

AN
INAUGURAL DISSERTATION

ON

Typhoid Fever

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BY

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We have heard and read a good deal of theory and speculation in regard to this disease within the last few years. It is thought that the ^{Fever} continued of the Middle and Northern States is identical with that of the Continent of Europe France Germany Sweden & ana which is frequently met with in Great Britain. The first attempt to prove the identity of the two diseases was by Hale of Boston in eighteen hundred twenty three. Dr James Jackson of Boston presented a memoir to the Massachusetts Medical Society in which he proved that the symptoms were the very same ana the patients presented the very same appearance in continued as he did when he died of Typhoid Fever. Dr Nathan Smith institutes a comparison of Typhoid ~~continued~~ Fever & says that it is the same disease that he has been treating for continued Fever for twenty years. Typhoid Fever is known under a variety of names. It is called in England Typhus ana in the United States it is known by the name of

Typhoid and I think this appellation is least objectionable. It might be asked what do you mean by the word Typhoid. It means an acute affection whose anatomical character is an enlargement and special change of the follicles of the small intestines and always accompanied by increase of volume & softening in the mesenteric glands and sometimes found in a suppurative condition. The usual symptoms of this disease are of variable intensity. The first symptoms that present themselves must usually be stupor, prostration, pain and a gurgling sound in the right-iliac region and you frequently see an eruption, observed first generally upon the thorax and abdomen of rose color and it is said that it will disappear on pressure. This eruption is always more or less elevated above the skin. The patient will have meteorism or in an other word the belly will be filled with gas which will distend the bowels to a considerable extent. Deamhea is a pretty constant symptom

in the majority of cases.

The anatomical lesions of Typhoid fever are an enlargement of the follicles of the small intestines and mesenteric glands. The alterations of the follicles vary with the period of the disease. On a post mortem examination of those who die from the fifth & the sixth day after they are taken, with this disease the exterior of the intestines opposite the glands present a red or black discoloration and some times are covered with a false membrane. On opening the intestines the glands of Peyer will be discovered & be in one or both of the following morbid condition. In the first place you find them either in a softened or hard condition and if they be soft the mucous membrane will be smooth or mammillated in some instances the glands have a vesiculated appearance; the tissue resembling the parenchyma of a cherry or plum, and the mucous membrane being readily detached,

The hard patches are more elevated than the preceding ones, and more elastic to the touch. The surface is plane and shining. This species occurs in about one third of the cases. Ulceration occurs about the ninth or twelfth day and it is said there are two varieties; in one the ulceration begins on the mucus membrane & extends to the glands, which it destroys; and in the other the yellow matter begins to soften and the mucus membrane consecutively implicates, the mucus membrane being easily detached in shreds the change ~~is~~ some times so very rapid that it escapes.

The ulcers are of an oval or elliptical form. In some the edges are hard & thick & in others they are thin and the base of the ulcer is of a brownish color throughout its whole circumference. The Peritoneum is sometimes perforated by the extension of the ulceration or from the separation of the eschar that is formed during the progress of the disease. These perforations are about a line or two in diameter and are found in the lower portion of the Illium & when the altered patches are but few,

The number of patches vary in different persons from one to twenty five or thirty - and they bear no proportion either in number or degree of alteration & the symptoms during life. You frequently find all of the alterations just-enumerated in the same patient. The change from a diseas'd & a healthy condition is frequently very abrupt & a healthy patch is very rarely found between two diseas'd ones. It is said that in non-ulcerat'd patches, resolution will not take place except in the reticulat'd variety, in which there has been no loss of substance. I do not know so well about this I think it is more than probable that resolution might take place when there was slight-ulceration but I may be mistaken.

The reformation of the glands when they have been pretty extensively ulcerat'd is very gradual, judging from the time the patient is taken sick until he gets well. The mesenteric glands are as constantly affected as the agminate glands.

Judging from all I can get from books & other sources they vary with the epoch of the disease. From the eight to the fifteenth they are slightly enlarg'd & soften'd & are in hue from a delicate rose to a deep red.

From the twentieth to the twenty fifth the disease is more marked and yellow points of suppuration not unfrequently formed scattered over their tissue and it is rare you ever see pus collected in an abscess. I have seen it recorded in books that Scarlatina, Cholera, Phthisis will bring about a diseased condition in the glands of Peyer & also those of Brunner but not analogous to that observed in Typhoid fever. In scarlatina Peyer glands are said to be occasionally increased in size but never contain any yellow matter nor do they ever ulcerate. In Cholera they have been seen to increase in size but that is about all. The resemblance between the diseased condition in Phthisis & Typhoid fever is much greater than either of the two diseases we have just spoken of. The patches present on their surface small elevations, like isolated tubercular follicles and in some there are but few ulcerations whilst in others they are extensively ulcerated. Tubercular matter is not unfrequently found in the mesenteric glands. I have

