

AN

INAUGURAL DISSERTATION,

ON

*Typhoid Fever*

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## Typhoid Fever

This is a common febrile affection, presenting a great diversity of symptoms, yet having in general a recognisable character, and probably constituting the same disease in different forms. It is the common endemic fever of the United States, and very probably belongs to the whole human family. The nomenclature of this disease is rather unsettled, and perplexing, there being a great variety of names for it. It does not always commence in the same way. It often happens that for several days before the disease assumes its distinct and proper aspect, and while the patient is still able to pursue his usual occupation that he is affected with certain symptoms

which may be considered as premonitory. This is not always the case however for sometimes it will begin with a chill, or the commencement be very abrupt, but as a general thing it is rather slow in developing its self. For several days before the patient takes his bed, he moves about, complaining of weakness, want of energy, loss of appetite, is easily fatigued, has headache, and frequent chilly sensations, alternating with febrile reactions, or a tendency to remission.

### Symptoms.

#### Diarrhoea.

This is one of the most common symptoms of this disease, usually coming on early. In some cases it appears before the patient is confined, sometimes however

it does not appear until late in the disease. The stools may not exceed three or four a day, but usually there will be ten or twelve, and in some cases they are quite exhausting. They are usually of a yellowish, or brownish, color, in some cases they are quite black, but sometimes they are almost healthy, except in consistence. They are usually very watery, and in a few cases are somewhat dysenteric. The bowels are usually very susceptible to the action of cathartics, which require to be given in smaller doses than usual. The diarrhoea is usually accompanied by more or less pain in the bowels, particularly in the right iliac region or it may be elicited by pressure.

## Tympanites.

This symptom is most always present to some extent, seeming to bear some relation to the intensity of the disease. It usually comes on about the seventh day, sometimes however, it appears much earlier. In some cases it is very distressing, causing Dyspnea by pressing on the Diaphragm. It is usually confined to the large bowels, the small being seldom affected, though in some cases they are certainly implicated. It is very injurious to the patient distending his bowels so that they can not act upon their contents. There is frequently a gurgling noise heard in the bowels, and when water is swallowed it produces a gurgling noise as it enters the stomach.

## Rose Colored Eruption

The eruption is quite characteristic of this Fever. It usually occurs on the abdomen, about the seventh day. This is usually the only part affected, but in some cases it extends its self to the thorax, and extremities. They are usually small, and round, disappearing under pressure, but returning when the pressure is removed. The spots are usually numerous, <sup>at</sup> but sometimes few, in which cases they are apt to be overlooked, They are sometimes, however, absent, In some cases there are spots of effused blood underneath the skin, from which the eruption may be distinguished, by the spots not disappearing when pressed. The eruption appears

in successive crops, lasting from three to four days each. The whole period of the eruption is very variable, lasting sometimes ten or twelve days.

### Sudamina.

These are small, transparent, watery, vesicals, appearing upon the neck, and armpits, and are very apt to be overlooked unless a very careful search is made for them. They usually occur much later than the rose eruption. The water dries out of them and skin peels off.

### Pulmonary Symptoms.

Cough and bronchial rales are very common in this disease. The cough is usually dry, or attended with a slight purulent or bloody expectoration. There is usually very little soreness of the chest.

The cough and bronchial rales are generally greater in proportion to the amount of inflammation, in this disease than they are in ordinary catarrhal affections. Sometimes crepitation is heard which indicates a good deal of inflammation of the Lungs.

### The Pulse

In the beginning of the disease it is sometimes full, strong, and accelerated; in some cases however, it is diminished in frequency, not exceeding forty beats to the minute. When the pulse is slow in the beginning, it increases in frequency as the disease advances, it is usually accelerated in nervous persons, The most characteristic pulse, is that of great frequency and feebleness. In the decline it sometimes becomes slow and intermitting.



## Hemorrhage

When this occurs from the nose, it is quite a characteristic symptom. It is usually slight, but in some cases is quite copious. That from the bowels is usually a worse symptom, and does not appear so early. The blood is sometimes almost pure or quite fresh looking, more frequently it is black and disintegrated.

## Headache.

This symptom is most always present, but is not usually, very acute. It is usually dull and heavy affecting different parts of the head. It is sometimes accompanied by dull aching pains in the back.

