, but with a regular organization they have a life, which preserves them from dissolution, and keeps their parts entire. While, therefore, a fruit retains its living properties, the digestive organs, or rather the gastric juice cannot act upon it, and assimilate it to our na-

tures; for the vegetable life resists the action of that powerful solvent; and the stomach either nauseates it and throws it up, or else protrudes it downward, when it is discharged unchanged. The gastric juice cannot act on or dissolve, a whole unripe gooseberry, currant, or grape. The digestive organs must first kill an animal or vegetable body, before either can be digested. But experience has taught mankind to kill a vegetable by boiling it in water; or roasting it in ashes before it is offered to the stomach for digestion. A strong and healthy human stomach possesses the power, not only of killing living, but of animating dead matter. If you attend to these laws of animal and vegetable nature, you will be able to form a more than ordinary correct judgment of the good effects of *ripe* fruit, and the bad effects of *green*. You now see the reason why every vegetable, not killed by time, or by fire, is oppressive to a weak and sickly stomach; and you will therefore hesitate in giving fruit to a dysenteric patient, unless you are convinced that it is already on the change. With these caveats on your mind, you may give fruit to your patient, especially if he hanker after it.

In order to fulfil the 2d intention, or indication, viz. that of relaxing and duly managing the internal spasmodic constriction of the intestines, and the external constriction of the skin, much may be said, although it is not easy to perform. The external skin, covering the body every where, (excepting the teeth and the nails) and the internal skin of the intestines, are like the two parchment heads of a drum; you cannot strike

one without affecting instantaneously the other. He who has not attended to this remarkable *sympathy* has not learnt half his profession. The affections of the mind affect the skin with the rapidity of thought.—Dread, terror, shame, or grief are instantly depicted on the skin of the face; and in many people these impressions as suddenly affect the bowels. We need not record instances.

When the skilful Sydenham first began to practice physic in London, practitioners believed that it was proper to raise one fever in order to cure another.—They were led into this error from observing, that fevers often terminated in a profuse sweat; hence they endeavored to raise one by heating medicines. They had not then learnt the distinction between perspiration and sweating.

We endeavour to recall the deranged perspiration through the pores of the skin by a variety of means; that commonly pursued in dysentery is giving small doses of ipecacuanha, or preparations of antimony. These relax the constricted skin by first relaxing the constricted bowels. The warm bath is used to the same end. This relaxes the constricted bowels by first relaxing the constricted skin. A judgment transcending all written rules must be exercised in harmonizing the external skin with the internal skin of the intestines. Small doses of ipecacuanha, and that combination of it with opium, known by the name of "*Dover's Powder*," may be used for restoring perspiration, as well as for mitigating the torments of tenesmus.

Under the process of relaxation we may mention *blood letting*. It is observable, that almost all army physicians, who have written on diseases of the camp, have commenced the cure of dysentery with blood letting. This may be a better general rule for our soldiery, who are athletic men, between the age of 24 and 36, than for a promiscuous practice among citizens. Bleeding in dysentery has been adopted from an idea that it was an highly inflammatory disorder. But the first physicians in Europe are by no means agreed whether the inflammation that attends dysentery, be the cause or the consequence of the original distemper. Dysentery is certainly accompanied by an intense inflammation; but then it is an inflammation *sui generis*, requiring a particular treatment.

In a young man, crowded with blood, and especially if he were intemperate, who, with an attack of dysentery, should have severe pains in his back and loins, and a very hard and crowded pulse, I should advise blood letting; but to repeat the operation to reduce the pulse, as in thoracic inflammation, would be absurd.

Thus much towards the removal of the proximate cause of dysentery. Let me now draw your attention to the palliatives proper to be used for assuaging some of the most distressing symptoms; such as the tormenting gripes and distressing tenesmus. This will lead us to speak of the use of *opium*. Young practitioners are too apt to resort to opium, whenever there is violent pain, or great uneasiness. But opium corrects nothing; expels nothing; it only assuages and benumbs, and gives opportunity for the nearly exhausted

powers to rally. If you are certain from the appearance of the discharges, that your patient has been thoroughly evacuated, you may throw in opium at bed time.

