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ON

Typhoid Fever

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BY

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To
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Prof: of the Institutes and Practice of Medicine
In The University of Nashville
This Dissertation
Is Respectfully Dedicated
By
The Author

Typhoid Fever

In writing upon any medical subject the student is often perplexed in mind because he cannot offer something new upon the subject of his selection. Such has been my condition, and if novelty of matter and manner is required, I shall fall far short of the desired standard.

The subject of this dissertation embraces, it is true, an extensive field; one which I have not the capability of exploring and fully unfolding.

I do not aim to offer any thing new upon the pathology and treatment of this fever, but simply to give a brief sketch of what I consider an interesting subject. My remarks upon this disease will be confined to typhoid fever as I met with it in the section of Mississippi in which I reside. Having had but limited practice, I shall avail myself of the information of medical men of extended experience in the treatment of this fever.

The period of the usual appearance of Typhoid fever is from the latter part of November until April; it occasionally appears sooner, and sometimes extends its ravages as late as June.

Symptoms-The first, and almost universal symptom of typhoid fever in its first or forming stage is a slight Chilly sensation; sometimes it is a distinct and well marked Chill, accompanied with an exacerbation of fever that abates, but does not entirely subside. Sometimes it comes on with a remarkable mildness in all its symptoms, often so much so, that the patient is unable to fix the exact time of his attack. But on learning the history of the case we find that previous to the occurrence of the Chill he had been complaining of an inability to make any exertion either physical or mental. We ascertain that he had a dull pain in the head, with soreness of the limbs, a general feeling of lassitude, sighing, dejection of spirits, and anorexia even to a Com-

plete loathing of food. The attack, though varying in different cases is generally preceded for some length of time, by all these premonitory symptoms until finally the disease is ushered in by the occurrence of a chill. We now find upon examination the tongue to be slightly furred with a thin white coating, a streak of red through its middle and red edges. There is considerable heat of the surface and dryness of the skin. The pulse is very much accelerated, ranging in frequency from 110 to 130 in the minute; it is also hard and slightly corded. In some instances it is compressible, but not commonly so. The patient seldom complains of much pain with the exception of a dull pain or uneasy sensation in some part of the head. Headach to a greater or less degree is always present.

Epistaxis^{is} of frequent occurrence in this fever, and very frequently sets in during the first stage of the disease. The condition

of the bowels vary; sometimes they are inactive, but most commonly they are active, and symptoms of diarrhoea are present. Though I have in some few instances seen cases in which there was obstinate Constipation at the first onset of the disease, yet it is not often the case. There is more generally looseness of the bowels, or if not, they are readily disturbed by medicine; a very mild aperient being followed by three or four copious discharges. The febrile symptoms upon a close examination are found to observe nearly regular periods they never intermit, but there are remissions and periods of exacerbation every day, and every other day.

As the disease advances all the preceding symptoms continue with very little change excepting a gradual augmentation in severity. We now ~~can~~ perceive upon examination the tongue to be deficient in moisture and red at the tip and edges. The pulse is more

feeble and greatly increased in frequency. The countenance is dull and heavy; the expression vacant, the patient seeming as if without thought, and is careless and indifferent to all around him. The diarrhoea increases, the discharges being often tinged with blood; frequently there is very copious and decided hemorrhage from the bowels. The abdomen is always more or less tympanitic, and tympanitis increases with the progress of the disease. Upon examining the abdominal viscera, we find commonly a slight tenderness in the epigastrium, but universally, considerable tenderness and gurgling sound upon pressure in the right iliac region. Though the respiration is not commonly affected in the commencement of this fever, yet at this period there arises slight difficulty in breathing, and frequently there is a dry hacking cough.

The patient now becomes delirious

though this is not of a very violent character at this period of the disease, yet it increases in violence as the fever progresses. There is a sense of drowsiness; occasionally the patient tosses to and fro upon his bed, and then remains in one position and then remains in one position picking at the bed clothes almost incessantly, uttering a low muttering noise, or talking incoherently.

The drowsiness increases as the fever progresses; the patient now lies in a soporose condition with half closed eyelids, rousing occasionally and uttering an imperfect exclamation.

There is an intolerance of light which increases with the progress of the disease.

The diarrhoea increases, and there is often involuntary discharges from the bowels and bladder. The tongue is dry and of a muddy brown color, and is often with difficulty protruded, while the teeth and gums are covered with dark clammy sordes.

The whole nervous system is much affected with tremors and twitchings; and involuntary motions of the muscles and tendons arise.

