Remarks on,
Typhus & Typhoid Fever.
by.
Jas. B. Potter.

March 25th 1868.
Introductory.

Specific fevers constitute so large a proportion of the mortality of our country, that their consideration is of the greatest interest to those engaged either in the study or practice of the Medical Art.

The usual division of these diseases is into, 1. Eruptive
2. Contagious Fevers. To the former class belong,
Scarlatina, Rubella, Varicella &c. &c.
To the latter—Simple Fevers or Febrifuges. Relapsing
Fever, &c. Typhus & Typhoid Fevers.

To treat of all these within the limits of this Thesis would be impossible, even in the most superficial manner. I shall therefore confine myself to the consideration of those of a continuance type, I more especially, to Typhus & Typhoid. They being by far the most frequent & fatal of the group.

To give an idea of the ordinary mortality of these diseases, I subjoin the following figures from the reports of the Registrar General, giving the total annual mortality from all causes, & also from contagious fever for the ten years 1850-59, both inclusive. These contagious fevers are being grouped together, under the head of Typhus, by the Registrar General.
**England & Wales.**

<table>
<thead>
<tr>
<th>Year</th>
<th>All causes</th>
<th>Typhus</th>
</tr>
</thead>
<tbody>
<tr>
<td>1850</td>
<td>368,995</td>
<td>15,374</td>
</tr>
<tr>
<td>1851</td>
<td>395,396</td>
<td>17,930</td>
</tr>
<tr>
<td>1852</td>
<td>407,135</td>
<td>18,641</td>
</tr>
<tr>
<td>1853</td>
<td>421,097</td>
<td>18,554</td>
</tr>
<tr>
<td>1854</td>
<td>437,925</td>
<td>18,893</td>
</tr>
<tr>
<td>1855</td>
<td>425,703</td>
<td>16,470</td>
</tr>
<tr>
<td>1856</td>
<td>390,506</td>
<td>16,182</td>
</tr>
<tr>
<td>1857</td>
<td>419,815</td>
<td>19,016</td>
</tr>
<tr>
<td>1858</td>
<td>449,656</td>
<td>17,883</td>
</tr>
<tr>
<td>1859</td>
<td>440,781</td>
<td>15,877</td>
</tr>
</tbody>
</table>

From these we see that the average annual mortality from all causes is 4.15.701 from all causes, from Typhus (containing fever) 19.4.8.2. So that in England & Wales, continued from instances merely 24 of the mortality from all causes or 4.25 per cent.

In the chief principal towns of Scotland, the mortality from all causes in 1862, is 24.985, from Typhus 9.85. Or about 2.5 or 3.94 per cent of the total mortality.

From these facts we at once recognize the fiendish nature of the disease, and the frequency of their
occurrence in our country.

History

Typhus fever is probably a very ancient disease, although the first epidemics of it, of which we have reliable accounts, are those which occurred in Italy at the commencement of the sixteenth century, which were recorded by Fabricius of Verona.

The evidence of Typhoid was indicated as early as 1762 by Roscoe & Wafter of Sittenzen in the course of an epidemic from which period it is lost. It was again attentively observed in 1813 by M. Petit de Veres at Paris. But its continual character did not first determine by M. Devernu's of Veres, who considered it a distinct disease, termed it Typhoidmicate.

For many years the two diseases Typhus & Typhoid were confused together, or considered merely as modifications of the same disease, till in the year 1837, Dr. Sebald at Prussia of Philadelphia showed that the lesions of Peyer's patches of the mesenteric glands are always present in Typhoid, never in Typhus, also the marked difference between the symptoms of the two diseases. Dr. Jenner bore in his admirable researches, published in 1849-57,
confined and simplified the distinction between the symptoms of the two diseases, he also showed that the specific cause producing each disease was different, and made other important observations.
Nature.

With regard to the nature of fever, various opinions have been held from the earliest times. To enter into all these would be impossible. All known seem to be agreed that the first step, is the reception of some poison of unknown nature into the system, either by swallowing with the saliva, inhaling with air, or by contact direct. The poison being gained admission into the system, by one or all of these channels, acts, I think primarily on the brain and hence on the system generally.

The principal feature of fever is increase of the animal temperature, as proved therapeutically, to a degree greater than the physiological standard. This therapeutical elevation is present even during repose.

In the fully developed condition of the febrile state, we may fairly assume that all the parts and tissues of the system partake more or less of the increase of temperature, so that the chief source of this increase of temperature is due to increased activity of the causes producing the physiological healthy temperature — this is Koch's theory. He explains that the actual constituent elements of the body, themselves undergo metamorphosis.
Changes of the removed, this in some instances to a very perceptible extent. Not only the animal fluids, but even the blood as muscle, heart, &c., lose itself under manifest diminution in volume and density in the course of fever, often to an extreme degree.

Increased rate of free of the circulation are commonly observable at an early period of fever. It may therefore be fairly assumed that increased temperature in fever is the result of increased tissue change, which is itself immediately excretory, if not entirely dependent on increased circulation, whether local or general.

It has been maintained by Balzoni in the last century that the first link in the chain of fever actions is a depressed state of the brain and nervous system. The nerves from their influence on the circulating apparatus constitute the natural regulators of the development of animal temperature.

Now taking into account the various phenomena which attend the onset of a fever, characterized as it is by rest, protrusion of the energy, especially in the muscles & sensory apparatus, we may conclude with Fourier that the elevation
of temperature, which is to be found amongst the earliest as well as most constant of the symptoms, is a paralytic phenomenon. Though not identical with the ordinary paralytic state, it is in all essential respects analogous to it. It can also be produced by a rise of temperature which instigates the natural regulators of the development of animal heat.

In the production of the chief febrile phenomena, a rise in the temperature is of great importance and probable causes. Besides the elevation of temperature, the alterations in the general circulations are the movements of the heart, the lesions of the digestive functions, anorexia, vomiting, &c., fall within the domain of the physiological influence of the fever. The lesions of the heart, lungs & throat thus fall into one category.