Sir John Pringle, whose book on the "*Diseases of the Army*," I cannot too strongly recommend, says, "I must observe here with regard to opiates in the dysentery, that it were better, perhaps, that they were never given at all, than used before the first passages are cleared. For, though from the beginning, they are sure to give some immediate relief, yet by confining the wind, and the corrupted humours, they tend to fix the cause, and to render the distemper more obstinate in the end." I have experienced sufficient to justify this caution. Nevertheless the tormenting pains, the distressing bearing down, and the teasing tenesmus, compel us to the use of opiates; for there are cases where we cannot, without a degree of cruelty, withhold them. The fact is, we are obliged to follow up purging so closely, that the patient would faint and sink under their operation did we not give a truce to the conflict, and allow the scattered forces to rally, by procuring sleep from opium. Dr. Cullen tells us, that as opium is apt to occasion an interruption of the natural actions of the small intestines, and consequently to retard the evacuation of their contents, we should be careful not to impede so necessary an operation in dysentery. I must however remark, that I have given in this disorder, 40 drops of laudanum, and 15 grains of that combination of opium and ipecacuanha, called "*Dover's*

Powder," at bed time; when, instead of binding the bowels, it actually loosened them. It seemed to relieve their constriction, and evacuate their contents by relaxing them.

Opium is certainly a noble remedy in the hands of the experienced; but a dangerous drug where experience is wanting. Dover's Powder may be sometimes used for the double purpose of mitigating the torments, and restoring perspiration, or harmonizing the skin and the bowels.

We should be equally cautious in the use of *astringents*. By the premature use of astringents, we renew the distress of the patient. Pringle's favourite astringent is the *chalk mixture*,* with from 4 to 8 or 10 drops of laudanum in each dose. Instead of the cinnamon-water in this mixture, some prefer that of mint. I have reason to be much satisfied with the decoction of the *wild cherry*, (*Prunus Virginiana*.) I commonly use the twigs bruised; others prefer a decoction of the roots. A wine glass full of this decoction, with or without a little molasses, is one of the best astringents in the latter stage of dysentery I have yet met with. We learn from high authority, that next to opium, an infusion of chamomile is the best remedy for removing those troublesome pains that accompany flatulency in this disorder.

Should it be thought advisable to lessen the aggravated state of the intestines by a counter irritation on the skin of the abdomen, I would recommend a mustard poultice in preference to a blister of cantharides;

* *Mistura carbonatis calcis* of Thacher's Dispens.

which is apt to produce a distressing strangury, when applied so near the bladder. Should a strangury be produced, nothing will assuage it sooner than an onion poultice, applied as near as possible to the part affected.

As to *diet*, I have no hesitation in denouncing every thing of animal nature, not even chicken-broth, during the first seven or eight days of the distemper. After the violence of the disease has subsided, and after the natural fœcal discharges have re-appeared, broth may be allowed; but in every stage and form of the disorder, preparations of barley, sago, arrow-root, and rice-water are preferable. As to brandy or bitters, infused in any ardent spirit, they ought forever to be rejected. If you cannot moderate the raging symptoms of dysentery, and assuage the convulsive motions of the intestines, on all which the remarkable prostration of strength depends, you never can restore strength by the use of fiery, stimulating, and the bitter class of tonic articles.

If the patient has been dosed, at the beginning, with heating articles, with astringents, and with opium, before his intestines have been freely and repeatedly, that is to say, daily, evacuated by cooling purgatives, a train of dreadful symptoms arise, different from what we have related, viz. a dry and parched skin, a tense abdomen, a raging secondary fever, accompanied with delirium; after which apthæ appear in the throat and mouth; then succeeds cold clammy sweats, with insensibility in the extremities, and a hiccup; or else a discharge

of black blood in the mouth, or something resembling coffee grounds. In this deplorable stage of the disorder, it is in vain to give wine or the bark, or preparations of vitriol, or to apply blisters, or to administer injections, or any thing else, with a well grounded hope of remedying the evil. In this situation of the sufferer, we can only smooth the doleful path to the grave by opiates; for when the pain and thirst cease all at once, and the discharges have a cadaverous fœtor, and the pulse has become small and trembling, we are certain that the intestines are so altered in their structure, that they never can be restored, an incurable gangrene having already taken place.