## Dullness or Hebetude.

This is a very common symptom. The patient frequently lays on his back in a

dull, heavy, half a wake, and half a sleep condition; is not refreshed by sleep, and sometimes answers shortly as if vexed.

He becomes gradually insensible, but may be aroused when loudly called, and his mind acts correctly when his attention is strongly drawn, but wanders when left to its self. Sometimes he is vigilant or morbidly watchful

### Delirium.

This symptom does not usually appear until about the seventh day, when it takes the place of headache. It is sometimes of a low muttering character; the patient imagines he sees objects, in the air, and tries to catch them, talks about business, picks at the bedclothing, imagines that there is nothing the matter with him,

and insists upon getting up and being dressed. He sometimes requires watching to keep him in bed, often says that he is from home, and wishes to return and sometimes becomes furious, and frantic.

### Hardness of Hearing.

This is a very common symptom, but is not looked upon as so dangerous a one as that of increased acuteness.

### The Tongue

The tongue in the commencement is thickened, and slightly coated or furred, and the coating increases as the disease advances, it is sometimes of a dark, brown, or blackish, color, it sometimes parts with its fur in flakes, leaving it slick, as if glazed after which it soon recoats and looks fiery and red at the tip and edges.

## The Skin.

The skin in this disease is usually dry and parched, but is sometimes moist. It is sometimes hot and dry at one point, and cold and clammy at another. It is very apt to be covered with cold perspiration when the disease is about to terminate fatally.

### Tendency to Sloughing.

Owing to the diminished sensibility of the patient, the mind does not recognise the necessity for a change of posture, consequently the most exposed parts are apt to slough, producing what are termed bed sores. Blistered surfaces owing to the feeble capillary circulation are apt to slough.

### Retention of Urine.

This is not a very uncommon symptom,

particularly in an advanced stage of the disease. In consequence of the diminished sensibility of the patient, the urine accumulates to such an extent before the mind recognises the necessity to urinate that the contractile power of the bladder is lost, and there is danger of its being ruptured, unless the urine is drawn off. It sometimes dribbles away. When allowed to accumulate, it is apt to decompose, and may cause cystitis.

### Involuntary Stools.

These are quite common, sometimes from an indisposition of the patient to be aroused. The sphincter ani, usually loses its contractility. The evacuations should be removed as soon as they take place,

as by their contact with the body, they cause  
sloughing.

### Terminations.

When the case is about to terminate fatally,  
the pulse gives way, and becomes either frequent,  
feeble and fluttering, or slow and hardly  
perceptible; the extremities become cold and  
clammy, or the whole surface is bathed in  
cold perspiration, bowels become distended,  
Necrosis sometimes occurs, the countenance  
assumes a ghastly aspect, and the patient  
gradually sinks. When patients die early in  
this disease, they are often carried off in  
a struggle. When a favorable termination  
is about to take place, the tongue moistens  
and gradually, cleans from <sup>the</sup> tip and edges,  
the pulse becomes full and less frequent;  
skin relaxes; stupor and Delirium diminish;

Tympanites improves, the patient manifests some interest in him self, has some inclination for food, or at least manifests less disgust for it, a general amelioration of the symptoms, takes place, and the patient recovers rapidly; The course of a favorable termination is not always so rapid, The tongue sometimes parts with its coating from the center, and in flakes leaving a brownish, glossy appearance, and when it thus cleans, if it remains moist, convalescence will take place, but very slowly, Frequently a thrush like exudation breaks out on the mouth. The patient is sometimes a long time in regaining his strength. Patients are sometimes left weak minded, or partially insane. The hair frequently falls off, but will come out again.

When perforation takes place the patient is suddenly seized without any premonition with intense pain in the bowels, which are very tender, not bearing the weight of the bed clothing without pain, The knees are drawn up, the countenance assumes a frightful or gasty aspect, frequent rigors, vomiting, and constipation, pulse very frequent and contracted, Colic takes place and the patient dies in a few days, some times he may ~~last~~ last for a week, in this condition, and a few cases recover.

### Duration.

The duration of this disease is very uncertain. Death sometimes takes place in the first week, more frequently in the second, or third, or even in the sixth or eighth. The period of convalescence is equally as variable.



It sometimes commences on the eighth or ninth day, but rarely before the third week, The severer cases, seldom before the sixth or eighth week, and sometimes later.

