

I certify that I myself  
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## Typhus Fever.

The cry today as with the Athenians of old is "Show us some new thing"; and I think it may be suitable in seeking for a subject for a thesis to select Typhus fever, which though formerly a comparatively common disease, has now become so rare as to be seldom met with in practice. In fact during the forty years before July last, no case of Typhus fever is known to have occurred in this small town of Hexham, with its population of 7000 inhabitants.

The following cases, of which I shall give some short notes, then came under my notice.

Case. I Thomas D. a cartman aged 22 yrs was seen on July 16<sup>th</sup>

He suffered from nausea, and vomiting, and complained of a pain over the region of his stomach, his temperature

was then normal, and as he had been indulging in alcohol, his condition was attributed to that cause. On the next morning July 17<sup>th</sup> I found that about a pint of blood had been vomited, and that his temperature had risen to 103°, and his pulse was 110, he was suffering a good deal from headache.

On the 18<sup>th</sup> July his temperature had risen to 104.5°, and he had become very excited and bad to manage, and there was great difficulty in keeping him in bed. He took a special dislike to me, and became so excited on my approaching him, that it took five persons to prevent him from getting out of bed to lay hold on the poker, and apply it to me. On 19<sup>th</sup> July he had passed a very restless night, delirious most of the time. Temperature is now 105.6°. He was extremely difficult to manage, so I had recourse to a

hypodermic of morphia. This I had to inject into his leg, that being the only part of his body I could approach with safety, as he still desired to make use of the pocket, and used hands, head and feet to keep us at bay. On the 20<sup>th</sup> the temperature was 105° fully ~~but~~ the patient was very much quieter, but had become dull, and listless. On the 21<sup>st</sup> the temperature was 104.6°, he was prostrate, and in a condition of stupor, and passed urine, and feces involuntarily. The pupils were contracted. On the 22<sup>nd</sup> the temperature 104.2 patient not even turning himself over in bed. Pulse very quick and weak. On the 23<sup>rd</sup> the temperature fell to 102°, and the patient could answer questions. On the 24<sup>th</sup> temperature fell to normal, pulse very much better, and mental condition improving. From this time onward the patient

rapidly improved.

Case II. Maggie D. aged 20. A worker at the laundry. On July 23<sup>rd</sup> took to her bed. She had started with a rigor. Her temperature was 103° and pulse 110. She had a slight cough, and was somewhat short of breath. Fine crepitations were to be heard over the top of the left lung, and on percussion some comparative dulness. The tongue was furred. On the 24<sup>th</sup> the temperature is the same, pulse 116, chest condition no change, she complains of feeling very tired. On the 25<sup>th</sup> the cough was very much improved, and the percussion dulness was no longer to be made out, The temperature was however still 103° and pulse 120, and the patient had become dull, and listless. She could be roused when spoken to, but did not seem to grasp the meaning of what was said.

The pupils were noticed to be contracted. She remained in this dull and indifferent state till the 2<sup>nd</sup> August when her temperature suddenly fell to normal. In two days more her mind was quite clear, and convalescence was very rapid. The skin was examined daily for any eruption, but none was found.

Case III. George D. - aged 19 years a labourer, was attacked on the 30<sup>th</sup> August. He started with a feeling of cold but no rigor. His temperature was 102.7 pulse 114 had thirst, loss of appetite, and general malaise, nausea but no vomiting. He is restless, and his sleep is disturbed. On 31<sup>st</sup> August. The patient is more prostrate, on September 1<sup>st</sup>. The patient's aspect is very dull and heavy. The temperature is 103.1 Pulse 118. He had been somewhat delirious during the night.

On September 2<sup>nd</sup> there were a few spots to be made out on the wrists, but on no other parts of the body.

They were slightly raised and disappeared on pressure, and of a dark rose colour.

The temperature was 103°. He is quite lost when spoken to, and delirium of a low muttering type is present, getting more noisy at nights.

On Sept 4<sup>th</sup> The spots are dying away, the temperature unchanged, pulse 130 and weak. Sept 5<sup>th</sup> No eruption to be noticed, condition unchanged. Sept 6<sup>th</sup> Temperature has fallen to normal, and pulse much stronger, and slower. His mind still misty. Sept 7<sup>th</sup> He can today answer questions, convalescence was very rapid.

Case IV. George Dodd Sen<sup>r</sup> aged 51. Hawker. Took ill on September 1<sup>st</sup> with a feeling of chilliness, severe headache, pains in back

and limbs, thirst and anorexia

Temperature  $103.2$  pulse  $120$

On September 2<sup>nd</sup> temperature

the same. The face has a very dusky hue. He is irritable, and does not answer properly when spoken to. When asked

to put out the tongue, He opens his mouth, showing his lips gums and tongue coated, but does not protrude the tongue. The pulse is  $130$

On September 3<sup>rd</sup> the temperature was  $103.4^{\circ}$  pulse  $136$  face very

dusky. The pupils are contracted.

He is quite stupid. Spots

resembling measles but smaller are to be seen on the arms

and legs. On Sept 4<sup>th</sup> Temperature

$104.10$  Pulse  $152$  He is now in

a condition of low delirium constantly muttering, and

is unable to move himself at

all. At 10 p. m. the same

night the temperature has gone

up to  $105.4^{\circ}$ . Pulse very quick

and feeble. Skin cold and

livid, profuse sweat, hands

and feet difficult to keep

warm. The eruption has become purpuric in colour, and is shown over the arms, legs, & abdomen. The pupils are very small. He died during the night, and the dark eruption remained over the body as in life.

