

# Typhoid Fever

## ~~Literature~~ References

- 1 Bartlett on the Fevers of the U.S.
- 7 Green's Pathology
- 8 Wagner's General Pathology
- 4 Smith Diseases of Children
- 5 Ellis, Diseases of Children
- 6 Meigs and Pepper Diseases of Children
- Rockitski Pathological Anatomy & Histology
- Stent's Practice
- Atkins Practice
- Meunier's Pathology
- 2 Ballou's Physiology
- 1 Rudolph's Pathological Anatomy
- 13 Gray's Anatomy
- 4 Green's Encyclopaedia

# Typhoid Fever

At present we have no thought of taking <sup>up</sup> the entire subject of Typhoid fever but only the discussion of certain points. These points will be first - the Etiology or the supposed cause or causes of the disease & secondly, the tissue characteristics of the disease 3rd the relations of the lesions to the essential disease 4 The supposed Repoisoning - And the the use of City foods



# Etymology

<sup>any</sup> Typhoid fever belongs to what is known as the infectious diseases. It is probably not a contagious disease in the full sense of that term, that is, it is not contagious in the same sense as small Pox or scarlet fever. It is the opinion of many of the most learned authors that Typhoid fever is never communicated directly from one person to another - also that the disease like smallpox never arises *denovo* but is always the result of germs derived from one previously sick of the disease.

There are three generally recognized modes of infection or rather three classes

of poisons which stand in a causative  
relation to infectious or contagious diseases.

These differences are based upon the supposed  
origin and peculiarities of development.

The first of these - called Contagious - caused  
disease by direct communication  
~~from~~ ~~the~~ ~~sick~~ of the specific poison from  
the sick person to the person in health -

The spores or poisons material is supposed  
to be formed in <sup>the body of</sup> and emanate from the  
sick person and may be communicated  
either by direct contact or by the medium of  
the air - After such communication  
a stage of development requiring some  
days <sup>must take place</sup> - the different specific poisons requiring  
different lengths of time - before the poison

becomes active

A second class are those called Pyasms. In these the presence of one sick of the disease is not necessary to its production nor is the disease communicable from one to another.

The poison is supposed to be elaborated from decaying matters - from manure, sewers &c and is in no wise dependent upon the presence of man for its formation.

The Third Class partakes of the nature of both of the preceding - Like the first it only results from the presence of one sick of the disease and is only developed within the body - Like the second one person cannot communicate it to



another x The first is elaborated in  
the human body - the second is elaborated  
without the human body - the 3rd is ~~elaborated~~  
& elaborated both within and without  
the human body - In the body of the typhoid  
patient we suppose a specific something  
to be elaborated as a result of typhoid  
poisoning - This something is not capable  
of reproducing the disease until it  
has undergone certain changes or  
processes of development requiring more  
or less time - outside of the body -

This development is supposed to take place  
in some peculiarly favorable soil - such as  
decaying animal or vegetable matter in  
which a farther growth or development takes

place after which the specific poison is fully formed and is ready to act in the production of the specific disease when introduced into the body of one susceptible to it - This Leber Meister calls Miasmatic Contagion

This process has its analogue in some of the lower forms of vegetation. The common Uredo which causes the rust on wheat is an example of this - The sporules which result from the growth on wheat will not themselves grow upon wheat. They will however grow upon the leaves of the Barberry bush and the sporules which result from the growth

upon the Barberry bush will in their  
turn grow upon the ~~barberry~~ wheat  
and thus indirectly reproduce the  
parasitic disease known as Rust.

If the Barberry bush could be exter-  
minated - provided it is the only ~~bush~~  
plant upon which the spores can undergo  
this stage of their development - the rust  
in wheat would be exterminated.

This is precisely the case with the  
Typhoid Fever poison - according to  
the investigations and conclusions of  
Hoffman, Liebermeister and others  
high in authority on this subject.

~~Let the~~ The Typhoid fever germ must  
after leaving the sick in which it is



developed meet with a favorable soil  
in which to undergo further development  
In case of the Uredo this favorable  
is found in the leaves of the Barberry  
In case of the Typhoid fever germ the  
probabilities are that it is decaying  
animal or vegetable matter - particularly  
the human excreta - Precisely how  
this may be is not certainly known  
but the accumulation of facts lead  
pretty certainly to decaying matter  
as the place for the further development  
of the germs

After the germs have undergone the  
necessary development they are fitted  
to reproduce the characteristic

Typhoid Fever and never any other disease. Rather does Typhoid fever spring from any other cause according to Liebermeister Hoffman and others.