From this in the opinion of Virchow essentially consists, in an increase of temperature which is caused by an increased consumption of organic material in the system, & appears to have its origin in certain changes in the nervous system. These changes may be considered to affect primarily
the regulatory functions of the nerves of the paralytic nature. It is probable that the last nerves are most likely the sympathetic, are primarily
if not chiefly engaged in the production of the
sebile phenomena.

This runs a to know any if him
in or right — how — with 2

Norman — RG
Definition.

Typhus fever may be defined as a fever arising from a specific cause, terminating usually on the 14th or 21st day, characterized anatomically by a peculiar eruption and by a disportion, more or less marked, to congestion of internal organs.

Typhoid fever, on the other hand, is a fever arising from a specific cause, terminating usually on the 20th or 28th day, characterized anatomically by a peculiar eruption, by marked changes in the eminences or nodules of the intestine, in the mesenteric glands, in the spleen, and by a specific tendency toward ulceration.
Causes.

May be divided into three classes: namely, to be divided equally at times to suit the species.

1st. All causes leading to debility of the system.

Sick, fatigue, exhausting diseases, exposure to cold and wet, mental disturbances, anxiety, excess of all kinds, intemperance.

Males and females are attacked about equally.

To Typhus - The last classes seem predisposing to this disease. Want of precaution also are associated with great epidemics of this fever.

To Typhoid - The upper classes in this country seem specially predisposing to this disease, in using the term upper classes I mean those who do not suffer from defintit poor dr.

The following is a fact as regards occupation. I extract from 5 March as recent link in time.

Of 1457 cases of Typhoid fever,

Near 1/3 461 were Female servants.

Of 45 physicians, 30 had Typhoid.

Of 247 nurses, 110 had Typhoid.

Of 64 regents, 1 had Typhoid.
Exciting Causes.

Of the causes of these diseases, little is really known, although much has been written.

With regard to Typhus. It has been stated that it may arise from catarrh or be greatly be arrested.

As to yellow fever, that this disease is very similar to typhus fever, I think there are doubts as to the present day. Such facts as, the numbers of persons, employed in fever hospitals, and the duration of the fever with which we can trace the disease from one of present suffering to the present effects, prove the fact of its contagiousness began.

But with regard to the question of the origin of the disease in some, there are much greater differences of opinion. It has been said that the disease may be prevented by the concentration of the inhabitants from living kept in their beds or in clothing in a state of filth. In other words, from coming in to filth. If this were true, this is it that epidemics of Typhus are not always raging every as was in Rome, no proof that in years of great epidemics of this disease, as for instance the years 1861-62 in London, there has been occurring a filth there in other years or at the present time in many parts of the same city. That occurring in a filth.
may act as indurates for the pain (whate'er it be) or as predisposing causes, as I think very likely, but that the pain alone can give origin to a specific pain such as Typhus, I do not think probable. As to the many instances related by writers of sensation de novo, as Jullien, supposed to be caused by moving aplet, I think it much more likely that the pain, in one way, in the clothes has come into the patient, or has been the premiss, as we know that few pain may remain in patients, if undisturbed, for a part, length of time, to retain its original violence. Again the same may be said of poison occurring in animals, no matter moving aplet predisposing to the reception of the pain, poison which has come into the patient. How would think one a day if the poison of terrible king poison de novo? I think the reasoning false. If pains arising de novo at the living catarrh, or able to spread themselves from one living body to another.

I think that there is few pain always present, being for matters to be in a phlegma for its reception into the system. I think that moving aplet is more especially want a patient, but as possible predisposing causes, one particularly among the intercurrent.

There together with some peculiar constitutions of the
atmosphere, at present beyond our knowledge, yet in some
manner upon the human frame, so as to render it in
a fit state for the reception of the poison of this pernicious
state. The atmosphere precedes the poison itself nine
weeks. Nearly all the great epidemics of Typhus in
this country have been preceded by severe pestilent
epidemics; the last epidemic in London (1861-62) may
be traced to great distress among the lower classes created
with the effects of the war in America.

With regard to Typhus. That this disease though infancy
of age, yet is still notorious, is generally admitted. The
attack gives much greater immunity from the chance
of a second, than Typhus.

This fever is also said to be caused by spontaneous germinates
from the Rothbauer germinates from drains, as follows.
The principal symptom of this fever is D. Marcksis,
the loss according from the same Typhymus to
the drainage. In his present work D. Marcksis finds
a faulty with the same Typhus, subject to it in
the form that from the similar J. S. drains
Typhus. Typhus, these in a tendency to acute
complaint in self that Typhus is not a disease
of Typhus fever. That the ease has this fault
is true, although at the same time it has advantages, as there are many exceptions in both sexes alike. Again we find fault with the term Pyloric, except to bring the impression that the term is the result of the intestinal lesion. This Agisten I think is decided untenable, the term retaining a good name, so indicating what is intended of many to be the age true proof of the disease, viz., the intestinal lesion. The presence of there the term Pylorine, which I think a very bad one, its meaning (small pylorus) implying a thing which, though good to Dr. Murchison, will I think he views by a very casual. The number of the stomach, I think the term Stomach perhaps Peptic for suable names, involving no thing but stating a statement of facts, the presence of the lesion which distinguishes this form all other forms. In accordance with the thing of the stomach's generation of this year, Dr. Murchison has collected with great care a number of facts tending to prove it. Of the cases stated I know that Dyspeptic form has been present of which unfortunately for Drs. Sei, many I think are of no value at all, so he joins no proof that they are cases of Intestinal form at all. In thus, the cases are clear cases of Intestinal form,
but I think the foul form, that the form was caused
by the virus, so that the foul form was greater by
the virus. Again he puts experiments of McFarland,
Majumdar who by injecting living substances into the
vessels of animals, produced symptoms similar to those of
infective form, but I think he is clear I admit that
none of these experiments succeed in producing the
specific lesions of infective form.

The problem of infectivity, I think from that
Typhoid form may be communicated by the macromas of
Typhoid patients, because the stools do not contain
the specific poison that it is.