### Varieties & Complications.

Though the description above given is applicable to a great many cases, yet there are complications which require a careful study, that this disease may not be confounded with others to which these complications give it a likeness.

It is frequently complicated with Pneumonia, which renders it very hard to treat. It is frequently confounded with the malarial fevers, from which, in some cases it is hard to distinguish. It is sometimes mistaken for some of the slower forms of Pulmonary disease.

## Anatomical Lesions.

Inflammation may take place in almost any part of the body, but the most common and characteristic, is that which takes place in the elliptical patches situated in the lower end of the Ilium, known as Peyer's glands, which are always found more or less diseased. Those patches situated nearest the Iliocaecal valve are usually found most diseased. They may be raised, softened, injected, or ulcerated. The patches diminish in number and degree of disease; the further up the intestine they extend. The corresponding mesenteric glands are usually found affected, and sometimes contain purulent matter. The Lymphatics in other parts of the body, are sometimes found diseased.

The Mucous membrane, between Peyer's patches, is usually found inflamed, softened or infiltrated. The glands of Peyer sometimes contain a yellowish, brittle matter. They are generally smooth, but sometimes are hard and ragged. Those patches highest up the intestine, are not always ulcerated, but are morbidly enlarged. The solitary glands in the small, and sometimes those in the large bowels are found ulcerated. Brunner's glands are seldom affected. The Gall bladder is sometimes inflamed.

The Stomach is usually normal, but sometimes exhibits traces of disease. In some cases the heart is soft and flimsy, aorta redened, and blood not coagulated. When blood is drawn, it usually coagulates, but not very firmly.

The Spleen is always found diseased. Sometimes it is enormously enlarged, softened, and is easily crumbled to pieces. The Liver is frequently slightly enlarged, and softer than natural. The Kidneys are sometimes inflamed, and softened. The Bladder is sometimes inflamed. The Brain usually shows very slight signs of disease, It is usually injected, and sometimes its membranes are slightly inflamed. The cerebral substance usually looks natural, showing red points when sliced. No satisfactory explanation of the cerebral manifestations, exhibited during life can be given, from the morbid condition which the Brain exhibits when it is examined.

## Causes .

Nothing certain is known as to the true cause of this disease, and the most probable theory is, that in certain individuals, there is an inherent predisposition to this disease, like the Tuberculous, Gouty, or Rheumatic predispositions, which most any of the exciting causes, may spring into action, in the production of this disease. Crowding persons to gather in impure air, and feeding them badly certainly predisposes to this disease. It is probable that one attack exhausts the predisposition, thus accounting for the reason why old persons are less liable to it, than young ones. As to its contagiousness, the balance of evidence seems to be on the side of non contagion.

It often prevails epidemically, in certain regions, and persons going into these infected regions, are apt to be affected by it.

It prevails at any season, but is most common in Autumn, and Winter, and to this fact may be attributed the reason why the vulgar call it winter fever.

### Diagnosis.

The most characteristic symptoms are the usually slow mode of attack, Diarrhoeal at the commencement, or soon after; dull heavy expression of countenance; tendency to hemorrhages, particularly that from the nose; which is quite characteristic; Bronchial symptoms; Rose colored eruption, after the seventh day; Sordamina; dryness, and redness of the tongue at the

tip and edges, and frequent glazed and fissured condition, Tympanites, pain in the right Iliac region, frequency and feebleness of pulse, duration &c. These symptoms will usually enable the practitioner to distinguish it from any other disease. The diseases with which it is most apt to be confounded with are bilious fever, inflammation of the brain, and some of the slower forms of tuberculous diseases. From these diseases it may be distinguished by the absence of its most characteristic symptoms.

The practitioner should be very careful about his diagnosis, not making up his opinion until some of its most characteristic symptoms manifest themselves.

## Prognosis.

Great caution should be exercised in making out a prognosis in this disease, Epidemic influence should certainly have some control over it as some are very mild, while others are very fatal. The seemingly lowest cases some times recover, and occasionally, even after perforation. No case however mild, should be looked upon as entirely safe, as perforation may take place at any time, and seems to occur more frequently in mild cases, than in severer ones. The most unfavorable symptoms, except those connected with perforation, are extreme frequency, and feebleness of pulse, immoderate Tympanites, gassy expression of countenance, delirium, coma,



stertorous breathing. cold and clammy skin, retention of urine, Involuntary evacuations, Diarrhoea, Coliquative sweats &c. The more favorable symptoms are improved pulse, returning consciousness, increased healthy secretions, skin improved, tongue showing a tendency to clean &c. The previous condition of the patient's health, should be taken into consideration. The prognosis is usually more favorable in young persons than old ones.