Liebermeister said that in the treatment of 1900 cases at the hospital at Basel only 45 cases originated in the building.

Of these 45 cases some were nurses who were attending patients sick with the fever but most of them were attendants in other wards and to one of less acute ~~observation~~ observation the fever might have been thought entirely free from contagion.

It was found however that those who contracted the disease were from certain quarters of the building especially from

rooms situated one above another  
through which the pipes passed which  
carried the excreta from the Typhoid  
fever wards - upon examination a  
pipe was found defective and after it  
was put in order there was no further  
infection. Facts of a similar nature  
to this might be quoted almost indefinitely  
without limit - and it is a significant  
fact that the great mass of these pipes  
to the human excreta as the soil in  
This second stage of development occurs  
A large proportion of the cases of Contaminated  
drinking water have been traced to  
This source



The views just given are not agreed to  
by all writers upon the subject - Hunt-  
has no doubt but that cases of Typhoid  
fever do frequently arise de novo  
and does not seem to recognize in it  
any such thing as the miasmatic  
contagion described by Libermann  
Hoffman and others. Indeed very few  
if any who wrote over ten years ago  
recognized any such theory of causation.

Since however it is now well known  
that many of the fungi undergo different  
phases of development in entirely different  
situations as described in the Euredo  
or rust - on wheat such a theory is not  
only plausible but seems in the highest

degree probable in the light of the facts  
at present in our possession

## Prevention of Contagion

We cannot well avoid presenting in  
this connection some thoughts on the  
prevention of infection. The Excreta  
from typhoid patients should never be  
allowed to stand for an hour or even  
half an hour in the room nor out of the  
room nor should they be cast into any  
privy vault or sink of any kind whatever  
but should be taken at once and buried  
in the ground if possible in a dry earth  
which will completely rob them of all  
moisture - each defecation should be buried  
in a place to itself so that there may be no

accumulation 2<sup>nd</sup> No clothing - linen

Bedding napkins or any thing whatever  
soiled by a typhoid patient should be allowed  
to remain in the room or out of the room

but should at once be destroyed by fire

or Boiling water  
or ~~at~~ thoroughly cleansed with soap and  
water and the water cast out if possible

upon the dry earth where the sun will shine  
upon it - it should never be cast into

sinks or cesspools. 3<sup>rd</sup> The clothing of typhoid  
Fever patients and their bed linen should

be very frequently changed - Carefully and  
judiciously of course - but always sufficiently  
often to keep them thoroughly clean and free

any emanations from the body of any kind

4<sup>th</sup> At all times winter and ~~and~~ summer



There should be the fullest-possible allowance  
of fresh air in the apartments

It is said that if the Barbey bush were  
exterminated the rust on wheat would  
be exterminated with it. It is highly  
probable that if the above plan were carried  
out thoroughly and completely in all cases  
Typhoid fever would be exterminated within  
a few years

## Tissue characteristics

By the term tissue characteristics of a disease we mean something more than is ordinarily included under the term Pathological anatomy.

This is generally used simply to designate a description of the lesions as they appear to the eye - Under the term tissue characteristics we wish especially to discuss the character of the tissues involved; the order of their involvement and their relations to the particular type of disease in which they occur. The lesions should be

divided into three classes 1<sup>st</sup> those essential to the particular type of disease and without which the disease cannot exist - 2<sup>nd</sup> the lesions which result necessarily on account of the existence of the first - 3<sup>rd</sup> those which occur

frequently but not necessarily in every case.  
The first of these groups represent the essential  
characteristics and the locus of the disease  
is found in the <sup>tissue or</sup> tissues in which they occur.  
The 2nd are the accompanying lesions and  
the 3rd are the complications.

We have recently read as closely as we could  
the authors cited in the beginning taking note  
of the points made by each intending to quote  
largely in this portion of our article - but  
as the notes fill more space than can be set  
for this entire article we will be compelled  
to content ourselves with a few quotations illustrating  
the different points.

Partlet - on the fevers of the U.S.  
Page 88 says "There can be but little

doubt - I think that one of the first,  
probably the first pathological alteration  
which takes place in the solids, consists  
in the tumefaction of the plates - Peyer's  
Patches - nearest the Ileocecal Valve,?"

What are these plates - or as they  
are more generally called - Peyer's Patches  
On this point there has been much doubt  
in the minds of Anatomists - but we find  
that more recently this question has been  
pretty well settled and that they are to be  
classed with the Lymphatic glands.

