AN INAUGURAL DISSERTATION
ON
DYSENTERY
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Dysentery.

Dysentery may be divided into two stages—the acute and chronic, and each is characterized by its own peculiar symptoms. Sacritude, want of appetite, flushes of heat and cold, slight pains above the umbilicus, occasionally Costiveness, sometimes and perhaps more frequently than otherwise diarrhea are the first—or premonitory symptoms that attract our attention upon the approach of the disease. Rigors, sometimes marked chills, flatulence, oppression in the region of the stomach, nausea, griping pains in the colic region, with great desire to evacuate the bowels, are also common symptoms. Torments usually succeed and sometimes become almost—
intolerable. The evacuations which at first contained some fecal matter become altogether unnatural—a glairy mucus makes its appearance in the stools, sometimes tinged with blood and sometimes blood is voided in considerable quantity.

The vascular system becomes very much excited and its equilibrium disturbed as is always the case in inflammatory diseases. The fever follows very soon after the dysenteric symptoms, and, I believe, is always in this stage of the disease of an inflammatory grade and usually continues so, though sometimes in the course of the disease it is said to assume evident characteristic marks of typhoid fever. I suppose this apparent change in the fever to be due to there being in
the blood, consisting with dysentery, some typhoidal element or cause of the disease and which as the dysenteric fever subsides, develops itself and produces its specific action on the system.

The tongue is usually coated at the beginning of the attack with a thin white fur, which as the disease progresses becomes brown and dry along its middle. The edges clean off and become red and fiery, frequently assuming a granular appearance like raw flesh.

The gums become tender and swollen, and at the same time the breath very offensive. The pulse is depressed and frequent: the countenance shrivelled and cadaverous.

The tumours, linessness, and dysenteric evacuations, will be sufficient-
determine the diagnosis.
The acute stage will last from four
to ten days. If the disease has rous
on in spite of remedies, or in other
words, the conservative powers of
nature have not rallied successfully in subduing
diseased action—the febrile heat—besides
the pulse becomes more frequent
and hard—prominent—discharges
accompanied with debility and
exhaustion—we have reason to con-
clude that altercation has taken place
that the deeper structures have become
involved that will require some time
to effect a restoration, and now
we may regard the disease as chronic.
Inflammation, as ascertained by
pathological investigation, is considered
by all to be the proximate cause.
of the disease, or in other words this is the disease itself. But I would ask what produces this inflammation? Whence arises that state of the system that I have described above—three distressing symptoms that characterize the disease? To these questions I fear I shall not be able to give very definite answers, for there are so many conditions and circumstances under which dysentery may and does manifest itself, that it would be a difficult task to assign to each its respective action in its production. Therefore, I shall content myself to consider only those which to me seem to be most effective in producing it. These are invariably in dysentery functional among men.
generally turbidity of the skin and
skin. These morbid conditions always
being present, it is reasonable to con-
clude that they are essential to its very
existence, and if so, whatever produces
these may also be effective, or at
least, reasonably considered among
the remote causes. From the prevalence
of sweating in malarial districts, being
often found in connection with inter-
mittent fevers, and from the liver's being
acted on similar in such, it has been
suspected, that malaria has something
to do in the production of this disease.

But whether or not malarial exhalations
of themselves are capable of producing
the disease, I am unable to say—but
this acting conjointly with other causes
may, I think, produce it. How is

necessary to the production of fevers, and this heat would naturally excite to incoordinated action the exhalents of the skin. This being the case a sudden change of the weather, as from warm to cold from dry to wet would produce constriction of the pores of the skin, perspiration would cease to flow, there would be a determination to the intestinal organs, a sort of portal constriction would occur, and finally dysentery would be the result. But since atmospheric vicissitudes, acting on the malarial diathesis, do not always produce the disease, there are probably other causes, some of which, perhaps for the most part, of an occult nature. Unequal food, food not well prepared, or insufficiency of
food, in short; any article of diet of an irritating nature may assist the predisposition to the establishment of the disease, and even cure it, when there is no predisposition and, may, therefore, be regarded as one of the occasional or sporadic causes. Seyballe may also be considered among the causes, though, I think, it is seldom that they contribute much to the establishment of the disease. From the prevalence of dietary epidemics, without regard to locality, season, food or drink, some authors speak of "an unknown peculiarity of the atmosphere" as a cause. Such may be the case, but this is only hypothetical, and I must acknowledge that I have but little confidence in the existence of
Any such influence.