The important objection, this thing, such as, that fumes are
exposed for a long time to the macromas from
accompanying animal matter, without entering infective
form, or孟氏's treatises by light. He says: it must
not be supposed that very much of which a worm
Typhoid, lessem, absence, can produce the poison of
infective form. So far as we know, it is necessary for
the production of the poison of infective form, that the
matter be macromas in a confined
space, as in a vessel a sense, so that it lies in a state
of stagnation. The 2 fumes to the atmosphere, a constant
dilution is a running stream, may not my vener-
the farm inspector, but may altogether prevent its formation. In this way he puts up many of his opposite arguments, such as the state of the farms, the manufacture of Varenne near Paris, &c. But even with all his exclusiveness, at last having the best of the question, Typhus from ri Bern, is no trouble. As matter of fact, suffer particular from Typhus from, i.e., the service of the whole one of the healthful classes of the community, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community. As matter of fact, suffer particular from Typhus from. i.e., the service is of the whole one of the healthful classes of the community.
I am subject to them, more than common, at certain times.

Again, the fact of its attracting the upper classes, without an equal, against the local means of the disease, I think we must suppose it to be equally exposed to enumerations of this description.

I think the whole has much to do with the cause of this disease as well as Typhus, when recurring specifically, to the agent a than epidermically and endemically to some peculiarity, epidemic, or constitutional of the atmosphere which renders the poison, or the state it is in, capable of entering into the human body, which in its turn has partly the seeds of prediagnosis, comes to the patient, the means.

As to the two diseases being alike in their cause, it is capable of producing as a whole, if of them concurrently, I think it has been disposed of by Jenner who clearly showed, in a paper in the Medical Chirurgical Transactions, in 1830, that, if a great number of cases where the disease has been the patient the known, in any instance, did a case of Typhus also occur, from the same cause. The Jennerian theory I think, that the poison of the disease does not produce the other, any more than that the poison of Leukemia produces Tuber or vice versa, though cases of both kinds have occasionally occurred in the
Some fevers at a very short interval from each other. Many cases of Typhus came from the same house, some of Typhus from another, but in the same instance did a case of little fever come from the same house. I think therefore I may fairly conclude that this instance is as exceptional as the reason I Typhus and Typhus are as distinct from each other as that of Syphilis and Varicella, and in no case can the poison of the one from join mine to the other.

What are the arrows a poison that cause these diseases? Nothing is known for certain. That the poison of a virus multiplies itself in the human body, spreads to all parts, and gives rise to fever is clear, as long as it finds human bodies in its path. The moment of its development is I think perfectly admitted. What is the nature of the virus? That it is of organic nature I think clear from its ability the poison of infective poison.

Is it possible, premises a short in a state of infancy, to think it is possible that it develops from the bowels of a sick person? that it is not a whole. If it is possible it would be directly
difference it must not be more determined near its source
than at a distance. Again if presence a little it would
in almost immediately resolve into carbonic acid, water,
carbonic acid, ammonia. The way the pyre I think
assume that the resin is an agamy substance in a
state of infinite minute division short from its form I infer
increase must kinds of agamy things whether vegetable
or animal. J. Marchin in says "as it relates
of Skipri Diones are made in the classic account
of the manner, when as are told that one being actuated
last of the field was actuated it was to be absurd
I imagine that all of them far away from Asam.
They must therefore have been produced at some more
advanced state of the world's history. If this be so, then
agamy if plants demand seeds - if J. Marchin
takes this mind, how can he deal with such things
as, the becomes subscript parasitic, intestinal forms
also vegetable parasitic; are not these plants or
animals? Yet no one of the present day knows
whether these have existed at the time of Asam,
or has no means of knowing, if they are, why
are the agamy things subject to the possession
of the different Skipri forms.
Although there is much to be said in favor of this theory of the nature of waves, yet there is much evidence against it on a substantial basis. The fact that no organized living animal or vegetable has been found in the mists or mists of these waves, although carefully looked for against the theory; although he may suppose that these minute objects are imperceptible, if any forms are present that be not perceptible, then the difficulty of explaining why so many of these regions, whereby some should exist, the waves of light must modify it. At present he must be content in stating that these regions are caused by temper and a form of light nature is at present unknown.
Symptoms.

Instead of going into a description of these diseases, as regards their symptoms, cause &c. I propose to give brief and simple reports of a few cases of each, as I have, in the past, studied and digested to some extent into the symptoms of each disease as regards the suffering from one another & from the drains.

The cases are selected from those admitted into the clinical wards of the Royal Infirmary during the past winter, which I had the fortune of noticing, while filling the office of clinical clerk under Dr. Bennett.

Cases.

Typhus Fever.

Margaret Brisbane, at 35. Widow, Worker in a Wool Mill. Admitted Nov. 26th 1862.

Was in the enjoyment of good health till Saturday Nov. 22nd when she experienced a rigor, followed by general physical symptoms accompanied with pain in lumbar region, slight cough, a suffusion of the eyes. First relieved the symptoms on 7th of December (5th day disease).

Nov. 27th - 6th day. Pulse 122, Mulberry Stain. Eyes
suffered. Some effusion from nose. Slight cough of expect¬

Bucks and warts since the visit. The patient's eating habits are normal. He is getting better in terms of his general health. There is some difficulty in breathing due to the presence of a tonsillectomy spot in the throat.

Temperature in arit. 101.2

March 28th—April 4th—Bucks which have increased. Had a sleep last night. No cough. Pulse 132. If poor strength. Patient continues to have red spots on the skin and swelling of the abdomen. Temp in arit. 101.2

April 29th—May 5th—Bucks are feverish. Pulse 128, with poor strength. Some redness. Backache still continues. Patient continues to have

May 30th—June 5th—Still delirium during the night. The red spots on the skin continue to increase. Pulse 128, with poor strength. Patient continues to have a red spots on the skin and swelling of the abdomen.

