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INAUGURAL DISSERTATION

ON

Typhoid Fever

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BY

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OF

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To

W K Bowling M.D.

The following dissertation is most respectfully inscribed as a testimony of high respect for his labors on the subject of Fever

and

as an acknowledgement for his assiduous efforts in the advancement of pupils under his tuition.

Typhoid Fever

No subject in the wide domain of medicine has received more attention than that of Fever; and none, after years of Study, presents a more fertile field for investigation. Hypothesis has led the Medical minds at random, conducting them into difficult labyrinths only to be extricated by getting into others Still more intricate.

But a brighter day is dawning; the cloud which has so long overhung Fever, is fast being dispelled by the close examinations & investigations of modern philosophers, from which will result a more just view of the disease & a more rational treatment.

Typhoid Fever is a form of the genera Fevers has received more attention in the last few years than any other. It does seem to be taking the place of our miasmatic fevers and if we believe the opinions of many Physicains of the present day it is

very nearly the only disease met with so common has the name become that the Mass now seem to know it and dread. and the Doctor who is so fortunate as to overcome the monster will surely rise. Now it is our opinion that many cases of Typhoid Fever exist only in the perverted imagination of practitioners and many are so called to answer their selfish purposes; yet it is of sufficiently frequent to claim our whole attention We chose this subject for an inaugural thesis, not with a view of throwing any new light upon it, but merely that we may pass. —

Typhoid Fever was long ago very accurately described by Huxam, Hillard Fordyce & others, but was first minutely investigated by the French pathologists Louis, Chomel and others. They not only examined into the symptoms but went into the morbid anatomy, causes &c Louis contends for its distinct seperate and specific nature depending upon an inflammation

and ulceration of the glands of Peyer and of the Mesenteric gland. While the British pathologist assert that it is only a modification of Typhus & the intestinal changes are only incidental. Our authors have generally taken sides with the French Jackson, Gerhard Stewardson and Bartlett believe it is precisely the same. Dr Bartlet has written an large work on the subject and to him are we greatly indebted for our knowledge upon the disease.-

This fever can boast of as many names as any other; each author appearing to think it of the utmost importance that it should possess a name given by himself. It has been called Gleitis, Dothinenteritis, Follicular enteritis Mucous Fever &c. As the French pathology has been generally received in the United States, so has its french name, Typhoid Fever.

The disease makes its onset very insidiously. The patient complains of feeling unwell for several days suffering from headache, dizziness

great muscular weakness, anorexia thirst and diarrhea. The extreme prostration and loss of strength are almost pathognomonic: the diarhea is not generally urgent: the patient has two or three large liquid evacuations during the day unattended with pain. These symptoms are generally followed in a short time with a chill, which is uncertain in its duration. Sometimes this chill occurs daily at other times twice or more during the same day: after the chill has passed off we have the febrile reaction; increased heat of skin, frequent pulse, thirst headache, throbbing of the temples &c The skin is usually hot and communicates a pungent feeling to the touch. It is has been found that the actual heat is not so great as it appears. The pulse is not otherwise unnatural except in frequency The tongue is clammy and dry and has a peculiar narrow snaky appearance (Dr Bowling) The diarrhea continues the evacuations are frequent and of a

thin yellowish fluid something like soap-suds. The abdominal muscles are hard and resisting; pressure on the abdomen scarcely ever gives uneasiness except it be over the right iliac region. There is likewise frequently a gurgling sound produced in this region by kneading the abdominal wall. This is no doubt caused by a mixture of gas and water in the intestine. The physiognomy in this disease is almost peculiar. We generally find the patient lying on his back; his countenance apathetic; his sensibilities blunted; apparently sleeping but is aroused by the least noise answers questions very slowly; if we ask him to put out his tongue it is with difficulty he can do so; frequently can't do it until after several trials, & then it is impossible for him to hold it steadily; respiration is quickened occasionly accompanied with sonorous and sibilant ronchi. About the end of the first or beginning of the second week the peculiar rose coloured eruption makes

makes its appearance. It is generally confined to the abdomen & chest but is occasionly found on the back arms &c

