

AN
INAUGURAL DISSERTATION
ON

Epidemic Dysentery.

SUBMITTED TO THE

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BY

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OF

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The history, Cause, and Treatment, of
Epidemic Dysentery, as it occurred in
Rusk, (Cherokee Co., Texas) and vicinity,
during the summer and fall of 1856.

In order that the Circumstances may
more clearly be shown under which
this dysentery prevailed, it will be
necessary that a brief topography be
given of the County, before entering
upon the disease; and when we come
to speak of the Cause reference will
be made to particular localities, at
which the disease occurred in Connection
with other immediate localities, and
circumstances, which may assist in throw-
ing some light upon the remote Cause
of the disease.

Rusk is situated about twenty miles South
of latitude 32° , above the junction and
between two small creeks, on an

unelevated plain, surrounded almost entirely by a range of sandy hills of considerable elevation for Eastern Texas. The only outlet to avoid these hills being in a southwesterly direction.

Along the southern boundary of Rusk runs one of these creeks, with a heavy timbered bottom on either side, with a very luxuriant undergrowth and much accumulated drift wood along its channel.

South and immediately along the edge of town is found situated a low wet marsh, about four hundred yards in length, and from fifty to one hundred in width.

At the junction of the two creeks the bottom is at least a half mile in width and so heavily timbered as to exclude the rays of the sun from the surface

of the earth beneath during the summer season. Eight miles north and running east is Mud Creek a tributary of the Angelina River; the latter a small stream lying about twelve miles east of Rusk and running directly south. West at a distance of twelve miles, and running south is the Neches River, five miles south and running west is Martins Creek.

All these streams (except the one found immediately along the southern boundary of Rusk) have bottoms stretching out on either side from a half to two miles in width, heavily timbered; numerous marshes and lakes are found all along their course.

During the continued spring rains which occur in this country, these bottoms overflow from hill to hill, and not

unfrequently remain inundated for weeks at a time, and it is not uncommon for the waters not to recede until the month of June.

North of Rush for many miles the Country is hilly and broken, South it is more level, but slightly undulating for five or six miles, after which it makes off in an uninterrupted plain for many miles. The growth of the elevated or table lands is low and scrubby, consisting principally of Hickory, Pine, Post oak and sand oak; while the low lands as before mentioned are very heavily timbered, consisting of Black Oak, Red Oak, Walnut, Sweet Gum, Black Gum, &c. The soil throughout the County is sandy, having a clay foundation, beneath which there exists an immense substratum of black slate, that abounds in

The sulphate of Iron, Cherokee County, may be said to be rich in sulphates, but more especially that of lime, which at some points is found in immense beds beneath the surface.

Lime Stone and Iron Ore, are found in large Quantities on the ridges throughout the County.

The inhabitants of Rust and vicinity are generally temperate in their habits, go well clad, and the great majority are well supplied with all the necessary Comforts of life.

Dysentery made its appearance in our Town about the middle of July for the first time as an epidemic, and prevailed with a malignancy unequalled in the memory of the oldest Physicians of the place; the Mortality increasing up to about the 20th of

August, after which it gradually subsided, and almost entirely disappeared during the month of October. The inhabitants of similar localities in the vicinity were attacked almost en-masse; the characteristics of the disease differing in no respects whatever; developing itself in some instances, owing perhaps to a peculiar susceptibility of the system, together with its complications, from a very mild affection, occupying but a small extent of the mucous membrane of the rectum to a most fearful and dangerous malady. An occasional complication was intermittent and remittent fever, either of which lessened the chances for recovery, and more especially ^{especially} inflammatory remittent, which occurred as a complication, during the month

of September, lengthening out the disease to an indefinite period.

The disease in some instances made its appearance with, and in others without fever, again it was preceded for two or three days, by diarrhoea, lassitude, occasional griping pains in the abdomen, nausea, a feeling of depression, giddiness; when at once excessive tormina and Tenesmus, with frequent small bloody mucous discharges or discharges of mucus alone would ensue, apparently suspending entirely within a very short time any traces of excrementitious matter, which ^{were} seldom if ever afterwards present in the evacuations, during the active stage of the disease, unless produced by the action of purgatives.

Again the patient was attacked simultaneously, with fever, excessive

Tormina and Tenesmus, frequent dis-
-charges of blood and Mucous, amounting
in many instances to over one hundred
in the Course of 24 hours; and in many
Cases the Tenesmus was so great, that
it was with much difficulty, the applic-
-ted, could be prevailed on to remain
in bed but a few moments, notwithstan-
-ding previous repeated efforts to evac-
-ate the bowels under a false desire;
while on the other hand, and especially
with Children, when once at stool
the little sufferer had to be returned
to bed by force, and there kept,
under its continued entreaties and
supplications to return to stool.