June 1st—June 10th—Fever and delirium at night. Pulse 136, with poor strength. Backache is worse. Fever is severe. Patient continues to have a red spots on the skin and swelling of the abdomen. Temp in arit. 101.4

June 11th—12th—Fever and delirium at night. Pulse 128, with poor strength. Backache is worse. The patient is very ill. May 29th—June 12th—Fever and delirium at night. Pulse 128, with poor strength. Backache is worse. The patient is very ill.
To this morning. Urine contains a slight color of rose, albumen present and chlorides very deficient. Pulse 116 beats a S.P. was noted. 4-5 drops of urine fell at the aperture to the bow. To grave - Pulse 108, strength improved since morning. Conscientious physician. The fever. Temp in axilla 104.


The urine has increased to 83. Temp in axilla 104.

5th - 14th day - Good night. Borne twice in the morning.
Pulse 104 of good strength. The urine contains a large amount of germs, the albumen is left in plenty of the chlorides.
Temp in axilla 102. Depressed.

6th - 15th day - Patient feels much better, passed a good night. Borne seven times. Was ready to have a little meat.

From this time the patient's story improved, though remaining extremely weak for some time.

Dec 8th 1862.

To not uneven if they expect to infect in a matter. Was quite well till Nov 30th a what day less experienced.

a major of Home's general all symptoms. He comes.

State when the complaint appeared that days, several days ago.
Dec 9 - 10th day of disease. There is a reddish purple eruption on the whole body, including a few spots on the face. The spots are irritated, varying in size from a pinpoint to confluent, quite elevated above the surface, they do not for the most part, mildly when a person is well. They are most numerous on the abdominal wall and lower part of thighs, also very abundant on the back. Skin hot, dry. Temp in arilla 104.4 Pk 118 of fair strength. Sparing appetite. Patient states he has had two or three loose stools daily since the commencement of his illness. Feet thick. Very dyspeptic. Memory somewhat impaired, complains of pain in his head. Slept a little during the night. Morn 4-1. Temp. 103, contains a trace of albumen a few phosphates. Attire bandage. Ordered a saline mixture, 1/2 t. for head. Beef tea and clotted
2 by 9 Wine.

10th - 11th day - Patient vomiting delirious during the night. For 3 hrs, no food which was kept in stomach. In his Pk 140 of fair strength. Headache better. Wine still alleviates Temp in arilla 100.

11th - 12th day - Patient slept a little during the night. For 6 hrs. Still headache. By 2 pm, patient is delirious, shanty and vomiting at intervals. Pk 126 of poor strength. Wine contains a few phosphates. Temp in arilla 107.

12th - 13th day - Patient vomiting during the night. To-day
is quieter. Six stools, one in bed, also purgative on urine in bed.

Pulse 120 if good strength. Headache better, but patriot is very
dead. No abdominal pain. Dr. Barton still makes

13th - 14th day - Again vomiting during the night, but did not
try to leave the bed. To-day he is quiet at times. Headache
still present. Dr. Barton continues. Six stools and urine in bed.

Pulse 100 full but soft. Urine fits 10:35, alias does.

The ears now an astrigent mixture of his hair to head
shot at and applied to the head.

14th - 15th day - No sleep, slept at intervals. Fares and wine

all paper, vomiting in bed. Taken a good deal during the
night. To-day quiet is occasional but painful to pass urine.

Pulse 100 if good strength. Barton fading.

15th - 16th day - Phillips' delirium during the first part of the
night, but slept a little after. This morning quiet, but

vomiting. Fares and wine purges all in bed. Pulse 96 if pain

strength. Still very weak. Suffering during the night. Barton

fading.

16th - 17th day - Slept more last night. To-day quiet but

vomiting. Fares and wine much diminished in quantity,

all paper in bed. Dr. Barton increases. Pulse 92 if good strength.

Toque de tutta cruda intorno.

17th - 18th day - Slept for short intervals during the night

but no eating delirium. To-day quiet. Fares and urine in
13th. Pulse 66 full & regular but 52°. Skin warm & temperature 103½. During the first part of the night was delirious, but slept after. Says he feels better to-day. Pulse 58 of good strength.


14th - 20th day - Patient relieves during the night & early this morning. Too sick of natural existence. Pulse 52 of good strength. Wrist contains spasm & diverticulum.

From this time the patient continues to improve daily, though very much stomach for the more recent of the attack.

Typhoid Fever.


He u2o delirious a couple so that no history can be obtained from him, but his husband states that a coming home on Nov 16th he says that he had felt at

just a the previous day. As because of loss of appetit

on the 12th. Three days after admission he was first delirious.

On admission he was found to be violently delirious, vomitings &
times out of bed. There were a few spots of a pale color, on

the abdomen well, about 1½ in number.

Nov 22nd. To still delirious. Has laps in fitness during the

last few days. Has noted a little profuse bloody vomit
alternately, very half hour.  26th, still peep up 2 delirium.  Pulse 80.  VRD off.  Toque very 2 jearned but not dim at the end.  She peeped, with
stools of loose consistency.  White blood, with small amount of albumen & phosphates.  She had urination to a small amount.  Three or four are few cirrhotic one-chord spots, which disappear in a posterior, or the abdominal wall.

27th.  Pulse 140 smallurate.  Searched the tolaer, then 8.00.  10.00.  12.00.  Seven a. m.  Three stools.  Was 2000
diurnal chalk mixture & C10 to be applied to the ulcer.

28th.  Still very delirious.  Toqur 2:00 to 4:00.

29th.  No stool.  She had very small, 2 delirious through the last part of the night.  4:00.  Being quiet 2 evening about
A.M.  He was content to.  Toque mental persisted in writing him.  Since joined in the.  Sept 24th.  Being the
letter part of 2 day, he has been delirious & unconscious
Two have been comb in moments in the lads.

29th.  Kept at intervals during the night.  Three have
been 2 stool.  Toqur, pupils are dilated & there are tension
on the body.  The spots in the abdominal wall are more
Intense than the last examined (26th).  Toque -

Three is reduced to power.

30th.  Toqur very 2 day.  Incontinent that goes a
round him.  One 2 and morning of force factor in 10.

30th.
Here also found pitting. Small tufts. From this time to last night sunk deeper at 1/2 past 3 P.M.