It is very difficult, if not impossible, in such a complicated disorder as this, to give precise directions. I hope, however, that I have said enough to guard you against running into any gross or fatal error in this rapid and highly dangerous disorder; and that was the end I aimed at in this plain cautionary address. You must bear in mind that dysentery, like almost all other acute diseases, has a natural course and termination, and that this crisis occurs about the 10th or 11th day; and it is probable that this crisis would take place, in a majority of cases, if you could induce your patient to take nothing but warm milk and water, or whey.

As every thing depends on the prompt exhibition of proper remedies, or doing the proper thing, at the proper time, I should advise you (when a soldier complains of sudden loss of appetite, costiveness, flatulency, sickness at the stomach, with retching to vomit,

together with chills, succeeded by heat; a frequency and hardness of the pulse, with pain about the navel, first above it and then below it,) to give an emetic of ipecacuanha; and within 12 hours after, an ounce and an half of the *sal catharticus amarus*, (sulphate of magnesia,) or, if the case be very pressing, throw 2 or 3 grains of tartarized antimony into this solution of salts, which will operate upwards as well as downwards, and save time. If your patient should complain of severe pains of his back, loins and head, and especially if he has been an intemperate drinker, you had better bleed him; but not so freely as if it were an inflammation of the thoracic viscera.

These being the first symptoms of dysentery, you must prohibit meat, tasting of spirit, or even drinking cider. A careful practitioner will, from this time, inspect the discharges. He will sometimes find, at the beginning, a mucous matter without any appearance of blood; at other times a frothy mucous, streaked with blood, or else a watery acrid humour, like the washings of meat, with a fœtid smell, and now and then lumps resembling bits of cheese; and sometimes towards the close of the distemper, a portion of purulent matter, which comes from the rectum merely.

These various and varying appearances will point out to you the nature, extent and progress of the disorder; and if you take into consideration also the increased action of the pulse, and the state of the skin, and the condition of the tongue, they will convince you of the necessity, the absolute necessity, of purging your patient, every day, with the cathartic salts, with,

or without manna, or castor oil,* or small doses of ipecacuanha, as the case may be.

During all this process your patient is to eat nothing solid, nothing beyond gruel, barley water, or milk in which the leaves of mullen have been boiled, sago, or arrow-root, a decoction of the running mallows, and drinks of that quality. Ripe fruit, so called, sometimes does no harm, but too frequently no good.

Such a disease, and such a thin diet, will necessarily occasion a troublesome flatulency; to counteract which I know nothing better than chamomile tea. During this rigid curative process, the convulsive motions of the bowels, and the distressing tenesmus, must be appeased by an efficient opiate at bed time. We are sometimes compelled to give from 1 to 3 grains of opium, or from 20 to 60 drops of laudanum, at the usual hour of sleep. Notwithstanding my cautions respecting the too free use of opium, I must say, that I have frequently found this drug so far from constricting the intestines, that it has had a directly opposite effect, and actually produced a free and easy discharge; but then I have given it with a few grains of ipecacuanha, or else Dover's Powder. In one case of severe dysentery, its effects were so happy that the distressed patient called it *the opiate purgative*. We presume that it produced this effect by relaxing the spasmodic constriction of the colon and rectum.

A severe dysentery, treated as we have recommended, seldom continues longer than 10 or 12 days; for

* Young children may take with advantage equal parts of castor oil, and sweet (sallad) oil.

in that time the distemper seems to have run its natural course, when the usual fœcal stools re-appear ; but sometimes from neglect, accident, or injudicious treatment, the disease is protracted many weeks, when the patient is gradually wasted, until nothing seems to remain but skin and bones. Those few who do recover from this low condition, are troubled with irritable bowels, and are liable, on catching the least cold, to be afflicted with a chronic dysentery, or purging, which renders the soldier unfit for field duty. Such subjects cannot be exposed to cold and dampness without injury, and should therefore wear flannel next their skin.*

There is a still more simple curative process, which very often succeeds in a moderate dysentery, viz. dissolve 4 or 5 grains of tartarized antimony in a pint of the solution of manna, and give enough of it to prove emetic ; after which let the dose be lessened, so as only to produce nausea, and exoneration of the bowels ; which, in mild cases, it seldom fails to effect. After this, give the chalk-mixture, with or without laudanum. By this simple mode of practice, many dysenteric patients are daily restored ; while those who are bled too profusely, or else dosed with brandy, or bitters, or prematurely with opium, are either cut off at once, or else linger out several weeks with incurable ulcerations of the larger intestines, and apthæ in the mouth and throat, or by wasting abscesses in some part of the body.