read a good deal about secondary lesions springing up, in the course of this disease, some authors say that the spleen is very much enlarged & softened & attains a size three or four times as large as when it is in its normal state; they also say that the mesenteric glands are in the same pathological condition as the mesenteric glands. Ulceration of the mucus membrane of the Pharynx & Oesophagus are met with in a number of cases. The mucus membrane of the Stomach is in a number of cases softened & sometimes ulcerated, and also the large intestines are to a very great extent diseased in a majority of cases. All this may be so but if they do occur it is very seldom. Typhoid fever varies in its mode of attack. It some times comes on suddenly and is distinctly marked & in the midst of health; but more frequently it comes on in a very insidious manner creeping as it were hour by hour and day by day. The bodily strength begins to fail

and the mental faculties are not so bright. In Watson
says that there is but one species of continued fever
although there are many varieties of this fever. Whotever
the premonitory Symptoms may be they exert some
influence over the Nervous System, upon which
the old Pathological writers supposed the first & direct
impression was made by the exciting cause whotever
that might be. But I think it would look more
reasonable that the exciting cause wrought first
on the blood & consequently on the Nervous System.
All the writers of the present day of distinction as
far as I have examined concur in that opinion.
Among the earlier Symptoms of this disease are
shivering headache & deafness which occasionally take
the lead, but these symptoms are observed the second
week most usually. This disease has been divided
into three weekly periods by all the authors who have
written on the subject. The symptoms most usually
observed during the first week indicate a derangement

of the sanguiferous & nervous systems. The patient complains of feeling hot & has a frequent & hard pulse, and he (the patient) manifest a great indifference to every thing about him. In many instances his muscular strength is so much broken down as that he is unable to set up in bed at the same time cannot lie on his side or turn himself in bed but remains in a supine position. At the end of seven or eight days Typhoid symptoms are more fully developed. If you purge him much in this stage the stools pass from him without his having any knowledge of it & frequently the feces will pass without his knowing or caring anything about it. In this stage the changes that occur are following. The pulse gets faster & more compressible. The tongue assumes a brownish color & becomes quite dry. There are more fowles & they are of a darker color accumulated on the teeth & lips & when the disease arrives at this point delirium nearly always sets in & certain eruptions are apt to spring up on the

skin and those symptoms that relate to the nervous system are the most prominent. The headache that is complained of so much in the beginning disappears. The patient lies on his back if you place him here a tendency drawn out over the foot of the bed if you place him on his side he will not remain in that position any length of time before he will wout & be turned back. Questions when heard and understood are slowly & reluctantly answered & evidently in a bad humor the replies being very brief & dry, the perception of surrounding objects being very vague. A woman who is in this condition makes little or no effort & prevents the exposure of her person the eyes are injected & brilliant but have an expression of unusual stupidity. The Pulse gets soft and often irregular and Dr. Stokes says that the first sounds of the heart are very much diminished & total extinction is met with in a good many cases. Complete deafness prevails with irregular involuntary movements of the

muscles of the arms & hands, & those on the face & upper lip twitch. The patient has a great disposition to ramble though generally it is tranquil but some times violent & the patient talks loudly & wishes to leave the bed & roam about, some times he ~~wishes~~ he falls into a drowsy state, the Coma Somnolentum out of which it is with some difficulty he can be aroused for a moment. In this state it is with great difficulty that the tongue can be protruded which is some times observed to be of a bright red color & smooth and looks like it has just been varnished. He swallows with difficulty any thing which may be handed him this may arise from Paralysis of the muscles of deglutation, or the mucus may collect around the root of the tongue & get dry and render swallowing painful or impossible. The breathing of the patient at this period is that of a whistling sound; he will not unfrequently have hemorrhage from the bowels. A peculiar odour

whole from the body within compare to that of mice; the heat of the body is some times acid, sloughs will occasionally occur & are generally found on those parts most exposed to pressure as the sacrum occiput, heels and trochanters, or gangrene may attack the blistered surfaces on the skin when there has been sinapisms to produce counter irritation.

Roupeil relates an instance where the inter soft parts of both legs became gangrenous so much so as to have amputate both limbs. Toward the close of the second week or the beginning of the third a decided change takes place; If the attack is to terminate in recovery the symptoms abate, the expression is more natural & the pulse gets a good deal slower & steadier he takes notice of what is passing round him, the skin becomes moist and of a natural temperature and the tongue begins to clean itself rapidly, and some critical evacuations as sweating not unfrequently precedes this amelioration.

If the disease is prone fatal there is a decided increase in the severity of the symptoms, or even one supervene.

Typhoid fever may terminate in four different ways and the physician if he ever expects to be a successful & scientific physician should study these ways diligently.

I think it is one of the most important things that the physician can know in this disease in which of these modes the patient will die, so that he may be able to anticipate the kind of termination most probable.

Death beginning at the heart is ^{the} most usual fatal termination of this fever. When the heart begins to lose its power the pulse becomes fearfully rapid & unsteady, in fact the whole surface of the body presents a congestive appearance, the face being dusky or livid, there is intense prostration, the eyes are half closed with the pupils dilated.

Death by Coma resembles that beginning at the heart & I have no doubt it is often compounded with it. It begins at the brain the symptoms

indicating a derangement of its functions, of that organ insensibility & suspension of voluntary motion the breathing is stertorous & imperfect deglutition becomes impossible the Sphincter, or relaxed involuntary discharges of urine & feces takes place.