At the autopsy, 16 hours after death. The spleen was

sufficiently

enlarged. The mesenteric glands enlarged. Toward the

base of the ilium, Peri's patches of the Wailing glands

were found in various stages of hyperplasia and necrosis in

the intestinal wall much enlarged.


1862. Lives at the Police Station, Pottsboro.

So far he felt, he was in the enjoyment of good health

until during the last week, he had feelings of languan

& fatigue, but still continued in duty. (Another

Police men also living at the Station, Pottsboro, was in

the Wailing, also suffering from Typhoid fever, just previous

to this time). On Sunday night last Dec 14th while

in bed, he experienced a severe rigor following the usual

plethysmic symptoms, he was borne to the one of-artic

bed & went to bed. During the night following morning

he had fever low stuff. Continuing ill he came to the

Infirmary & was admitted on the 4th day of the illness.

Pulse 103. Full & imperfect. Little百合

Pain in head. Tongue dry & pasty. No appetite.
Slight thirst. Increased vomiting after food. Nervous at night. No abdominal tenderness. Urine Sept. 1030, contains no albumin, but is abundant & frequent in chlorine.

Two pills. Pain last 2 days. No vomiting. Was mixed in saline mixture.

Dec 10th-15th day - Slight back, but no delirium. Pulse 108 not to full as yesterday. No appetite, but has taken milk & beef tea. No nausea or vomiting. No stool since 3rd Dec. Vinea contains more albumen & less chlorine than yesterday.

16th-20th day - Slight back. Pulse 110 of fair strength. There is still slight headache. No stool to day. Urine Sept. 1026 albumen still present & chlorine deficient.

21st-25th day - Last night his pulse being 108, he was given 4 oz of wine. He was given on view which brought away some of his fever. He wet sleepy, with some difficulty to speak well. He matters a good deal to himself during the night. Pulse 116 of good strength. Epistaxis to day. Up to 1 P.M. he has 2 or 3 light yellow liquid stools. No abdominal tenderness. Some distant rigors. He was made to have his hair cut short & to have his clothes cut short at his head, at the time of the omission.

26th-30th day - No very restless or slept last 2 days, passed in getting rest. Pulse 116 of fair strength. No epistaxis. Slight pain in more frequent in right this again. Few liquid stools. More help with stools of no benefit in 2d.
This list of day. There are 3 or 4 punctures spots in the abdomen of those where diplococci appear a suprave.

22° 9th day - Sky fell delicious last night, attempted to hear the bell two or three times. Pulse 112 weak. Slight epistaxis.

Induced tape, tooth a pause yesterday at 6:00. Pain at prepare is light, chills region will continue. Tm same stools. There is intense dense sediment of mucus, contains a trace of albumen.

This list of day, spots as yesterday, toxicus tournais. Died by 1:00 pm.

23° 10th day - Patient no more delirious last night I attempted to put at 1:00 last hours. Pulse 110 of fair strength. Began epistaxis last night and this morning. Tm same stools. Marked pain in right thigh.


25° 12th day - Patient very weak last night attempt to string to put at 1:00. Pulse 104 of fair strength. 

Epistaxis less in quantity, but coming hourly times. Tm same stools. There intense a trace of albumen, 24 dominant.

From liver stools. Urine is free from albumen. Their lost but not so dry. Small spots are found along the shadow which has not been seen before.

27th - 14th day - Good night. No epithetes. Size liver stools. Size normal, contains no sediment. There a few blood spots on left side of liver, these elsewhere are faded. Pulse 90 of fair strength.

26th - 15th day - Slept well. Pulse go of good strength. Stools thin not so liver. No fluid spots. Slept soundly.

29th - 16th day - Pulse 92 of good strength. Stools few day later, but darker in colour. Urine moody into water. Patient sat up in bed last night. No new spots, all new fading.

30th - 17th day - Slept well. Pulse go of good strength.

One stool rank of liver. Urine high colored, no sediment.

Skin evenly with perspiration. No fluid spots. Most of the others have disappeared. No pain or pressure in right side from duodenal mixture to be omitted.

From this time the diarrhea gradually by a step or altogether on the 20th day. Urine contains a drop sediment of urine is the 21st day he felt better, began to wish for. On the 19th day the spots disappeared altogether. On the 29th he caught fever, which ran a very sick course.
Diagnosis

That the two diseases, Typhus and Typhoid, are not identical, I believe, from sufficiently proof of the presence of Dr. Jensen, &c. And I think no one can doubt this, at any rate, after death, when the spirit continued living Typhoid is found. Still many doubt the possibility of distinguishing between the two, owing to the symptoms being similar. I propose to analyze the symptoms in the following order, 1st. Those common to both diseases nearly equally. 2nd. Those more often present in the one than the other. 3rd. Those belonging absolutely to the one disease of not met with in the other.

1. Symptoms common to both. —

The ordinary symptoms of Typhus, viz., chills, fever, accentuated pulse, loss of appetite, increased thirst, dry and forced tongue, sore headache, thirst, pain in limbs, Tardanatory stools, 

Peculiar aspect of face, with the bluish ashen "face of typhosus."

2. Symptoms, more often present in the one than in the other. —

Delirium, confusion of Int!t, come in earlier and are more often present in Typhus — but there is a much greater tendency in Typhoid, &c. papers.
to have their bed to wander about.

Deafness, comes on much earlier, it is more absolute in Typhus than Typhoid.

Conjunctivitis, much more tendency to injection in Typhus.

Fainting is more common in typhus, very uncommon in typhoid.

Abdominal pain and headache, very much more common and persistent in typhoid, rare transient in typhus.

Diarrhoea, much more common a persistent in typhoid.

3. Symptoms, belonging absolutely to the one disease, not met with in the other.

In Typhus - Pellicle Eruption.

State called coma vigil.

In Typhoid - Pellicle Eruption.

Epistaxis.

Intestinal haemorrhage.

Greying in right side face, with tendency to pain, a prepare.