These symptoms however only occurred
in the more aggravated forms of the
disease, which in the Course of a few
days produced great depression of

the nervous system; in case the patient survived the intensity of the first shock: frequent though feeble pulse, amounting from 120 to 140 beats to the minutes, with dry hot skin, tongue dry and red around the tip and edge, with a heavy brown coat along its middle.

In all those severe attacks, the entire mucous membrane of the large intestines seemed to be involved from the very beginning. The inflammation evidently in many instances extending to the Ileo-Caecal valve, as the tenderness could be sensibly traced, commencing at the sigmoid-flexure of the Colon, along the ascending, transverse and descending portions, into the right iliac fossa directly over the point of termination of the small intestines.

About one inch above and to the left of the umbilicus, there existed almost invariably an unusual amount of inflammation, presenting to the touch a very sensitive, firm and resisting body about the size of a large Walnut, evidently due to the presence of stricture of the bowel and accumulated faecal matter.

In the milder forms the inflammation appeared to be confined exclusively to the rectum, at least no tenderness could be detected along the course of the Colon. In all those mild cases the patient would not have more than 12 or 15 operations during 24 hours, though they were much more copious than when so frequent, amounting usually at each stool, to at least one pint of bloody mucous. Fever was seldom present though the skin

was dry and inactive, pulse slightly contracted, tongue coated with a long and white villous coat. But whenever the inflammation extended as high as the sigmoid-flexure of the Colon fever commonly followed, and in no instance do I recollect where it had reached the descending portion that fever was not present, as a result of the inflammation. Retention of urine was occasionally present, seldom occurring earlier than the 5th or 6th day of the disease. In the early stage the discharges had a peculiar indescribably fresh smell which any one acquainted with the disease would at once recognize on entering the room of a dysenteric patient. At a more advanced period the discharges often contained what appeared to be, in all probability detached

Mucous membrane or organized plastic material. The stools also entirely changed their appearance to a dark and very offensive fluid matter, due no doubt to a gangrenous condition of the parts, and in not a few instances was found a foetid purulent like discharge resulting perhaps from an attempt in nature to restore by granulation disintegrated parts.

Prognosis. The disease in most instances continued without abatement for the first seven days, mild cases usually terminating in Convalescence within that time. Should the attack have been severe from the beginning with much fever the active symptoms seldom abated short of the 10th or 14th day, and in case it persisted longer than the 14th day, the disease was not necessarily

though frequently fatal. During the month of September (as before mentioned) when the disease was growing mild it was occasionally associated with a low grade of inflammatory remittent fever, continuing from 30 to 40 days before complete recovery. A favorable termination was usually marked by a gradual abatement of all the active symptoms, the Toronina and Tenesonus subsiding, the discharges of blood and mucous took place at longer intervals, whilst the bilious and fecal discharges become gradually established, presenting every day a more healthy and consistent appearance, the tenderness along the course of the Colon at the same time diminishing.

On the other hand a sudden cessation of the Toronina and Tenesonus, with

involuntary stools of a dark and offensive odor, acceleration of the pulse, profuse perspiration, cold extremities, and pungent heat on the forehead denoted a speedy and fatal termination.

Cause. Among the general exciting Causes may be mentioned Climate, and the season of the year, at which it occurred, high solar heat during the day followed by immoderately cool nights, were doubtless the main exciting agents in its development.

But that these agents either separate or combined acts as a predisposing Cause in its production as some have supposed must of necessity be unfounded, at least such could not have been the case in the particular epidemic under consideration, as all the attending

Circumstances go to prove to my mind
most conclusively the existence of a
specific poison either different or
modified to some extent in its char-
-acter from that inducing the mias-
-matic fevers of our Country.

Directly north of all those streams
(beyond mentioned) whose course was
either east or west, the disease prevailed
whilst on their southern boundary, and
along the Neches and Angelina
Rivers the course of the later streams
being south, not a single case occurred.
The reason of this is at once apparent
when we but call to mind the ever
prevailing south wind of our summer
season, the effect of which was to
drive north this poisonous agent and
as a natural consequence, the inhab-
-itants residing south were wholly

exempt from its noxious influence. Whilst those residing along the Neches and Angelina, were equally exempt; although there existed within their limits all the elements necessary for the generation of the poison, yet it had of necessity to remain in the bounds of its own production, there being no current of air to divert it otherwise. And I will remark as a further proof of its miasmatic origin that it became an established fact that in the neighborhood of Park^rs on Martins Creek at a point where the disease prevailed in its most malignant form, that all who visited the sick there and remained during the night, without an exception took the disease in the course of 6 or 8 days afterward, a circumstance also

Showing that the poison was more concentrated at night, as all could visit the locality during the day without incurring any risk whatever.

And again the disease was confined within the bounds of two to three miles north of the streams mentioned in connection with its occurrence, except in the person of those, who visited these localities and were exposed to the cause as mentioned above.