Among those who have given unreserved  
opinions to this effect we may mention  
Knapfensch, Kolliker, Frey, Lebermeister,  
Wagner, Hunt - and a number of others



Flint says of these glands "they may be considered as constituting the first row of Lymphatic glands in the wall in the Mucus Membrane" That is they form the last of the Lymphatic glands connected with the Lymphatic vessels as they proceed outward from the Thoracic duct; or the first if we proceed inward toward the Thoracic duct.

These Glands are somewhat different from the other Lymphatics, This difference seems to be that they represent ~~of~~ but one half of an ordinary Lymphatic gland: other Lymphatic glands are made up of two parts. They have a system of different vessels leading into an aggregation of cells and a

system of efferent vessels leading out of this  
aggregation of cells. Now the solitary glands  
- of which Peyer's patches are groups - being on the  
~~ends~~ ends of the Lymphatic vessels have only  
the efferent system of vessels and therefore  
represent - but one half of an ordinary  
Lymphatic gland

It is in these glands that we suppose -  
from the evidences before us - that the first  
effects of the Typhoid fever poison takes  
place - Bartlet who now we have quoted  
is of the opinion that the irritation of the  
Mucous membrane occurs later and is probably  
secondary to the irritation of the glands -  
Kundflesch says of these lesions - "we may  
ascribe them to the local action of the

action of the poison, inasmuch as they are produced in those very organs which are probably the channels through which the poison is introduced into the system."

In support of this view he cites - aside from the observation that this lesion seems to appear first - the frequent production of disease from contaminated drinking water and other observations which seem to show that the entrance of the poison is by way of the alimentary canal.

A number of the authors we have examined are not definite on this point while some suppose that the inflammation of the glands is secondary to that of the Mucus Membranes. Among the latter Rockström is the

important name

In regard to the <sup>relative</sup> time of the inflammation  
of the mesenteric glands the evidence is that  
it occurs at the same time or immediately  
after that of the solitary glands. In some  
observations the inflammation of the mesenteric  
glands have been apparently first and ~~sometimes~~  
sometimes the solitary glands have <sup>certainly</sup> been  
so first - Curvier reports a case in  
which all the characteristic lesions occurred  
in the mesenteric glands ~~and~~ spleen &c with  
no lesion whatever in the walls of the intestine  
near the ileocecal valve -  
It seems that the patient had had the fever before  
and the solitary glands had sloughed out;

There being no glands there to act as the nucleus,  
but the solitary glands above the point of the previous  
inflammation, the intestine escaped - The  
(This said it)

slough & showed the usual hyperplasia



patient however died of the fever nevertheless

The first of the solitary glands to be affected are usually those situated nearest the ileo-cecal valve, from this point the inflammation extends upward along the intestine involving sometimes only a few inches of it - but occasionally a large portion or the whole of it - and even the jejunum - Not infrequently the colon is also involved sometimes extensively

It seems probable that in the beginning of the disorder the entire system of the lymphatics of the intestine is in a congested or hyperaemic state bordering on active inflammation which causes a more or less general catarrh of the intestinal tract. Rindfleisch says "Nearly all of the Lymphatic structures in

in the wall of the intestine are unreplicated  
 in the first or catarrhal stage, with a marked  
 tendency to concentration during the process  
 of medullary infiltration - and in the stage of  
 sloughing there is a farther and more striking  
 reduction in extent \* He also found the same  
 conditions in the mesenteric glands

Following closely after the inflammation of  
 the solitary and mesenteric glands comes the  
 enlargement of the spleen. Of this Greene in  
 his Morbid Anatomy (Page 227) says "The splenic  
 tissue becomes exceedingly vascular and the lymphatic  
elements increase rapidly in number so that  
 the organ often attains two or three times its  
 natural size" \* This statement is corroborated  
 by Rindfleisch and others

The Inflammation of the Lymphatic structure  
is not limited to these parts but it probably  
extends to all of the Lymphatics of the body  
though not in the same degree. Yet in a portion  
of the cases there is evidently sloughing or  
ulceration of these glands in other regions  
quite remote. Bartlet - After describing  
the lesions of Peyer's patches - says "the  
glands of the Mesocolon are affected in the  
same manner but less extensively. the  
same observation with the same qualification  
is true of all the other Lymphatic glands  
of the body. It is also true that these  
glands are rarely changed from their  
healthy state in any other acute disease