### Treatment.

It is usually necessary in the commencement of this disease to clear out the bowels, thus preventing the contact of irritating matter with the mucous membrane, and for this purpose, Epsom salts,

or castor oil may be given in small doses. As there is a peculiar susceptibility to the action of cathartics in this disease, drastic ones should not be used, as they are very apt to injure the patient. It is usually necessary for the patient to have one good operation a day, but the patient must not be worried by cathartics. Magnesia may be given when the breath is sour, turpentine for the Tympanites, lina-  
cum to quiet pain. As to the propriety of bleeding, it is sometimes necessary when the pulse is full and strong, with determination to the head, or great cerebral excitement. The bleeding had frequently better be local than general.

Bleeding is admissible on the setting up of any incidental inflammation. Bleeding should in no case be practised with the view of aborting the disease, as it is very apt to abort the patient first. Refrigerant Diaphoretics should be given from the first, the best of which is neutral mixture, and a dose of it should be given every few hours. Sometimes the antimonials may be indicated, but great caution is required in their administration, as they are very apt to irritate the bowels. Spts of niter, Hoffmanns and dyne, and camphor water, ~~has a good~~ may be used to quiet nervous symptoms. Sponging with camphor water, has a good effect on Subsultus tendinum. It is best that the night should be passed

in sleep, and for this purpose Opium may be used when not contraindicated. The patient should be allowed cold Orangeade or Lemonade. Cold ablutions should be often practised, and sponging of the whole body to keep down the morbid heat. When the patient is feeble stimulents may be added to the bath &c. Headache should be treated by the constant application of cloths wet with ice water to the head, Hair cut short, ice in bladders to the scalp, leeches to the temples, cups, and blisters to the back of the neck. When there is pain in the bowels, cupping, Leeching, blistering, and puncturing, are the remedies. Diarrhoea should be treated with cold injections, Opium, Acetate of lead, and Kino.

When the tongue is dry and secretions generally diminished, it may be necessary to give a few blue pills, but this remedy must not be freely used, as the Mercurials are very dangerous remedies in this disease, and had probably better be dispensed with entirely. The Oil of Turpentine seems to possess some peculiar or specific influence in this disease, and should be given in all cases particularly when the tongue is dry, and bowels distended, The most convenient mode of administration, is to make an emulsion with Mint water, Sugar, and Gum Arabic, and a dose of this should be given every four hours, When there is Tympanites, the Abdomen should be rubbed several times a day with the warm oil of Turpentine.

The usual dose of Turpentine, is from five to twenty drops, every four hours, and when kept up, the tongue gradually clears from the tip and edges, skin improves Tympanites diminishes, pulse improves and a general amelioration of the symptoms takes place, and the patient gradually recovers. The Turpentine should be gradually diminished and not left off suddenly, until convalescence is established. When the patient is much debilitated, it is necessary to husband his strength with stimulents and tonics. If stimulents diminish the frequency and febleness of the pulse, they may be continued, ~~and~~ but when they have the opposite effect, they should be dispensed with. When the

patient gets cold, his temperature should be kept up, or circulation equalised by rubefacients, and warm applications. Hemorrhage from the nose should be checked, by cold injections, or plugging, that from the bowels, by cold applications, Opium, Kino &c. The Lungs should be relieved from all tendency to congestion by dry cupping. The prominent parts of the body should be stimulated, and when sloughing occurs, apply soap plasters. The patient should not be allowed to lie too long in one position, but it should be often changed. Involuntary evacuations should be removed, as by their contact with the body they cause sloughing. The Urine should be drawn off when retained.

The diet should be light at first but nutritious, and as the disease advances, it should be rendered stimulating.

The apartment should be clean, and well ventilated. The bowels should be kept regular during convalescence.

Immoderate exercise should be avoided, as well as great mental excitement, and the patient should be gradually brought back to his accustomed mode of life. (Good CKM)

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