While making use of the second group of symptoms as a help to diagnosis, yet in cannot place great reliance on them, as they are often present in both diseases. For much place on reliance, is only a third group, to make accurate diagnosis between
the two Diseases.
First I present the Eruption.
In Typhus - Appearing generally between the 5th or 7th days, consisting of distinct spots of a milky color, met with in all parts of the body, very numerous on the abdomen or back, sometimes on the extremities of even on the face, the spots very often of two or three running into one another, giving it a mealy appearance. At first they disappear under pressure, the state lasts for 2 or 3 days, then they all partially disappear on pressure or eventually don't disappear at all, being changed into true petechia. After the 3rd day of the eruption, few spots remain, one or two on the original ones remaining, up to the 14th to 21st day of illness.
In Typhoid - Appearing generally between the 6th to 7th days from the fever, consists of small palpable elevations of the cuticle, ranging in size, but generally that of a large pin's head, of a pink color, disappearing on pressure, but resuming its appearance on removal of the pressure, generally scattered about the surface, chiefly on children. Dr. J. D. Jenner remarks that one may be frequently noticed on the arms, on the cellular interna at the upper border of the pectoralis major muscle on either side. Varying
in number from 10 to 200. The papules are not
in influenza, &c., each with lasting about 3 or 4 days &
just also appearing every day or two. These spots are
from pechkin.

With regard to the rash as a means of diagnosis, if
there be one or two will defend Typhoid spots present,
the diagnosis is simple, as the spots are so different
from any other that the line of almost sufficient
to indicate the disease, without any other special
symptoms. I think the presence of the
erupion seems to distinguish Typhoid from Typhus
-off the disease. But in some cases there is no rash
present or with difficulty recognizable, this is infrequent
in ordinary practice of Typhus, &c., but to the subject
of the fever prevalent in the army of the East, during
the Crimean war, while stating that Typhoid from
one undoubt the most important matter fact, says, "The skin presents a general dusty aspect,
with brilliant reddish of the surface. It was also, as
in the cases, often deep colored with minute hemorrhagic
spots, which appearance do not help seem much to
mark any characteristic eruption. Be it from this,
or whatever the cause, we have but few cases been
able to determine the presence of a well marked or
characteristic eruption, in cases subsequently fatal by the abdominal lesion. We cannot state that any such eruption has point of absent; but when present, it was alone, very difficult of recognition, a frequent, in consequence, overlooked. On the whole, we think that we are warranted in saying, the typhoid eruption has much less marked a much less characteristic in the disease as present in the brain - than we have been accustomed to find it under other circumstances: we think it not improbable that this may have been to some extent a different character of this form of disease which prevails in the army of the East.

With regard to the typhus rash, it frequently occurs in what has been appropriately termed, a merely form, I have seen the disease very often mistaken at first for Rubella, although, of course, the subsequent progress of the case would make the distinction - still there are cases where the eruption comes out earlier than usual in the history of the case without it's assertion done in there it is very liable to be mistaken at first. On the other hand, the distinction between it and the typhus are so small so marked as to render impossible of the diseases quite applicable. The difference in them, the key features arrangement in
Typhoid which is extremely rare in Typhus as the result of some definite appearance of the spots in Typhoid, are sufficiently apparent at the commencement of the disease. But even if there were any difficulty at first, there would be none after a few days' passage of the case, the typhoid symptom continues to produce flesh spots up to sometimes the 20th day, if flesh spots are not produced, the HD now was a cause of in 4 days disappear, while pain always disappear under prepare. Whereas these of Typhus were appear just after the 5th day, the symptom of the HD now as above state, pain a regular case, changing their characters ultimately become true tetanus that affected in consequence of prepare.

From here, we may conclude, that if the symptom to present, the diagnosis between Typhus & Typhoid is by no means difficult. But that the real difficulty is in those exceptional cases, when the symptom is absent.

The symptom of Typhus is absent in about 11 per cent of all the cases. More frequently absent in the young than the adult. The part of Typhoid is absent in about 12 per cent of all cases & more frequently present in the young.
From a Vigel, is defined to be that peculiar sensation, in which the patient lies with his eyes open, vividly aware, but indifferent or insensible to all that passes around him. This is a common symptom of Typhos, but is rare in that of Typhoic.

Epistaxis, this is a symptom peculiar to Typhos, it is a very common one. It may appear at 3 periods of the disease. 1st. During the few days of the premonitory state. 2nd. In the first day, being a symptom of weakness, I have noticed again. 3rd. In the perfect remission. It may be stated that in my own experience of this case, it is rare. In cases of this nature, I have never observed it. It is rare in Typhos and is therefore a most valuable symptom of which I think is not sufficiently noticed. It is stated to be an uncommon symptom of fatal cases, this is partly true, as it generally occurs in fatal cases, but I think it occurs with equal frequency in cases that ultimately recover. In those cases where the remission is late in coming out, the reappearance of epistaxis is. I think an invaluable guide to the duration of the disease, one which I think should be much more attended to, than it often is.
Intestinal Hemorrhage, occurs in a large proportion of the cases of Typhoid, ranging in amount from a couple to two or three points. It may occur once or more, or day after day, in spite of all remedies. Its color ranging from pitch black to light red, consistency may be liquid or in thick clots. It generally occurs at about the middle of the third week, betwixt the 20th and the 25th day. It may occur sooner much earlier, or, on the other hand, not at all until during the phase of exacerbation. In very rare cases it may be in bad epidemics it occurs in Typhus. The mechanism of its occurrence may differ in these two cases.

The hemorrhage in Typhoid is from aliment, that in Typhus involves no destruction of substance, but is simply the result of congestion. In the perforation of diaphragms I am afraid its cause is much more deep and this symptom is a symptom of its general occurring so late, still in those cases where it occurs early as it necessarily does soon on the 7th day, it will affect so one air in discussion.

Gurgling in Right Flank from gas and tenderness, no pressure in that region - There are limits.
entirely to cases of Typhoid. The jaundice is stated
as due to the presence of pus at lines under the
tract of the bowel. The pain the constipation the
abdomen are! explained by the bowel lesions which are found,
often put in the future by the bowel which is
stated in this form. The shape of the abdomen is
Juvenile also, the constancy being from side to side
of the fever being diminished. This shape of the
symptoms which is also present in this disease is
indicated due to the chen they disturb into flatus.