They are small pimples, not larger than a pins point of a bright red color, scarcely raised abov the skin, disappear on pressure Sometimes there are very few of them, but frequently they are abundant. Accompanying this eruption occasionly are the sudamina of authors: they are small vesicles filled with a transparent fluid. and are found in the region of the neck armpit groin &c. The duration of the rose colored spots vary from three days to three weks: more frequently pass off in a few days Delirium is the almost constant concomitant of Typhoid Fever: it usually commences during the second week and continues until the patient begins to recover or dies. At first it is only at night that it is present & seems to be mere aberration. The mind is wandering & the thoughts seem to be of distant things but if the patient is addressed in a loud voice

he arouses up as if from a deep sleep answers questions rationally but immediately drops back into the same state if left undisturbed. In a few day the delirium becomes constant; generally it continues of a tranquil nature, the patient seeing unconscious of surrounding objects muttering disconnected sentences of events which had transpired long since; imagining that he is away from home & his friends and wishes to be carried to them his countenance seems like one who is perplexed; eye is dull; hearing is frequently impaired; he is constantly picking at something which he imagines is on the bed clothes or in the air. Sometimes the delirium is of a wild nature: the patient can hardly be kept in bed, rave & talks loudly; but this is rare.—
Emaciation goes on rapidly. No other disease that I now recollect is accompanied with so great an emaciation except Phthisis Pulmonalis & some Chronic affections. Unless the disease take a favorable turn soon,

all the symptoms become aggravated. the pulse becomes more frequent, sometimes amounting to 120 & 140 per minute; small & feble; at times it has a double stroke the diarrhea is more urgent: and prostrates rapidly. the stools are very offensive & pass off involuntarily; the tongue becomes dry cracked & very dark; dark sordes are collected on the teeth; the breath is offensive and the body exhales a peculiar odor; the delirium past subsides into a stupor from which the patient can not be aroused easily: there is subsultus tendinum the extremities become cold & the patient sink into a coma from which he can not be aroused & soon death closes the scene. The attack does not always come on so slowly as above described but like an avalanche it overwhelms the patient at the commencement. Epistaxis frequently attends its course & generally affords relief to the headache & delirium Hemorrhage from the bowels also appears sometimes & is to be dreaded upon the ulceration

The pathological anatomy of Typhoid consist in a change of the texture of nearly all the organs of the body; but no one change is constant except the inflammation & ulceration of the elliptical patches of Peyer and an enlargement of the corresponding mesenteric glands These gland are found principally in the ileum and are made up of a number of mucous follicles. They are more numerous toward the lower extremity of the ileum & diminish as you go up. The first change in the patches is enlargement, so that they are more clearly seen than in their normal condition. the mouths of the little follicles are enlarged and open the whole taken together presenting very much the appearance of a cicatrix from vaccination; as the disease advances the follicles ulcerate into each other producing a large ragged ulcer with raised edges: this surface is usually red but is frequently colored by the contents of the

the bowel. These ulcerations are most frequently found near the ileo-coecal valve and are farther advanced. At times but one or two are affected; more often many are. The corresponding Mesenteric glands are inflamed and enlarged. Doubtly on account of irritation from the bowel The solitary glands are likewise affected; they become large and hard, & at length ulcerate: the ulcer is small but deep. From the fact that delirium almost always accompanies the disease it would naturally be inferred that some morbid change would be found there always: but such is not the case Chomel says that out of thirty eight cases fifteen presented no morbid appearance: in 12 there was fluid in the ventricles in 7 there was an effusion in the meshes of the pia mater: in 6 slight softening: in 2 altered density and in 5 a speckled appearance of the cerebral matter. This proves then that there is no certain or constant change in the encephalon. —

The Lungs are generally found in an altered state. In nearly all of the cases there is congestion of the posterior parts of them: but this is merely mechanical. Sometimes these same parts are found in a state of hepatization and as it is generally confined to the posterior part of the Lungs it no doubt owes its origin to the same cause as does the congestion viz stasis of blood in the depending parts.- It is proven not to be inflammatory 1st by its being confined to the lowest parts: 2nd it differed in color being of a deep bluish red & was firmer than usual: 3rd that it did not present the granular appearance of Pneumonia upon tearing and 4th the fluid escaping from a cut surface is different".-

The pleurae do not generally give much evidence of recent disease. Sometimes there is an effusion of fluid into their cavity.

The Heart is sometimes found

softened; of a livid red color; its walls thin and easily broken down. It is more frequently it is healthy.-

The Liver is generally of natural size frequently of a pale color & very much softened.

The Kidneys are generally healthy sometimes softened and larger than natural.

The spleen is almost always affected: being thickened enlarged & reduced to a mere pulp; in other words it is perfectly rotten.

The stomach is not ordinarily diseased sometimes its mucous membrane is thickened and softened, and mamelonated rarely ulcerated

The Large intestines was generally distended with gas. The crypts upon its mucous membrane are rendered more perceptible, sometimes ulcerated

The genital organs are generally found free from disease.

The Muscles are likewise unaltered.

The duration of this disease varies from ten days to two months. It does not run its course rapidly nor can it be cut short like many diseases. Its usual duration is between 20 and 25 days. When it exist longer it generally depends on complications.

