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AN
INAUGURAL DISSERTATION

ON

Typhoid Fever

SUBMITTED TO THE

PRESIDENT, BOARD OF TRUSTEES, AND MEDICAL FACULTY

OF THE

University of Nashville,

FOR THE DEGREE OF

DOCTOR OF MEDICINE.

BY

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OF

Tennessee

1855

W. T. BERRY & CO.,
BOOKSELLERS AND STATIONERS,
NASHVILLE, TENN.

The use of the term Typhoid Fever, conveys to the mind no definite idea of the nature of the malady, to which that appellation has been given. Hence, different writers have proposed different names, which in their estimation were, in some degree, expressive of the character of the disease. But it is probable that no cognomen can be applied to the disease under consideration, which would be so significant of all the prominent features of the affection, as to justify any one in the rejection of the name Typhoid Fever. Typhoid Fever, then, is a continued fever, adynamic in its tendency, attended with lesion of a particular portion of the small intestines, and owes its origin to a specific poison.

Much contrariety of opinion, has been entertained by authors, with regard

to the nature of the poison, which is believed to act as the determining cause of "the fever," as it is popularly called.

Some assert that the determining or remote cause, is the same as that which produces the malarial fevers. But they were doubly lead into this error, because of the existence of inflammation in the mucous membrane of the Small bowels; this inflammation in their estimation being caused by congestion of the portal circulation, superinduced by the malaria. But to refute this notion, it is only necessary to enquire into the localities and seasons, in which Typhoid Fever prevails.

Others, believe and maintain the doctrine that the remote or exciting cause, is a Specific Animal poison. Or in other

words, that the disease is propagated by contagious, in the same manner that Small Pox and the other Exanthemata are, which are admitted by all to be communicated by contagion.

The theory of contagion has many advocates of acknowledged ability; and I may add that the arguments they are accustomed to use, are by no means weak.

The fact, that many instances occur, in which those visiting or having visited, persons laboring under the disease, are found to take the fever, after their return home, where no such disease existed, appears to be pretty conclusive evidence of the correctness of the theory of contagion.

Yet, those who deny the existence of any contagious element in the disease, will not admit that such instances prove that

the disease was propagated by contagion, but they say, that individuals, visiting those sick with the disease, come within the air impregnated with the peculiar aciform poison, to which they ascribe the power of producing the disease.

And they say that it does not always happen that those, visiting persons sick of this Typhoid Fever, take it; and moreover it is often the case, that the members of the same family are exempt from it; which would not be the case if it were contagious.

But this is not so strong an objection to the notion of contagion as one would suppose at the first glance; for the same thing happens often, in diseases which are known to be propagated by contagion alone. But we learn from this that the poison is frequently generated in

small quantities or if but little malignancy. There are difficulties in the way, no matter which theory is adopted - contagious or non-contagious. It is well enough under all circumstances to regard the disease as contagious, at least, until better evidence of its non-contagiousness can be adduced.

Authors are in the habit of enumerating other influences, which are frequently found to aid or favour the action of the exciting or remote cause. These are the predisposing causes; the number of which is not a few. Anything that depresses the vital functions of the human organism, may be considered as predisposing the individual to the influence of the specific agent in the production of this important affection. A consideration of these need not take much time or space.

Almost every one has experienced the debilitating effects of sudden changes in the temperature, as well as the barometric condition of the atmosphere. Depressed spirits, intemperate habits, violent mental emotions, have all been placed in the list of predisposing agents.

Although these have no specific agency in the production of the disease, yet it is said that the special agent would be entirely inert in many cases provided no such debilitating influences, as those above enumerated, were to act in conjunction with it. The predisposing, thus becoming the exciting cause in such cases.

After the introduction of the poison into the system certain morbid phenomena are observed, consequent upon its morbid impression upon the economy; which symptoms, will not demand attention

Writers generally describe certain symptoms, as occurring before the regular invasion of the disease. They are the premonitory signs, giving warning that the disease is making up or is about to make its irruption.

The expression of the patient's countenance alters; he becomes pale, languid, abstracted,

He is not inclined to make any exertion either of mind or body; slight exertions being sufficient to exhaust him. There is dull headache, especially, in the morning; after, perhaps unrefreshing sleep at night.