There are many steps upon many symptoms that
are marked Garth to, as diagnostic of Typhoid,
as I think many of them are to prevent that
with in Typhoid, as the disease proceeds for the
purposes of symptoms the two diseases from one another.
I allow in the first place, the peculiar stools
of Typhoid, the so-called patterns "pre-copse"
swells. I have often met with stools of this
description in cases of Typhoid, and in the more
temper often for them about in cases of Typhoid,
that I think they can lead to a correct diagnosis.
Never to omitting, we seem to be more common
in Typhoid, but I think this also extremely doubtful.
Again with regard to its duration, Lewis says that if 100 cases, one third were found to be perfectly moist throughout the disease. The superinfection of intestines of the patient is said to be dirty and muddy in Typhoid and not to be Typhoid at all, as is also found on the Indian texts in the former disease, but I think the appearance of the face, depends so much on its actual appearance during life, that the distressing facts can be largely useful as means of diagnosis.

The more important known are the facts regarding the age of the patient and the duration of the disease, but especially the former.

5 years prior to the average age of Typhoid, 22.08.
4 years, 60.0. 32 of 63 fatal cases, he gives the following: 40, Typhoid. 23, Typhoid.
Typhoid - Between 10-19 (both inclusive). 8 cases.
20-29 — 12 cases
30-36 3 cases

Thus the cases of Typhoid were limited to patients under 40 years of age.

Typhoid - Between 8-19 (both inclusive). 5 cases
20-29 — 4 -
30-39 — 9 -
Typhus (cont'd). - Between 40-49 (both inclusive) 12 cases
50-59  —  6 —
60-69  —  6 —
70  —  1 —

Many one third of the 40 cases are more than 50 years of age. Five frights of them are 40 or upwards.

Duration —
Average duration of fatal cases of Typhoid was 22 days
Typhus  —  14 days

Half the cases of Typhoid survived the 20th day.
No one case of Typhus survived the 20th day.

To conclude, it will be seen from the foregoing
remarks that, the presence of vomiting, even in two spots, the epistaxis & the abnormal symptoms,
tonic weakness in right shin pain, with diarrhoea,
bleeding of nose, are the principal definite
symptoms of Typhoid in men accounted
as typical of it for Typhus. To those if we add the
pulmonary carcinoma, we can say to him the
bed, on the other hand, the death tip absolute defecy,
the absence of tone right of the non-injection of the
piration, is there a perfect means of distinguishing
this disease from Typhus.
But in my rare cases, a great many of these symptoms may be absolutely wanting, especially in the early part of the disease, before the appearance of the eruption, or there cases we must wait for an eruption, at the same time in matters of treatment, giving the benefit of the doubt in favor of Typhoid. But if there be any Typhoid eruption, well defined, no matter how few in number the spots may be, it is difficult to justify but to the symptoms not to think there is some disease. In cases of fever, there be some evidence of epidemic measles, I think that an eruption being present is a strong proof of its correctness.

The eruptions of these diseases from each other being very fully considered, it remains to speak of the distinctions between them and other diseases. The eruptions in these eyes to a difficult difficulty of the eruption habit.

Typhoid in its early stages as mentioned before may be easily mistaken for Measles, especially if there be intangible symptoms.

From Meningitis it may be distinguished by the fact that in the from disease you generally have headache and muscular tension, in Typhoid separate, the headache
coming first is then the debility with headache.

Typhoid fever and diarrhea often closely resemble Typhus, in the absence of eruption, the history of the case leads to the suspicion.

Typhoid fever may be mistaken for acute Phthisis, the principal distinction are, the absence of the symptom of lympheitis in Typhoid, whereas in Phthisis, the history of the case.

Typhoid complies with pneumonia and without eruption may be easily mistaken for Phthisis. It may be distinguished from Tubercular Meningitis by the following. In Tubercular Meningitis, the vomiting is more frequent, boils often angiomatous, abdomen depressed of the headache is debility, pyramid present typhlet.

From frequent attacks of fever, the duration of the boils by the face they much help marked.

The of certain points for diagnosing these forms from the diseases are,

The characteristic eruption.

History of pyrexia to diagnose.

Pernicious history after case.
Mortality.

From the Reports of the Registrar General it is impossible to form an idea of the mortality of these diseases, as, in the first place, the terms of sympathy are not set out. Secondly, the number of persons attacked. The following, therefore, I am able to extract from Murchison's recent work.

During the 12 months 1848-62 (June 30th), there were admitted into the London Fever Hospital,

Typhus 478.7 cases. 1070 deaths.
Typhoid 2305 cases. 465 deaths.

or Typhus, the mortality was 22.87 per cent.
Typhoid, " 18.56, " "

Regarding different years, the mortality in Typhoid was much more variable than in Typhus. While Typhus ranges in different years, from 8.8 - 60 per cent,
Typhoid in no year was below 12.8 or higher than 28.7 per cent.

The mortality of Typhus is slightly greater among males, while in Typhoid it is higher among females. Typhus is infinitely more fatal in advanced life. The above statistics correspond pretty closely with those of other places.
Anatomical Characters.

There has been so few written comments upon by
authors, that I shall content myself here with
simple
statement.

In Typhus there are no true anatomical characters,
it is principally distinguished from Typhoid, in this
respect, by negative characters -- viz., the absence
of the lesions found in fatal cases of Typhoid,
the patches of Paget, the villous glands of the
small intestine are very few, indeed, in the
mesenteric glands, likewise.

In Typhoid the true anatomical characters which
distinguish it from all other forms, are, the changes
in the glands of Paget, at a very early stage in the
villous glands of the small intestine, mesenteric lesions,
disturbance in the Spleen, the last feature it should
be mentioned is often found in Typhus.
Treatment.

It may be said with regard to all these diseases, as well as the other specific fevers, that, in the present state of our knowledge, the disease being once established, it must run its course as in cases of no access of entry, it is shut by nature.

The principal indications for treatment are,

1° To arrest and vitiate nature.

2° To support the strength and obviate the tendency to death.