Different notions as to the pathology of this disease have obtained in different ages. Some pathologists consider the disease to be a cutaneous or rheumatic affection of the intestinal tube; some that it was the result of a vitiated state of the fluids furnished from the secretory organs, considering the inflammation secondary or the result of this; while others believe that the disease was the result of constriction of the muscular fibres of the colon and that attempts to defecate produced a sort of spasm of the bowel, which was communicated to the rectum and thus accounted for the tenesmus. The inflammation is now considered primary.
Direction of the intestinal canal, of those who have died with the disease, reveals an ulceration, the principle seat of which appears to be in the mucous membrane of the colon and for the most part, the deeper structures are also involved. The small intestine and even the stomach have been found to exhibit manifest marks of diseased action. In cases that have died soon after the first attack, from accidental causes, the structure of the seat of the disease is found to be soft and spongy, and the mucous membrane studded with numerous small prominences. The liver seems also to be implicated, and has been found considerably enlarged and sometimes even its structure partially destroyed.
This I believe to be more frequently the case when dysentery prevails epidemically. In making our prognosis we should always look to the greatest source of danger, and consider minutely the circumstances from which death would most likely occur. We are to apprehend death in this case from extension of inflammatory action. We can arrive at, tolerably correctly, the extent of the inflammation by the nature of the circumstances. The mucous membrane of the intestinal, like other mucous membranes, has a basement membrane and is well supplied with blood vessels and nerves. This membrane being in an inflamed condition, the capillaries would become distended from the loss of contractility, and
the discharge will be similar to that of incipient cough or bronchitis. In this discharge some authors apply the term 'gray mucous.' Little danger is to be apprehended from this discharge, even if it should be attended with great-tormenting and distressing. The bloody mucous discharge indicates that points of stagnation have been set up in the mucous membrane, and the probability is that the deeper structures will become involved. However, the submucous tissue, not possessing so high a degree of vitality, acts as a shield to the muscular coat. The danger will now become imminent as the disease progresses. Lesion of the muscular coat is characterized by
the bloody serum discharge. This will be consignmented with the bloody serum. Should the progress of the disease be arrested at this point, the process of reparation will be by granulation. Should the peritoneum become involved, it is evident that the danger will be insinuated from the common tendency of inflammation to spread in this ordure of membrane.

The inflammation in dysentery will terminate either in resolution or mortification - the former is indicated by an abatement of all the dysenteric symptoms, the discharge becoming natural - the latter by an abatement of the febrile symptoms, the extremity becoming cold, haggard countenance, the pulse small, thready and hard, exhaustion, frequent evacuations etc.
Ulcration is the result of mortification, and when this occurs, if the patient recovers at all, sometime will be required for the recuperative powers of nature to effect a repARATION. If the ulcers are unhealthy, or in other words, there gets up an antagonism between the conservative powers of nature and the disease, the repARATION will be slow, and constitutes what we term chronic dysuria.

In the treatment of this disease there are four morbid conditions, to which I have already alluded, viz. inflammation, vascular excitement, and altered function, generally, torpidity of the liver and skin, and by these the remedies proper to be used are clearly indicated.
Of these the inflammation deserves precedence in making our therapeutic applications; for if this is lessened the equilibrium of the circulation will naturally be restored, and the liver and skin resume their natural functions.

Thus what remedies will best accomplish these objects? Blood-letting would naturally suggest itself as an appropriate remedy, but if we listen to the experience of others, this is not so much of a curative means as we would suppose, authors generally agreeing that it is of less utility in this disease than in others of the phlegmonic. However, there are circumstances under which it is of the utmost importance. We should not
bled the patient—because he has dysentery—but, because the circumstances of the case demand its employment.