Wagner in his general Pathology (page 100)

deep Sympathetic new formations occur constantly  
in Typhoid Fever, these new formations are the  
only essential morbid anatomical conditions  
in the small intestine - in the large intestine -  
in the mesenteric glands, in the spleen - and  
not infrequently also in the Liver, in the Kidneys  
in the Laryngeal Mucus Membrane &c<sup>39</sup>

It seems from the statements of several  
Authors Wagner, Rudolfich, Bartlet, that  
the hyperemia of the Bronchial Mucus Membrane  
from which the cough occurring early in the  
disease arises is due to the irritation of the  
bronchial Sympathics - small but deep ulcerations  
are not infrequently found here which correspond  
with the position of the Sympathics ~~where~~  
though as a rule the irritation subsides after the



Nucleus of the second week ~~and~~

Lebermeister says after describing the  
hyperplasia of the Lymphatic glands that  
do not generally ulcerate says "the Lymphatic  
glands which surround the follicles at the  
root of the tongue are affected in the same  
way, in most cases after a time the swelling  
subsides but sometimes softening and perforation  
takes place"

We might easily go on giving quotation  
after quotation all going to show that the  
Lymphatics ~~of~~ of the whole body are involved  
in the Lymphoid process but this does not seem  
necessary - We find that most of the more  
recent writers give the facts which show that  
this tissue is the true nucleus of the affection

The Examination of the process occurring in  
the intestines it seems to us goes to show this -

Also shows that the Mucus Membrane does not  
readily take part in the more intense forms of the  
inflammation - The solitary glands are situated within  
the Mucus Membrane and during the growth of the  
Morbid product - in them there is more or less  
infiltration of the Syphoid Material into it - but  
generally very little - When the sloughing comes  
it is generally confined so rigorously to the gland  
elements - which are much enlarged - that only  
the portions of the Mucus Membrane lying immediately  
over them is destroyed - even the margins of the  
Membrane are left overhanging the opening  
produced by the loss of the gland - And the tendency  
is to the healing of the wound at once after the

the removal of the gland - This could not well  
be the case if the true nucleus of the affection  
was in the Mucus Membrane as claimed by  
Rockitanoski; for in that case it should be  
especially the Mucus Membrane ~~that~~ while in  
fact we find that it is especially not the  
Mucus Membrane but the glands that  
slough - ~~It is true~~ however that when  
the cellular infiltration is extensive, ~~that~~  
there is much sloughing of the surrounding  
tissue - Not especially however of the Mucus  
Membrane but of the Muscular tissue  
as well and even of the peritoneum - We  
believe that it has not been shown by any  
observation that sloughing occurs in the  
Mucus Membrane except in the immediate

~~presence~~ presence of the Lymphatic glands  
and in the case cited from Cuvellier in which  
the Solitary glands had previously been lost - there  
was no inflammation of the Mucus membrane  
while the characteristic lesions were found  
elsewhere

Regarding the Lymphatic structures as being  
the true nidus <sup>the</sup> of the Typhoid process <sup>The lesions found</sup> found in  
these form the characteristics of the affection - These  
occur in every case of the disease no matter how  
light the sickness may be - in fact without  
them we can have no Typhoid Fever



## The Lesions of the Lymphatics

Various expressions are used by different authors in describing the lesions of the Lymphatic glands. The ~~swelling~~ swelling is spoken of as tumefaction by one, Reducible by another, by another. Generation of the typhoid material by another &c. Yet their descriptions of what they have seen are essentially the same.

This change of the gland consists of in a rapid increase of the peculiar granules or cells of the gland - in the production of a new product - Greene in his pathology describes these newly formed cells as being a little larger than the ordinary lymph cell and as containing a larger proportion of protoplasm and says it occurs constantly in typhoid &c.

(no 1)

We have made a critical examination of these cells both as they occur in ~~the~~ Typhoid fever both in the intestine and mesenteric glands and have compared them with ~~lymphatic~~ new products occurring in the lymphatics from other causes - as in Tonsillitis &c and must say that ~~we~~ have failed to establish any characteristic difference - My conclusion is that there is nothing in the lymph cell to distinguish it as a Typhoid fever cell

Hudnall and others give a description  
which corresponds exactly with Green's but  
regard these cells as the specific typhoid  
cells believing that they only occur in  
the disease. It is from the multiplication  
of these cells that the enlargement of the solitary  
glands the mesenteric glands the spleen  
and the lymphatic glands every where is due.  
In the mucous membrane they often over-  
flow the bounds of the glands and infiltrate  
the surrounding tissues - both the mucous  
membrane and the muscular tissue.