There is a loss of appetite, the ^{bowels} usually being confined. The patient is neither well nor sick, occupying the half way ground if such an expression is permissible.

These premonitory symptoms may continue for three or four days, before the regular onset of the disease; or they may

not precede the attack at all, though they
often do so, precede it; than otherwise.

The disease is then usually ushered
in by a chill, followed by fever, which
is continued in its course. The pulse
becomes frequent and hard, and perhaps
at first fuller than natural; it often
in very severe cases reaches as many
as one hundred and thirty or forty
strokes per minute. It sometimes,
however, falls even below the standard of
health. The average number of beats in
a minute is about one hundred. But
whatever be its frequency it generally
remains at the same point during
the disease, until convalescence is es-
tablished or till the fatal issue approaches.

The patient at first complains of
severe head-ache, which leaves him in

a few days, generally. Delirium, may or may not be present, it is however often seen in the beginning.

Much has been written concerning the appearance of the tongue in this fever, its is characteristic of the disease; its appearance being in all or nearly all cases the same, so that it is regarded by many as pathognomonic. It is remarkably red at the tip and around the edges; it becomes thicker and narrower and apparently longer than natural. It may be at first coated white, but it gradually, as the disease progresses becomes brown; then a dark streak appears through the middle, which by degrees spreads over the whole organ, so that it is covered with a thick, black dry coat, later still numerous fissures may be seen traversing it, causing the

tongue itself, to look as if it were cracked.
This coat, may remain on the tongue during the whole course of the disease. or else, as frequently happens, peel off leaving the surface smooth, raw and red; then if the case still progresses the same thing will be repeated, so that there may be several of these dark, foul looking coats produced and successively cast off.

Another symptom of importance is diarrhoea, which usually comes ^{on} during the second week, sometimes, however, being present in the beginning. The dejections from the bowels are numerous, having the appearance sometimes, of the washings of meat; at others looking very much like pea soup, always very foetid. There is almost invariably pain, or at least tenderness, over the situation of the Pleum and especially at its junction with

the Coecum. This symptom is one of the most constant of all the phenomena observed in the disease. There is nearly always in association with the diarrhoea a tympanitic condition of the abdomen.

During the second week there is, also, said to occur an eruption, which is peculiar to the disease. This consists of small rose-colored spots scattered over the surface of the abdomen. Hence, some writers have classed this fever among the Exanthematous diseases.

The patient's ^{skin} assumes a dusky aspect; his general appearance is altered; dark serdes, or filthy looking deposits are seen upon the teeth and lips; the mouth is dry and clammy; regurgitating deglutition difficult, also.

There is great emaciation with loss of

muscular strength. The functions of sensation, ~~thought~~ and voluntary motion are much interfered with. The patient sees or thinks he sees, small bodies floating in the air, and he is continually endeavoring to catch them, with his hands. Deafness or rather partial loss of hearing is often another manifestation of the depressed state of the nervous system.

The patient being all this time, in many cases, entirely sensible as regards his intellectual faculties; only being a little stupid, but not delirious. Often however gets into a low form of delirium, talking to himself in an unconnected manner, or else lying entirely unmindful of every thing that is going on around him. Being stupified by the circulation of the poisoned

blood, in his system, which exerts an influence, "Oblivious more than Lethis waters were," Along with these there is often seen another symptom, which is by many considered a very bad one, which is *Subsultus Tendonum*, involuntary twitchings of the tendons of the muscles and frequently tremulous movements of the soft or fleshy portions of the body.

Epistaxis often comes late in the disease; it is a symptom always to be feared, as death is frequently the result of the loss of blood in this way. Hemorrhage from the bowels is another occurrence much to be dreaded, though not always fatal.....

The mortality in Typhoid Fever is not very great, the proportion of deaths to the recoveries being very small, for so grave an affection, manifesting so many

Symptoms, indicative of a low degree of vitality.

The diagnosis of the disease is not attended with much difficulty if time sufficient, is given for the development of the signs, characteristic of the malady. A knowledge of the manner in which the patient is taken would excite suspicion as to what was going to follow; and suspicion would be converted ^{into} certainty, when the peculiar appearance, of the tongue, before mentioned, is seen, more certainly, however, if the abdominal symptoms be present,.....

