

was then performed by means of a double layer of interrupted stitches. This proved to be a matter of very great difficulty and could only be effected by the use of the high Trendelenburg position and after partial division of the left rectus abdominis muscle to allow of easier access. Owing to the likelihood of leakage from the suture line, a rubber drain was left in for the first three days. Enemata were commenced on the eighth day after operation, and small actions were obtained every other day. On the twenty-fourth day after the excision the caecostomy was closed by operation, and normal actions of the bowels followed. The growth proved to be a columnar-celled carcinoma; some small glands in the mesentery were not involved.

No Evidence of Recurrence.

I saw the patient every few months up to the summer of 1914. Owing to the war I was unable to see him again until May, 1919, when he was in very good health and had no intestinal symptoms of any sort. Abdominal examination was negative, and there was no local evidence of recurrence.

In this case the absence of prodromal symptoms before the obstruction became absolute is remarkable, and the man must be regarded as extremely fortunate to have survived the enormous distension found at the first operation and the effects of the rupture of the caecum.

A NOTE ON

SEGMENTAL HYPERALGESIA IN MALARIA.

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In the course of 1918 I made a series of observations on segmental hyperalgesia in trench fever, which were embodied in a paper published in THE LANCET.¹ The substance of them was briefly as follows:—

If a series of light pin-pricks are made on the skin in a direction which crosses a large number of areas of segmental nerve distribution, it will be found in patients suffering from trench fever that three groups of areas are unusually sensitive, particularly as to their borders. The groups are an upper one containing the eighth cervical and first dorsal areas, a middle one containing the seventh dorsal area, and a lower one containing all the lumbar areas. The areas are not found in every case, and in positive cases only parts of these groups may be hyperalgesic, but something of the kind is present in the great majority.

I noted in this paper that in 18 cases of *malaria* which had been examined similar areas were found. I have since had the opportunity of examining patients suffering from malaria in very large numbers, both at a camp in France, where patients were treated who had been infected in other theatres of war, and also in Egypt and Palestine, where malaria was incomparably the highest cause of sickness during my service there. I was able to find the same areas of hyperalgesia in the great majority of cases, and they differ in no important particular from those found in trench fever, and such minor variations as were present are stated below.

Analysis of Results.

The following is an analysis of the results found in 120 cases examined consecutively for this sign.

Cases examined, 120. Positive 83 (70 per cent.). Negative 37 (30 per cent.). This is a lower incidence than in trench fever, where I found only five negative in 73 cases, but malaria is capable of far more certain recognition, and I came to rely on the presence of these areas for the differential diagnosis of trench fever.

The areas found hyperalgesic in the malarial cases were these:

Upper group	... { C. 8 ... 9 } 44 = 50% of positive cases.
Middle group	... D. 1 ... 35 } 83 = 100% " "
Lower group	... { L. 1, 2, 3, 4, 5 } 42 } 49 = 59% " "
	... { L. (incomplete) } 7 }

Full distribution C. 8, D. 1; D. 7; L. 1, 2, 3, 4, 5, 8 cases = 10% of positive cases.

It was remarked that these areas could never be demonstrated while a rigor was in progress.

In 68 positive cases of trench fever the results were these:

Upper group	... 39 = 57%	Lower group	... 67 = 99%
Middle group	... 68 = 100%	Full distribution	24 = 35%

The only differences are the more frequent escape of the

lumbar in malaria, and the consequent reduction in the number of cases of complete distribution.

The middle group shows a few minor differences; in trench fever it is rare to find anything but D. 7 or D. 7 and 8 involved, but in the malarial cases D. 6 was found once, D. 8 17 times, and D. 9 once, also in nine cases the hyperalgesia was unilateral, which was hardly ever found in trench fever.

Conclusion.

The similarity between the signs as found in the two disorders remains very striking and adds one more to the many likenesses between them: one being mosquito-borne and the other louse-borne; one admittedly protozoal, and the latter probably so from its cyclic character and its capacity for lying latent; both associated with enlargement of the spleen.

It is necessary, however, for either disease to be excluded before the presence of such segmental hyperalgesia can be allowed weight in the diagnosis of the other.

PARATYPHOID INFECTIONS OF THE PLEURA.

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PNEUMONIA, and especially bronchitis, is not an uncommon complication of paratyphoid fever¹; but sero-fibrinous or purulent pleurisy due to infection with the paratyphoid bacilli is apparently so rare that the following cases deserve recording.

CASE 1.—F. L., a man aged 38, was admitted to the David Lewis Northern Hospital, Liverpool, on Feb. 12th, 1918, after being crushed between a wagon and a wall. The left side was strapped. During the 11 days he was in the surgical ward he had some diarrhoea, and typhoid was suspected. He was then transferred to a medical ward with signs of consolidation at the left base. As the breath sounds were very feeble, although there was no displacement of the heart, a needle was inserted into the pleura and 5 c.cm. slightly turbid fluid were obtained.

On bacteriological examination a motile Gram-negative, indol-negative organism was present in pure culture, which gave the characteristic reactions of paratyphoid B in lactose, glucose, maltose, mannite, and saccharose. It agglutinated with the Lister Institute paratyphoid B serum 1—6500, but not with the paratyphoid A or typhoid serum.

The patient's serum agglutinated his own organism 1—1250, and the results with the Oxford standard emulsions were: typhoid — 1—25, paratyphoid A — 1—25, paratyphoid B + 1—1250. The faeces were not examined.

Throughout his stay in the medical ward the temperature never rose above 100·4° F. and the respirations above 30, but the pulse averaged about 100. Treated on general lines he made an uninterrupted recovery without any further operative treatment.

CASE 2.—M. W., a woman aged 24, was admitted to the David Lewis Northern Hospital, Liverpool, on July 22nd, 1918. She stated that three months previously she suffered from "influenza," and recently had pain in the left side. There were obvious signs of pleural effusion, her temperature was 104° F., pulse 124, respirations 44. On July 23rd 2½ pints of clear fluid were removed by aspiration. On August 1st the chest was again explored, and as pus was found the empyema was opened; the patient made an uninterrupted recovery. The fluid was examined after aspiration and twice subsequently when the chest had been opened. It always contained a streptococcus longus and a bacillus which gave the characteristic cultural tests of paratyphoid B, it agglutinated with the Oxford paratyphoid serum up to 1—40, titre 1—100.

The patient's serum agglutinated her own organism 1—96, and the results with the Oxford standard emulsions were: typhoid — 1—25, paratyphoid A — 1—25, paratyphoid B + 1—50. The faeces were examined with negative results.

Cases Reported by Other Observers.

Lenhartz (1910) published the first case of pleurisy in paratyphoid fever; here the effusion was serous and contained paratyphoid B bacilli in pure culture.

¹ An Address on Sensory Changes in the Diagnosis of Trench Fever, THE LANCET, Oct. 5th, 1918.

¹ Dawson and Whittington, 1916; Willcox, 1916; Hurst, 1917.