Towards the end of the second or beginning of the third week the typhoid eruption makes its appearance, if it appears at all, for in some cases it is absent. These rose-colored spots are regarded by all writers as characteristic of the disease. They are seldom seen in the first stage, but usually occur after the beginning of the second. In the last stage of the disease, all the preceding symptoms are increased in violence, the nervous symptoms are augmented; there is debilitating diarrhoea, the evacuations are passed unconsciously and the patient is regardless of every thing that goes on around him. To sum up in few words, all the symptoms, the Cerebro-spinal, abdominal, febrile and thoracic, are joined together

in severity, as if to bring the scene to a close. The patient is at this ^{time,} and even in the second week and sometimes earlier, reduced to the most extreme degree of emaciation and to a condition apparently hopeless; but there is no disease from which recovery so often takes place in spite of even the most unfavorable symptoms as from typhoid fever.

Anatomical Characters. - In this fever nearly every portion of the alimentary tract and all the viscera are, according to our best writers, the seat of some lesion. The blood in this fever undergoes a considerable change, in ^{fact} it is almost essentially a disease of the blood. It has been demonstrated by the researches of Andral and Gavarret that in this fever there is a diminution of the fibrin of the blood. This fact seems to account for many of the peculiarities of

this fever, namely hemorrhage, Coma, and delirium. Carpenter says that by the experiments of Magendie, it has been ascertained that one of the effects of a diminution of the fibrin of the blood, is a tendency to the occurrence of hemorrhage or congestion. In a palsy and purpura hemorrhagica this plastic material of the blood is greatly diminished in quantity. The characteristic lesion of this fever is the enlargement, tumefaction, and ulceration of Peyer's glands, these alterations being more extensive in proportion to their nearness to the ilio-cæcal valve. The mesenteric glands are also enlarged, swollen, and of a red color. I have never had the opportunity of making a post-mortem examination, but the above are lesions mentioned by our best writers. Etiology With regard to the cause of this fever but little is known.

It is thought by some to be contagious. The most general opinion, however, is, that it is non-contagious, and that it is endemic in certain localities. Dr Bowling believes it to be the result of a peculiar malarial poison that inhabits an argillaceous sub soil. I know it to be true, that it is more frequently seen upon the pine and post oak hills of Mississippi than in the bottoms. Age is a predisposing cause of this fever it being confined almost exclusively to young people. Proximity of residence is said to exercise an influence in its production.

Diagnosis- This fever is distinguished by the stealthiness and mildness of its approach, the sluggish expression of countenance, the presence of diarrhoea, and the occurrence of epistaxis. Tympanitis with tenderness and gurgling sound upon pressure in the right iliac region, is always present in this fever.

The frequency of the pulse and dryness of the skin, the tongue dry and red around the edges and at its apex, and becoming "thickened and narrowed" as the disease advances and of a muddy brown color, are signs of the greatest value. The rose-colored eruption is a characteristic sign. This fever is often mistaken for remittent fever, but it may be distinguished by the remissions in the latter being more decidedly marked, and by the absence of the characteristic symptoms of typhoid, namely diarrhoea, tenderness and gurgling upon pressure over the ilio-cæcal region and by the patients seldom complaining of any pain, and also by the appearance of the tongue.

Prognosis It is very difficult in this fever to give a correct prognosis of its termination, for there is no certainty that the patient will recover even when it is pursuing the

mildest course that could be expected by the physician, since when least expected perforation of the intestines with the escape of its contents into the cavity of the peritoneum may take place, giving rise to fatal peritonitis.

Nor is there any case ever so unpropitious that may be viewed as altogether hopeless.

The unfavorable symptoms are, violent delirium, much watchfulness on the part of the patient, great prostration, subsultus tendinum, and great frequency of the pulse with much feebleness and fluttering, profuse sweats, very copious and debilitating diarrhoea together with hemorrhage from the bowels.

"A notion of the patient that nothing is the matter with him", is regarded by some as a very serious symptom, and is looked upon as an omen that the patient will certainly die. On the other hand the pulse becoming fuller and slower, the tongue moist and

beginning to Clean off, respiration free,
diarrhoea diminished, and the Complete
absence of delirium promises a favorable
termination.

Treatment As this is a self-limited disease, the
object of the physician should be to carry the
patient through the whole course of the fever
with as little danger and suffering as possible,
also to carefully watch the case and guard
against all complications that may arise.