3° To treat symptoms and complications.

First, let us speak of Typhus.

If the case be well marked and there be some constitutional at the commencement, fever will be found present and ague-like and violent but not to the point of a nature. But if at the commencement the case be not well marked as there being possibility of the fever being to turn out a case of Typhoid, by all means avoid purgation, as very often from the administration of these at the commencement the foundation of exhausting diaphoretics has been laid, which has rendered it difficult to destroy the febris. A great object in the treatment of these fevers is to give prompt to the patient, d
As a topic springing affects this, let us mark always the pains of the patient.

Medical acid has been recommended by some authors, who spoke highly of their good effects, but I have not seen them used. It is usual at the commencement to give saline mixtures of these are no fault except if as my pupils to the patient a thin fluid; I think the Bicarbonate of Ammonia is a very useful thing for this purpose. It is much less disagreeable to the taste than the Acetate, it is also stated to be slightly stimulant. To the dose of a/ in water every 3 or 4 hours is very serviceable, the addition of this to Bicarbonate of Ammonia is useful to act as a diuretic and assist the kidney in diminishing the fluids and products of previous effusions.

The patient should be allowed to drink freely of tea, milk, and the brown sugar most potable beverage. The diet should be confined to Beef Tea, Milk, and Water. In an effort to arrest diabetes in these cases in the first period of the disease, generally found to the 7, 14 or 21st days, the administration of a diuretic of diaphoretic a day previously, is the follow of the most beneficial effects.
2nd. To support the strength: We must watch and attend the state of the pulse, especially at its first signs. Stimulants may be required at any period of the disease; their administration must be regulated by the state of the pulse. If the pulse be good, stimulants are not needed, but when it begins to fail, a gentle or soft compound is to be taken, with some habit, to be vanquished by the effects of the pulse. Do not think, if the pulse be soft or impossible, that stimulants are ever necessary, indicated by the symptoms.

3. Symptoms and complications.

Headache must be treated by cutting the head, not by applying ice to the head, this is often of the greatest relief to the patient. Sheep's meat, by Morphine, or as suggested 3 or 4 times, if the pupil be constant, Belladonna or Nux vomica will help. First signs of the treatment of complications. It is moreover to speak here, as the head involved causes injury to the patient, its various degrees to be noted beyond the limits of this thesis.

To sum up, the treatment of Typhus consists in keeping the patient strong, a convalescent nature in hinging their life out of his disease. We cannot tell what the disease, so must treat medically without attempting to cure patients before withdrawing his sufferings, leaving to Nature to do the rest.
TREATMENT OF TYPHOID.

As regards the first indication, we have to pursue the symptoms in the individual case. In accordance with the advice of the physician, if the patient remains constitutionally for 2-3 days free from fever, we may administer the medicine for the sake of the Indians, but if fever is suspected, we may administer the medicine for the safety of the physician.

2. With regard to vomiting, we may follow the same rules as in Typhus. Wine and Brandy are useful in this case.

3. Symptoms to be specifically treated.

Abdominal tenderness, if present, is best treated by the application of 5-6 leeches to the right side.

Dehydration is the principal symptom requiring treatment. It is best treated by means of saline, and in severe cases by the intravenous injection of saline.
Headache, sleepiness, or may be both as in
Syphilis.

Complications - If laryngitis occur, he must prevent
its passing to this by using in the affected larynx a
some mixture made of it mixed with 1 oz of linctus
of salve, 3 j of the 3d. This may be done in this
manner of treatment, but this is much preferable to
the use of the syringes.

Peristomites, from peristomites, this is the best and
total of all complications, still pressing may take place,
the use of linctus is absolute first, dosing for food
drink except in the very mildest quantities of the
regular treatment of ipecac. If the patient prefers
this, he must be careful not to give a purgative,
no matter how small, in addition than 3 to 4 times.
Still with all our efforts recovery is by ease.
Other complications, the same remarks apply, 1 time or
in the case of Syphilis.
Isolation.

In the concluding chapter of his work on fever, in summing up his observations on the propriety of isolating fever patients or distributing them in the wards of general hospitals, Sir John snow says, "It is doubtful if cases of Typhus ought ever to be admitted into a ward with other patients: even in the larger proportion than 1 in 6, there is danger of the disease spreading." And in the wards of the Royal Infirmary of this city, he says, patients are admitted into the general wards and yet, without spreading to any appreciable amount.

And in one of the clerical wards there are 4, 14, 2, as stated by Sir John Snow; but he adds: "Of the exceptions of four patients, making the proportion 1 in 475, and yet it does not spread. He mentions the example in which four patients caught the disease from those in the ward, but he does not state, that the cause of this was traced at the time by Sir Christopher to a neglect of the rules of the regulation of fever patients.

He states that during the 14 years 1840-61, there were 3,640 cases of true Typhus admitted into the London Fever Hospital, with an incidence of 3 cases per 500 persons in the ward of those who died. Again, during the first 6 months of 1862, 1,880 cases of Typhus were under treatment in the fever hospital of the disease has communicated to 27...
persons of whom 3 died. Thirteen of 272 cases admitted into 6 general hospitals, it was commutted to 71 cases of whom 21 died.

The does not herein state what was the arrangement, as to the admission of few patients into the hands of the general hospitals, whether the few cases were all placed together or in the Infirmary line, they one received a place in this between windows 2. If cases of few patients were admitted into general hospitals without any further precautions than in the case of ordinary patients the disease was in all probability spread. I think there can be no doubt, that patients hit few may be mixed in proper precautions with ordinary cases in a general hospital, not of without injury but to the length of the common. But of course the proper precautions must be taken, such as,

1. If possible, having a bath, before removal to the ward.
2. Remove a patient of clothing in separate from appropriate for the purpose.
3. Other patients shall as be allowed to be talking to the incoming cases.
4. New instruments may be still kept apart from the other patients.
5. The bedding stow away be used except for from beds.
Still there is no doubt that in past epidemics, from 
infants are absolutely indispensable, as in the absence 
of them, the general result for the number of five.
potato into home coat at five yards.