Death from Apnoea or death beginning at the breathing apparatus is owing I think to want of power in the heart to propel the blood through the lungs, but this want of power in the heart may not be always the cause for perhaps the blood may be prevented from passing through the lungs by other causes such as Bronchitis & Pneumonia &c. Death by Apnoea is not very common, I would ~~not~~ suppose but it may take place when the disease is of long continuance. Perhaps it would happen oftener with those who have been subjected to debilitating treatment and not properly nursed during their sickness.

The treatment for this disease,

Typhoid fever generally runs a definite course with

a natural tendency to a happy termination.

Dr Williams of St Thomas Hospital London used only simple enemata of warm water in sixty three cases & all got well but one. I think this disposition & yet will should not be interfered with by medicine or mischievous activity on the part of the physician. There are no means by which an attack of this fever can be cut short or its duration abridged in the least. All the treatment should be of an auxiliary character. Dr Watson says in the treatment of this affection he who knows when to interfere & when not must be considered the safest and best practitioner over.

A primary consideration of the epidemic constitution, for this as has been shown is constantly changing and forbids the idea of any absolute system of treatment being established. For in one group paratives are demanded & are necessary and in another

they do positive harm, Stimulants are frequently ^{demand}ed
from the beginning. The epidemics vary very
much in different places & should be particularly
noted as the guide to the general treatment. A great
object in the language of Cullen is to obviate the
tendency to death. General blood letting should
be resorted to with great caution, it ought not to
be put in requisition only when the necessity is
urgent & during the first days of illness.

The patient should be placed in an upright
position and the circumstances which justify a
recourse to it are the unequivocal evidence of
local inflammation conjoined with a full and
active pulse. Bleeding by cups & Leeches, I apply
head is less debilitating and usually quite
as efficacious in alleviating Cerebral Abdomi-
nal or pulmonary Complications. Leeches should
be used with caution after the first week & the
hemorrhage stopped immediately on their removal.

At the beginning of this disease purgatives might be used with advantage unless diarrhea should exist to any degree. Local complications are the most frequent sources of danger in this disease. It becomes the practitioner to oppose those tendencies to organic changes which might be detected. It is not unfrequently you see Pneumonia complicated with this disease when so found how are we to treat them? They are often modified by the primary affection and ~~evacuation~~ evacuation, as a general rule or not to be well in their treatment, their effects differing widely from those resulting from them in idiopathic inflammations of the same organs. If these complications spring up in the earlier part of this disease blood letting would be the remedy but it should be resorted to with great caution. The bleeding should not be copious & the patient put in an upright position. Cerebral complications should be combated by general

and local blood letting if there be any such thing as
the complications you so often see laid down in the
books, but if there be much delirium, sleeplessness
& agitation there will be great benefit derived
from opium but it must be used with caution
and not until arterial excitement has subsided
or if there is any disposition to Coma & when Coma
is profound Dr Watson recommends highly a
blister on the head. Nervous Tremor or sub-
sultus frequently yields to Camphor Musk of
ium & Pain tenderness in the Umbi-
lical and Coecal regions are often relieved
by light-warm ~~and~~ Poultices rendered slightly
stimulating by sprinkling a few mustard
~~over them~~ serpentine fomentations over them.
The bowels should be kept open by laxatives
or emetics throughout the whole course of
the disease if there be nothing to contra indicate
If diarrhea be present of course it would not

be needed but on the other hand I would give small doses of Opium & Chalk or it may be necessary to resort to a larger dose of opium. If excessive Tympanitis exist it will be relieved by small doses of Turpentine or an enema of Turpentine & Assafoetida Dr. Schoenlein of Berlin recommends as the most effectual remedy for the relief of this symptom frequent enema of cold water. Carbonate of Ammonia & Quinine should be given after the first week if there be any amelioration of the symptoms. Wine & Brandy may also be given but this must be judged of by the attending ~~physician~~ physician. If they increase or originate the symptoms they should be discontinued immediately. As a general rule however their free use is attended with decided benefit & the fault usually committed is in not resorting to them early enough. The Patient should be placed under the most favorable hygienic condition, he should be withdrawn from any thing which irritates him in the least. Perfect quietude of mind & body should be maintained if possible

together with free ventilation light bedding & great cleanliness
The body should be sponged with warm water according to
the feelings of the patient & which vinegar or some other arom-
atic spirits may be added. The mildest drink, acidulated
may be given in small quantities. If prostration be very
great the patient should have beef tea & after that animal
broth milk eggs & jelly. If there is one point to be insisted
in this disease more than another it is the administration
of proper nourishment. Frequent examinations should be made
of those parts of the body most exposed to pressure they should be subjected
to gentle friction. The bladder should be kept in proper condition
by drawing of the water from time to time. During convalescence
he should be narrowly watched & the slightest return of evening feverishness
require immediate attention. A number of specific methods of treatment
for this disease have of late been proposed. One cure all with
purgatives, another small doses of Nitrate of silver, whilst another
lauds the use of Chlorine water. In a disorder when so many
recover spontaneously there are too many different sources of
fallacy to warrant or attribute the power to any one remedy.