In the beginning of an acute attack, when the inflammatory action runs high, when the patient is phthisic, having previously enjoyed good health, 

Venaexcision is indispensable and may be carried with beneficial effects to a considerable extent. Under these circumstances I would not hesitate to bleed the second time. By it the inflammation may be reduced, the circulation depalpized, and the portal con-

junction relieved. Although the remedy is capable of affecting so much good yet, it may be injudiciously employed and produc
of the most-fatal consequence.
Local depletion is also of much importance and this can be done very effectively by the application of some dozen leeches around the arms and helping up the flow of blood by warm fomentes. Keeping in mind the pathology of this disease, we can readily perceive that depletion from a part to another tissue structure and so intimately connected with it—by anastomosing vessels—would be productive of the greatest benefit.

Purgatives come next in order of practice. They carry out of the intestinal canal all irritating matter which may thus be lodged, the presence of which have been much to do in keeping up a train of morbid action.
They act beneficially, also, by depleting the portal system and thereby dilating the dilated capillaries.

For most of the cases occurring sporadically, at all seasons of the year, a dose of Castor oil and turpentine combined will be sufficient to effect a cure. In cases of a severe grade I would adopt a different course. Calomel will now be the heroic remedy. Fifteen grains may be given in a dose, and this should be followed by a mild purgative in about ten hours if it does not act itself. This will produce a free evacuation from the bowels and probably excite the liver to its normal secretory function. Did I give Calomel after this it would
be for its specific action on the liver
to excite an irritation in that humor
and thereby, displace from the vena
portorum. When this treatment
is kept up for any length of time
its action ought to be watched, as a
severe peritonitis may be produced
necessarily. I say, unnecessarily, because
the good effects of the medicine
may be obtained without carrying
it to the extent that would foresee
it. There is another purgation of which
I will speak before dismissing this
part of our subject and that is
Epsom salts. The high reputed in which
this remedy is held by a great
many practitioners demands for it
a place among the particular
purgatives for this disease.
Perhaps any of the saline purgatives will answer as well. The object of it is, I suppose, to change the nature of the evacuations to excite putrid discharges from the bowels and thereby relieve the distension of the engorged vessels. They take from the circulating fluid its healthy elements and thus disrupt the postal system more effectively than could be done by visa section.

The next class of remedies of which I would speak are diaphoretics. Such is the intimate relationship existing between the intestinal canal and the skin, that an increase of secretory action in the one is attended with a diminution of the same action in the other and.
thus being a determination to the internal organs in this disease, to excite diaphoresis would be to act on in a great degree the equilibrium of the circulation. A combination of quaeque with some other medicine is well calculated to effect the end in view. The dose powder administered in doses of 2 or 3 grains every hour or two, is an excellent remedy to effect this object.

The next therapeutic application of which I will speak is Enema. The tribute of blood is the most vulnerable. From the known benefit derived from the application of this remedy to ulcerated membranes generally, we could naturally infer its utility in
this disease. The rationale of its action is this. It stimulates the
domestic irritability of the part, and customizes contractility to the distended
capillaries and thereby establishes an effusion of the thinner elements of
the blood, amounting virtually to a
deflation. The essence should be
strong, containing about 10 grains
of the nitrate of silver to the ounce
of distilled water. A grain or two
of the sulphate of morphia may be
added. We should incline to deem
the immediate application of this
inflamed surface and this can
best be done by means of a glass
syringe and gum elastic catheter
introduced high up, even beyond the
inflamed surface if possible, and
withdrawing the instrument as we make the pressure. This may be used with benefit throughout the course of the disease.

The practice of using opiums and astringents to this disease is not only useless, but productive of the greatest harm. They are directed to arrest the discharges. I regard these as the working of the vis medicae in nature and therefore beneficial, and that attempts to check these discharges would be but to thwart the already crippled powers of nature. Nevertheless, did I think them necessary at any time in the progress of the disease I should not hesitate to use them.

When the disease assumes the chronic form, I would use the same remedies
that I have recommended in the acute stage. Colonel and spee- 
ch in broken doses, with the nitrate of silver enema will be sufficient.
At first, food will be unnecessary and the patient will generally 
but in the latter stage, it will be necessary to sustain the exhaustion 
powers. Unleavened bread and meat of some small animals as of 
fish, will be sufficient. This should be allowed only in small 
g garments. Not much at any one 
time should be allowed, and not much 
altogether. I have not time to speak of complications. They should be 
treated on general principles.

Robert A. Warnock

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