In no disease is it of so much importance
that we should assign to our art its proper
position as the handmaid of nature as in
this fever. In mild cases of the disease the
expectant treatment should be carried
out through ^{its} ~~the~~ whole course, ~~of the disease~~
and any interference on the part of the
practitioner, by using active and severe
measures, will be attended with injury to
the patient. "Medicus Curat, natura sanat

morbum' says an old Latin maxim; and in no disease is it more applicable than in this fever. There have been various plans of treatment adopted in this fever, but at the present the profession are of nearly one opinion in relation to the course of treatment to be carried out. As there is diarrhoea at the commencement of this fever (or if not it will supervene during its progress) we should not use any drastic cathartics, but the bowels should be kept open by mild laxatives. The salines are best, such as the sulphate of magnesia, or better still sedative powders, which act as well and are more pleasant to take. Calomel is contraindicated in this fever for it has been proved that it diminishes the fibrin of the blood. Dr Karl Popp who has made elaborate researches on the composition of the blood infers that tartar emetic, nitre, and

Calomel diminish the amount of fibrin".
After attending to the Condition of the bow-
els the next indication is to seduce the febrile
excitement. The skin in this fever is dry and
hot, and the pulse frequent, often as high
as 120 in the minute. To obviate these symp-
toms the refrigerant diaphoretics, spts
of nitre, Citrate of potassa, and the solution
of the acetate of ammonia, have been
used with success and are beneficial. The
application of Cold water to the head,
and if not objected to by the patient, to
the whole surface of the body, has a
fine effect by diminishing the heat of
the surface. The patient may be allowed
the free use of Cold water to drink if he
desires it. But as the pulse ranges high
without much diminution, and when
seduced by general or topical depletion,
soon mounts up again it is an impor-

tant desideratum to keep the arterial circulation reduced down to something near its normal standard. For if this is not done we cannot expect to moderate the progress of the fever, and prevent with any surety those dangerous local inflammations. Fortunately for the profession, we have a remedy and a sure one; perfectly safe if given properly, which will certainly reduce and keep down the arterial circulation without any danger to the patient. This remedy is the tincture of *Urtica viride* lately brought to the notice of the profession by Dr Ferriwood. The mode of administering it is, to give it in doses from two to four or five drops every two or three hours in a little sweetened water, and repeated until the pulse is sufficiently reduced, or until slight nausea is induced, when it should be omitted for a time.

It will reduce the pulse from 120 to 75 beats in the minute, it is perfectly obedient ^{to} the will of the physician and can be ~~stopped~~ stopped short at the desired point. It is a remedy that must be administered with judgement and care. In the advanced stages of this fever, when the tongue is slick ^{and} dry, and there is some delirium or coma, Veratrum is not indicated - in such cases it will fail to control the circulation, and consequently do injury. When the tongue after cleaning, instead of becoming moist, should remain dry and have a glazed appearance, the turpentine emulsion should be given in doses of from five to twenty drops every three or five hours. It has a fine effect in removing the tympanitis of the bowels and preventing diarrhoea whitæ it induces a moist state of the tongue. From its peculiar

effect upon the mucous tissue, it appears well adapted to prevent the progress of intestinal inflammation, and as an internal remedy in the second stage of typhoid fever, it is the only one upon which much reliance can be placed. The use of stimulants, although apparently indicated in the more advanced stages, is seldom attended with any beneficial results. It is only in the decline of the fever, when there is a mitigation of the symptoms, when the pulse though quick is ^{that} soft, stimulants have sometimes a beneficial effect. But when the pulse is quick, small and corded, stimulants will only increase the delirium. The best stimulants are the Carbonate of ammonia, given in emulsion or good port wine. When there is much tenderness of the abdomen and typhoiditis the part should be covered with a mush poultice. To prevent the

Further progress of follicular inflammation of the intestines the abdomen should be cupped, particularly, over the right iliac region. Should there be much headach, it may be relieved by leeches or cupping, behind the mastoid processes. If there is great delirium, the head should be shaved and cold water applied, and if the stupor increases and the pulse becomes quicker and smaller, we may derive benefit by applying a blister to the back part of the head, it sometimes has a good effect in relieving the delirium when not too long delayed. If the diarrhoea be very profuse, it may be checked by astringents, Nino, the acetate of Lead ~~and~~ and opium may be used with good effect. For the nervous symptoms; when there is great restlessness and subultus tendinum, opium, Camphor, Hoffmann²⁰

anodyne and some of the antispasmodics may be used with benefit. When there is much hemorrhage from the bowels opium and the acetate of lead will often prove beneficial. Throughout the whole course of the disease the diet of the patient should be mild, light and nutritious.

Cleanliness is of the first importance in the treatment of this fever. The patient's body should be washed in soap and water. The room should be clean and well ventilated. Convalescence from this fever is often very slow and tedious, the patient is left by the disease extremely weak and emaciated and with the digestive organs greatly impaired. It is often many days before the stomach is able to digest solid food. During this period the patient should be carefully watched in order to prevent a relapse.