The cause or causes which operate in the production of Typhoid Fever are involved in a great deal of mystery. Without detailing the many causes assigned by various authors we may say that it is our humble opinion that the disease is contagious slightly perhaps, but supposedly so to stamp its character: that it is an exanthematous disease, running a determinate course unchecked by medicine; affecting all ages and sexes; and not regarding seasons or climate.

There may be sporadic cases, but these are only exception to a general rule:- and I should judge from my little experience these exceptions to be rare

The prognosis of this disease is always involved in much doubt. No Physician can say in the beginning of an attack what will be the result. Even the mildest cases sometimes takes a sudden change & die very soon: and on the other hand the most grave cases, contrary to the expectation of all, recover.

It is only by taking each symptom seperately and studying it in all its various relation to the disease that we can even approximate the result.

It is most fatal among the lower classes; those whose abode is filth & who are confined in little, mean ill ventilated houses. Other thing being equal it is more fatal in those who have been previously ill or who are naturally of weak constitutions. This rule does not always hold true. Its attacks seem to be worse in some localities whether it be owing to some peculiar local cause or to the treatment adopted

I am ignorant. - The symptom most to be depended on in the prognosis is the pulse. Should the pulse not become much quickened we need not fear but if it run from 120 to 140 or 60 the prognosis ride be unfavorable. The delirium occuring early & continuing is also unfavorable. Should the tongue become dry & black at an early stage we may expect something bad. The diarrhoea urgent accompanied with hemorrhage & not unfrequently passing off involuntarily are bad Symptoms. The early existence of the subsultus Tendinum are not favorable Evidences of great muscular weakness such as a constant tendency to slip down to the foot of the bed, indisposition to use any motion &c argue bad results Then if a patient has frequent pulse say 140 a 160. Constant delirium dry & black tongue diarrhoea urgent with hemorrhage great muscular weakness subsultus Tendinum and hiccups we may suspect a bad result. On the other hand

the pulse becomes slower, the delirium ceases or is less constant, the diarrhea lessens, strength returns &c we may suspect a change for the better

Epistaxis has been looked on as a very favorable circumstance; farther than relieving headache &c. I should not regard of any importance. Swelling of the Parotid gland has been spoken of as a good sign. —

We now come to the treatment of this disease and the question naturally presents itself can it be cured?

We answer unhesitatingly, Yes, and why not? Because it is a self limited disease — an exanthemata - having certain stages to go through as does measles a small pox. Our object then in the treatment should be not to attempt to drive it but lead it to its termination, adopting the purely expectant plan meet the symptoms as they arise treat complications as their nature indicates and watch & guard against

the tendency to death. The patient should be placed in a large well ventilated room. Should the bowels have not already been cleared by previous diarrhoea a mild purgative may be administered If on the other hand diarrhoea is urgent we restrain it with opium Should there be headache with delirium accompanied with full pulse a small bleeding may be of benefit or perhaps a dozen leeches to the temples or cut cup may answer. If the fever is high with hot dry skin the citrate of potash in the form of effervescing mixture with sponging the surface with sugar and water will subdue it. Something should be administered in the form of nourishment from the commencement, such as gruel rice water &c for if we put nothing for the stomach for the absorbents to act upon they will take up the acrid secretions & cause an additional irritation on the system

This treatment will be sufficient during the first week or two provided there be no complications. Should any arise they should be treated as their nature indicates. We should be now be on the lookout for the tendency to death and counteract it. The most frequent tendency is by asthenia. As soon as there is a tendency to sinking it should be opposed by stimulants. The strength of which should correspond to the amount of the depression. Thus Camphor Quinine Wine Brandy Eth Ammonia &c may each find an appropriate place At the same time we must not neglect to give nourishment of the most supporting character. During this depression the patient is insensible and the nurse is negligent so as often to neglect the secretion of urine by which the bladder becomes enormously distended pressing much damage to its structure

The practitioner should pay special attention to this point and not rely on the statement of the nurse but examine into it personally There is another point which deserves attention. Patients after going into the third stage lie almost constantly on their backs. in consequence of which the projecting parts are liable to slough This can be remedied by bathing the parts in brandy and water & padding well with cotton or other soft material or with strips of adhesive plaster Should coma supervene the scalp should be shaved & covered with a large blister.

If there should be a perforation of the bowels and effusion of its contents into the peritoneal cavity the termination is almost always fatal but we should make an attempt to save life. We would do this by giving large doses

of Opium. by which the bowels are put in "splints" (as it were) until nature can remedy the breach.

The treatment during convalescence is almost as important as that before. Relapses are nearly always fatal. The patient should not be allowed animal food but be confined exclusively to farinaceous diet. He must not get up too soon. Bowels should be kept regular.

The rational deductions from the treatment are, to mitigate the violence of the symptoms — for we cannot cut short the disease; to assist complications and to support the failing powers of the system nature necessary. —