* You will find in Dr. Mann's medical sketches, good observations on *chronic* dysentery ; and good directions in the *acute*, in his prize dissertation.

Should you have an opportunity of examining the bodies of those who die of dysentery, there is one thing I earnestly recommend to your attention; and that is *certain eruptive, pustular, or tubercular appearances here and there in the intestines*. These pustules, or *vestiges* of pustules, have been slightly noticed, now and then, by dissectors, and as slightly mentioned by practical writers. It has, however, given rise to a suspicion, that this rapid, and formidable distemper, *is to the intestines what the small pox is to the skin*;—and that it commences with an eruption of pustules, accompanied with an intense fever, which attains its height in 8 or 9 days, and then gradually declines, and goes off in 11 or 12, like the small pox. Let us see how far this idea is countenanced by facts.

In 1748, Dr. Fraser found in the intestines of a person who died of dysentery, *little vesicles full of a putrid liquor*, numbers of which were evacuated from the bowels before death. A woman died in St. George's hospital, London, of dysentery, who passed from her bowels a number of vesicles, such as those mentioned by Dr. Fraser. On examining the body after death, *a number of small prominences* on the inside of the colon and rectum were discovered, with erosions of the villous coat in their middle. On squeezing these prominences, a number of vesicles, full of a watery liquor, some of the size of a millet-seed, and some larger, came through the villous coat, and were exactly similar to what she passed before death. Dr. Donald Monroe noticed the like appearances in the colon and rectum of those who died of

dysentery. Similar pustular appearances have been found in the *intestinum illeum*. Bonetus mentions, from Pontanus, a case where there were found more than 200 little ulcers, from the beginning of the colon to the end of the rectum. Some of those little ulcers had crowded the whole intestine, and *between them there were parts of the intestine whole and entire*. Dolæus, "*de Dysentria*," says he found the small as well as the large intestines, crowded with *purulent tubercles*. Dr. Cleghorn, in his observations on the diseases of the island of Minorca, found, what he calls *schirrous tubercles*, straitening the cavity of the colon in several places. Sir John Pringle has made similar observations.

Arctæus, de caus. et sign. morb. diurn Lib. 2, cap. 9, says that Dysentery originated from ulcers, which appear tumid, rough, anomalous, callous, and resembling such knots as are generally found in the branches of wood. If at first the ulcers are small, and do not for some time begin to spread, these small ulcers, like the waves of the sea, succeed each other; some of them subsiding, whilst others rise to an apex. He adds—these ulcers of the intestines happen most frequently in the summer; next to which the autumn is the most general season for their production: they happen more rarely in the spring, and never in the winter.

Sir George Baker, in describing the epidemic dysentery which prevailed in London in 1762, says, that he found on dissection of those who died of it, besides inflammation and gangrene, *a number of little tubercles, or excrescences, which resembled the SMALL POX, of a*

flat sort, at the height of the disorder ; but which differed from them in this, that they were of a firm consistence, without any cavity. Lastly, the great LINNÆUS, that celebrated secretary of nature, appears to have made similar observations on those who died of dysentery ; for he says (see Amoenit. Academ. vol. v. dissert. 32, p. 97) "*Dysenteria epidemica SCABIES est intestinorum interna, ut ex dissectionibus cadaverum dysenteria defunctorum patet.*"

Taken collectively, these are curious facts ; and worthy to be farther examined, as they may lead us, at least, one step nearer the truth than physicians have hitherto advanced. The disease that comes nearest, in appearance, to dysentery, is the *erythematic enteritis*, or erysipelatous inflammation of the intestines ; yet dysentery is by no means a simple inflammation of the intestines. Its symptoms are more like *exanthemata*, or *eruptive fever*, as measles or small pox. Like them, the dysenteric fever runs a certain number of days, and then remits, or subsides altogether : like some of them it is liable to recur, in a sort of *secondary fever*, with aggravated symptoms, frequently terminating in death.

I thus state my motive for wishing you to pay attention to the appearances in the intestines of those who may die of dysentery. As the object is the PUBLIC GOOD, I feel no reluctance in risking an opinion not yet sufficiently supported by facts.

Cambridge, Mass. September, 1817.

ERRATUM.—Page vii. line 5, for "ostener," read "often in puerperal fever."

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