Tissues so infiltrated usually slough  
- but not always. Sometimes resolution  
takes place and the morbid products are  
removed by absorption - this is usually the



case in positions other than the intestine

We recently removed a lymphatic  
gland from a man dead of typhoid fever  
which measured  $5/8 \times 1 \times 3/4$  inches  
one and  $3/4$  inches in length, one inch  
in width and  $3/4$  inch in thickness

In the position in which this was found  
the glands are usually no larger than a pea  
the same or even a greater proportional growth  
takes place in the solitary glands and the  
sloughing of these aggregations forms the large  
ulcers found in these positions



## Function of the Lymphatics.

In this connection a statement of the function of the lymphatics would be entirely proper as furnishing reasons why such an affection of them should produce such constitutional results as is manifested in this disease - but unfortunately our

knowledge of ~~their~~ their function is limited

We know however that they take up a fluid from all parts of the body and return it

to the blood. And that the Lacteals which are the Lymphatics of the Nutritive system

take up the oily portions of the food and convey it to the blood by way of the Thoracic duct - In the passage of these substances

through this system of vessels it is all

passed through the <sup>Glands</sup> glandular capillaries  
coming into intimate contact with the  
gland cells so that we are justified in  
~~the con~~  
~~the conclusion~~ that it undergoes ~~some~~ some  
modification which fits it for the purpose  
of Nutrition - We find in <sup>the function of</sup> these glands  
a close analogy to the Liver - The products  
of digestion taken up by the blood vessels  
from the stomach and intestines must  
first pass through the <sup>Capillary circulation</sup> ~~capillary circulation~~  
<sup>of the</sup> ~~of the~~ Liver before it enters the system  
at large - before it is fitted to perform  
the office of Nutrition - Thus we see that  
all the products of digestion pass through  
<sup>Glands</sup> glandular capillaries before it enters  
the system at large; and in this sense the

<sup>of the liver</sup>  
is the prototype

Lymphatic and mesenteric glands, each performing its part of the function toward certain nutritive elements just as the ~~one great~~ ~~great~~ gland of the ~~system~~ of the blood vascular system performs its office toward its ~~apportioned~~ ~~elements~~ elements of the nutritive material and the one is probably as important as the other in <sup>the</sup> maintenance of the normal standard of health - Now in Typhoid fever we find just such results as we should expect to find in ~~the~~ disease of a special system which ministers so directly to the nutritive function - Great emaciation and failure of the nutritive powers + It is rather the gravity of the general disturbance of this system that



marks the gravity of the case than the intensity  
of the intestinal lesion; ~~or rather~~

In other words it is the case in which  
the intensity of the disease is not concent-  
so strongly on one point in the intestine  
which we have the very grave fever that  
kills by paralysing the nutritive powers and  
wastes away the patient's life

Why there should be a peculiar type of  
fever accompanying these lesions is not  
known - Neither is it known why a  
particular type of fever should accompany  
pneumonia or small pox - These peculiar  
types of fever doubtless exist through the  
force of some pathological law not yet  
understood



In this disease as in many others  
it is not certainly known whether the  
fever stands in a causative relation  
to the lesions or whether the lesions stand  
in a causative relation to the fever.

The most general expression is however  
that the fever is the prime factor

Kindlesich says "we may regard the  
lesions as standing in the relation of an  
isanthem to the Constitutional disorder

~~S. S. S.~~ Lebermeister says "Although  
the intestines is the first portion of the body  
attacked we are compelled to assume that  
the typhoid fever poison is taken up by the  
juices of the body and so create a general  
disease. These expressions may be

regarded as expressing the general opinion of the medical profession

## Repoisoning

When we began this paper we had hoped to be able to present some views on treatment - but we have already taken as much time as we are rightly entitled to. We will however refer briefly to what is called poisoning.

It has been held by some that a typhoid fever patient is being continually re-poisoned by the typhoid material developed within himself - If this be true it is an important point - especially if there be any means at

land for preventing it. It is on this theory we believe that the Sulfo-carb-ol-ate of soda treatment is based. In the discussion of this point we are led back to the causation of the disease.