And in no instance was the disease without those poisonous districts transmitted to other individuals, a circumstance in connection with those above mentioned, going to verify its supposed miasmatic origin; and at the same time establishing an instance in proof of its noncontagious character. As to the properties of this poisonous agent,

or in what respect it differs from that producing intermittent and remittent fever we have no mode of determining. We know that it originates in miasmatic districts, and generally at a season of the year at which malarial fever makes its appearance, but should it depend upon precisely the ^{same} agent our southern and western country would never be exempt from the disease, as it is well known that immense quantities of malarial poison is generated throughout the entire southern country every summer and fall season, still from the circumstances it was certainly dependent upon malaria in connection with some unknown modifying influence. Let the cause be what it may the effects are very apparent, and I believe no discrepancy of opinion exists as to its mode

of action; consisting according to anatomical investigations in its early stage of deranged hepatic function producing congestion of the portal circulation, and in the advanced stage inflammation and ulceration of the mucous coat of the large intestines with all the attendant consequences.

Treatment. Various modes of treatment were resorted to with more or less success, I shall however confine my remarks more particular to certain remedies which within my own observation seemed to exert a salutary effect upon the disease. Mild Cases during the stage of Congestion, seldom required anything more than a mercurial cathartic followed by a full dose of opium.

But in the more aggravated forms of the disease in which the colon in part

or throughout its entire extent become involved in inflammation, no remedy was found efficient in its immediate subdual, and the disease had of necessity to be treated upon general principles with a view of subduing by appropriate remedies the symptoms present.

And as an auxiliary mercury in some one of its preparations was certainly a valuable agent, of which I much prefer the blue mass, it being less irritating in its nature and more easily controlled in its action by opiates. Purgative doses of mercury were invariably injurious after inflammation ensued, greatly increasing the tension and debilitating the patient. Beneficial results followed its use only when it was given in small and repeated doses, in combination with a sufficient amount of opium to control

its purgation. By this means its action was obtained upon the system and more particularly the liver, the altered function of which seems to be the first to follow as a consequence of the cause producing the disease. The continued use of Mercury was not demanded, its introduction into the system so as to produce its action upon the liver was the first step to be taken in the treatment, without incurring the dangerous consequences of ptyalism;

which result was usually accomplished by administering 4grs Blue mass in combination with 2grs of Dover's powder every three hours until 16grs were taken, followed in the course of six or eight hours from the time the last dose was taken by a Seidlitz powder, repeated every two hours until an evacuation

took place, which usually resulted in the discharge of a quantity of dark bilious matter. It was seldom that its subsequent use was demanded the bilious secretion and discharge being kept up by the use of salines, though an occasional repetition was necessary its use being made evident by a jaundiced appearance of the patient and an absence of bilious matter from the action of the salines.

An action from the bowels every day was of the utmost importance, and more especially in all those cases in which there existed stricture of the bowel, containing above the point of stricture, acrid excrementitious matter, acting both as a mechanical and actual irritant in its maintenance. This object seemed best

accomplished by salines, which do certainly occupy a first place in the vocabulary of medicinal agents in the treatment of dysentery, a fact which my own observation goes most conclusively to substantiate; which I am unable to account for, aside from its mild cathartic effects, freeing the bowels of irritating matter; unless it has the power as some suppose of subduing the inflammation by lessening the adhesive and plastic material of the blood. It is hardly necessary to mention that drastic and hydragogue cathartics were not only unsafe, but dangerous in the extreme.

Opium was an indispensable agent in the treatment, for the purpose of allaying Irritation and Tenesmus.

To accomplish this object frequent injections of starch and landanum was used, in quantities of about a half pint of warm starch solution to 13 Gr. of opii. mucilaginous injections alone in some instances controlled temporarily the Tenesmus. Large injections did not answer well, as they were not so apt to be retained.

In all cases where stricture seemed to be present, Opium administered by the mouth in doses of $\frac{1}{4}$ to $\frac{1}{2}$ grain in combination with ʒjss of Spicac every two hours, exerted a beneficial effect, the opium acting as a strictus while the Spicac in relaxing the system, controlled in a measure the strictured bowel, insuring more certainly the action of purgatives

which were so essential in the treatment
The local treatment aside from those
mentioned above, consisted in the
frequent application of Cups along
the course of the colon, Sinapisms
and poultices to the abdomen.
Blisters were resorted to with benefit
in protracted cases, but in the early
stage they exerted a deleterious effect.
When intermittent or remittent
fever existed in conjunction with
the disease, Quinine had the
effect of controlling the fever, with-
out exerting any appreciable benefit
upon the dysenteric discharge.
Turpentine was resorted to with ben-
eficial effects in protracted cases
and especially where it existed in
connection with the low grade of
remittent before mentioned.

Various mineral and vegetable astringents were resorted to producing more or less injurious consequences.

A strict antiphlogistic regimen was observed throughout the disease.

Cold drinks were scrupulously avoided producing in almost every instance in which they were indulged immediate dysenteric discharges. The diet consisted in easily digested articles of food, such as boiled milk, Rice, arrow root &c.