At the time I attended upon these patients I was unable to trace, the origin of the disease, but it afterwards transpired that an aunt had stayed for two nights in the house at the end of June. She had there taken ill and had been removed to the general sick room of the Workhouse, and following upon her admittance, three or four of the inmates of the sick ward had sickened of what was thought to be enteric fever. This aunt before coming to Hexham had been engaged in nursing a relative who had died of an acute fever,

which in all probability was typhus.

Up to the present investigators seem to have failed to demonstrate a typhus producing parasite. Murchison endeavoured to prove that typhus, instead of being always due to infection from a previous case, could arise spontaneously in persons placed under defective sanitary conditions, and subjected to overcrowding. At the present day the view that any infectious disease arises *de novo* can not be accepted, but it must be allowed that dirt and filth and bad ventilation are very active agents in helping on the growth of the typhus poison.

These cases arose in the lowest part of the town, in a house where there was a considerable amount of dirt, and where bugs and other insects are so numerous, that it is thought wasted energy to kill any of them. One should not be at all surprised should

experiments prove, that the contagion is carried by these insects, and that sunlight ventilation and cleanliness prevent the disease by getting rid of these pests.

The incubation period in these cases seems to have been unusually long. The aunt stayed in the house at the end of June, and case I did not commence till the 16<sup>th</sup> July. Then the third case did not begin till three weeks after the first and second were going about. The general incubation period is stated to be 3 to 7 days, but may be shorter, and Murchison has recorded cases in which it was 21 days.

The rash was only noticed in cases III and IV. In case I it was not looked for, as I had no suspicion of Typhus, and considered it a case of meningitis. Case II was at first thought to be pneumonia

but afterwards any rash was looked for, but I was unable to say that any spots that did occur were not due to insect bites. In the third case the rash was found only over the wrists, as for any sub-cutaneous mottling the ingrained dirt of the skin prevented it from being noticed. In Case IV the rash appeared first on the forearms and legs as small spots, these became very numerous, and also covered the abdomen, and before death they assumed a purple tint. The temperature rose rapidly in these cases, and was practically the same, morning and evening. The urines were febrile, deposited urates and phosphates, and in cases I and IV contained albumen.

Head symptoms. Case I was very excitable for a few days and it took, five and six to keep him abed, but afterwards he resembled the other cases in becoming dull and stupid and with a

vacant expression of face.

In the fourth case there was more muttering. The crisis in the three cases which recovered, took place much sooner than is usually recorded. The usual time stated being 13 to 17 days but in these cases it was 8 or 9 days.

The Diagnosis in these cases became simple when the third case occurred but until then it was very difficult to form an opinion. Case I was thought to be meningitis, and case II was at first mistaken for pneumonia, until the condition of delirium and the subsidence of lung symptoms made one think of a common origin for both cases. I could however in case II detect no <sup>typus</sup> rash, and did not feel justified in notifying them as such. Cases III and IV cleared up the diagnosis.

Spread of the disease. From these cases the disease spread to seven other houses. In one dark

house of two rooms into which sunlight never entered lived a father and mother and eight children. The mother was first found to be suffering from typhus, and at the same time two of the children had very high temperatures. The whole family was removed to the infectious diseases hospital, and every one of them took typhus fever. Six cases occurred in different houses. Three of these were removed to hospital, and three of them were isolated in their own homes. In none of these cases was there a second case in the house.

The removal of a case to hospital as soon as the disease manifests itself as typhus should be a very sure means of stopping the spread of the disease, as the contagion seems to be most marked after the first week. Murchison states that if a patient with this disease is placed in a large well-ventilated apartment the attendants incur little risk,

and the other residents in the same house none whatever. In two of the cases treated at their homes the mother was both nursing the typhus case, and going back and forward to the other children, but there was no spread of the disease.

As to prognosis there were two deaths, <sup>among 20 cases</sup> the one case IV that has been reported, and who was of very intemperate habits, and the other a delicate man, over fifty years of age, who collected the rents from this property and contracted the disease while doing so.

These were both over fifty.

The prognosis in children seems very good. The older the person the more the danger. Murchison found in the London Fever Hospital (the average death rate for typhus cases being 15 to 19 per cent) the rate in persons above thirty was 35.39%, in those above forty 43.48%, and above fifty 53.87% and above

sixty years 67%. Those of intemperate habits, and whose systems have been weakened by want of proper food have a bad chance of recovery.

The treatment in the four cases recorded consisted in

Case I - was given chloral

Hydrate and Bromide of Potash  
Ice was applied to the head.

The arms and legs were sponged with cold water. A hypodermic

of morphia was used to quiet the excitement. afterwards he

had Tinct: Cinchon: Co and Spir:

Ammon: Aromat:

Case II was first given some carbonate of ammonia and Senega. afterwards Quinine and Hydrochloric Acid.

Case III Had Quinine and Hydrochloric Acid throughout.

Case IV Had Quinine and Hydrochloric acid at first afterwards digitalis ether strychnine and alcoholic Stimulants.

The feeding consisted chiefly of milk raw eggs and beef tea. When convalescence occurred the appetites became

enormous, and it was  
extraordinary how soon  
their strength was regained.

The rule in typhus seems to  
be a quick convalescence,  
and complete return to health.