Leermesters statements of the Causation is very clear and definite and we believe his views are supported by a goodly number of the most learned German writers of the present time and we believe by most of the later writers on the subject. According to this view it seems to us that the theory cannot stand for the reason that the poison developed in the body of the patient must be voided and undergo another phase of development out of the body before it can exert its specific poisonous action. The adoption of this theory of the causation therefore

at once does away with ~~the~~ theory of  
re-poisoning by the absorption of the typhoid  
material in the intestine or directly from  
the source of production

This, however, has nothing to do with another  
source of poisoning from the intestine which  
may be worthy of attention - We mean  
Septic poisoning - In those cases where  
the lesions are severe and the sloughing  
extensive there is necessarily a very  
considerable formation of puss for a considerable  
period of time - We suppose that as a rule  
this puss remains pure and laudable  
while in the intestine and therefore will  
not act in the production of septic poisoning  
but we cannot always be certain of this



If at any time it should be otherwise  
it would certainly be absorbed by the ~~veins~~  
veins and carried into the blood and thus  
produce its specific ~~and~~ effects.

Any treatment directed against this will  
certainly not be out of place and it is probable  
that the sulphocarbonate of soda treatment will  
have the desired effect.

According to the investigations and conclusions  
of Hoffman Lebermeister and others the comple-  
~~test~~ development of the typhoid material  
within the body requires from three to four weeks  
after which time it is completed and becomes  
inert. Now it is not improbable but it  
is highly probable that the sulphocarbonate  
of soda or other disinfectant medicine will

diminish the intensity with which the development of the typhoid poison proceeds and that this is rather to be regarded as the true theory upon which its employment should be based

In the feeding of typhoid patients such food should be used as can be ~~assimilated~~ assimilated without overtaxing the lacteals

It is essentially the lacteals that are diseased and they are called into action by feeding with those foods <sup>which</sup> ~~that~~ contain much oil

It is true that after the end of the second week many of the lacteals have usually recovered from the shock and that the lesions are concentrated in the glands in the neighborhood of the ileocecal

valve but we have no means of definitely  
knowing the extent of the lesions ~~We have~~  
~~had some personal experience in the use of~~  
~~Butts - We were fed upon it when we~~  
~~suppose now we had this disease - We assume~~  
~~it passed out as milk and that its effects~~  
~~were anything but pleasant - While plain~~  
~~Butts made from lean meat had just~~  
~~the posit effect - We should so feed our~~  
patients as will best nourish them and  
we should not attempt to force the nourishment  
through a system of glands that are incapacitated  
by disease If we attempt this we will  
fail and the patient will sink in consequence

Milk seems to be the popular food for  
Typhoid patient and in many cases of

Where the Lesions are closely concentrated  
in one point it undoubtedly answers  
the purpose well. But in the more grave  
cases where the hyperplasia of the  
glands is more extensive and less  
intensely concentrated it cannot -  
in the very nature of things do much  
toward the nourishment of the body  
for the reason that it cannot pass the  
diseased glands. And if it is depended  
upon the Amaciation progresses steadily.

In all cases of grave fever, broths from  
the lean Meats ~~well concentrated~~ will  
be found more serviceable for these are taken  
up by the veins and have a clear road  
into the circulation. <sup>The defecating</sup> ~~This~~ is a point



worthy of the gravest consideration and  
the closest watchfulness on the part of  
the physician in each individual case  
and close attention to it will probably be  
more serviceable to the patient than any  
point in the Medication

In feeding with milk we think it would  
probably be better to rob ~~the~~ it of its cream  
the Casein being the element demanded  
This element of the milk is appropriate  
While the oil is not

# Adendum

What are the reasons for the peculiar mental conditions in Typhoid Fever?

The fever itself accounts for some disturbance of the Cerebral functions but this furnishes no reason why it should be so different in this from other fevers. It is probable that this difference is caused by a perturbation of the Lymphatic glands. The Hypothetical peculiarity of Typhoid Fever is an inflammation of the Lymphatic glands with supuration of the Agminated glands of the Illium and occasional supurations of minor importance elsewhere. Now the function of the Lymphatics is as yet but poorly understood at best, but it is tolerably certain that they take up something from the system

at large and after passing it through  
their glands deliver it into the Blood.

The probabilities are that this substance  
is some form or forms of matter which  
have become unfit for use and that by  
this process it is again rendered fit for  
use in the economy - Now in Typhoid  
Fever the Lymphatics become in a large  
degree incapacitated for the performance of  
their function and as a result this peculiar  
substance collects in the tissues and  
lacunar circulation and acts as a poison  
to the nervous system producing the peculiar  
type of cerebral disturbance observed