The study of the Pathology of Typhoid Fever is full of interest, because of the light which it sheds upon many of the symptoms manifested in its progress. A depraved condition of the blood is presumed to exist in all cases. There is a great diminution of its plasticity, ~~and~~ perhaps of other vital endowments. The whole mass of the blood

is "touched corruptibly," by the morbidic impress of the remote cause of the disease.

The peculiar symptoms, which relate to the nervous system, doubtless owe their origin to this poisoned condition of the blood.

There is great laxity of the muscular fibre, consequent on the altered state of the blood; its fibrine being deficient in quantity.

It is probable that the frequent occurrence of Epistaxis and hemorrhage from the bowels, is due to these two conditions - laxity of the tissues and deficiency of fibrine. The blood being deprived of a considerable portion of one of the elements, which serves to retain it in its vessels.

The anatomical lesions, are often numerous; but there is only one that is peculiar to the disease - is always found to exist.

This lesion is inflammation of, or at, the glands of Peyer, situated in the mucous membrane of the Small intestine, particularly in that portion designated as the Ileum. It is proper that something should be ^{said} of the structure and probable uses of these glands, before a consideration, of the change they are said to undergo, is entered upon.

They are described, as being small sacculated bodies, situated as before described, and collected together in small patches, forming what are called the glandulae agminatae. It is said by Physiologists, that they have no secretory ducts, but discharge their contents, by a destruction of their walls. Hence ~~the~~ glands are destroyed at the time their secretions are poured into the bowel, and their place is supplied by

the formation or development of new ones.

Nothing positive is known at present, concerning their physiological uses. Several hypothetical uses have been assigned to them, but none of them are regarded as entirely satisfactory.

It is believed by all writers, and observers of the disease that inflammation and ulceration of these glands exist in connection with it. Perhaps an error was committed when it was first stated that all believe this state of disease in the glands of Peyer always exists, for some I believe do not ~~give their~~ assent to it. Some believe that the disease is essentially inflammation of these Peyerian bodies; but this evidently, is contradicted by many facts observable in the disease. It is hardly necessary to go through the steps, which are described as occurring in

these glands, during the progress of inflammation in them. Suffice to say that they disappear, leaving numerous little ulcers behind them, which sometimes penetrates so deep as to perforate the bowel, almost necessarily producing Peritonitis and death, by the escape of the contents of the bowel, into the peritoneal cavity.

It has been a matter of inquiry, with all, who have devoted any time to the consideration of the disease, why ulceration of the bowels is found to exist in it. Some have supposed that this is nature's mode of eliminating the poisonous element from the blood; others, think that the remote cause, has a particular relevancy of action for these bodies. but it is probable that the matter can never be settled definitively. May it not be that ulceration is the result, of the inability of unpubled

nature to close up the breach of surface consequent upon the rupture of the glands in discharging their contents? —

In the treatment of Typhoid Fever, all violent or purgating remedies are to be withheld. Since it is impossible to cut short the disease by any evacuations whatever.

The rational objects of treatment are, to mitigate the urgency of symptoms that cannot be wholly subdued; to redress so far as art can redress, those dangerous complications which are incidental, but not essential, to the disease; and to aid the conservative efforts of nature, when these manifestly languish and fail.

Much will be gained in the fulfilment of these indications, by the adoption of proper

hygienic regulations. The patient should be placed in as large a room as convenient, so that pure air will be afforded him in sufficient ^{quantity}. Frequent sponging of the skin, when hot and dry, will be found pleasant, as well beneficial. His diet should be mild yet nutritive. If diarrhoea come on, it should be controlled as speedily as possible. Anodynes should be administered when indicated, so as to procure sleep and repose. Bleeding from the nose, should be arrested, if excessive, by plugging up that organ. In fact all symptoms endangering the life of the patient should be mitigated so far as is practicable. If sinking of the system comes on, the patient must be supported by stimulants, a persevering use of which is often instrumental in keeping the patient alive until the destroying angel shall have passed by.