NOTES ON A FATAL CASE OF ACTINOMYCOSIS OF THE LIVER.

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Quartermaster-Sergeant P. was admitted to the Royal Herbert Hospital, Woolwich, on December 10th, 1909. He complained of frequent cough. He had been in indifferent health since the previous August, losing weight, and sometimes sweating at night. No tubercle bacilli were found in the sputum.

On examination he had an indefinite tumour along the line of the ascending colon. There was oedema, with some bulging of the lower intercostal spaces. There was not much tenderness, and no rigidity of the right abdominal wall. Rectal examination was negative.

The diagnosis was considered to lie between an abscess in the liver and one in the right side of the abdomen, not involving the general peritoneum, but possibly connected with the appendix, and certainly shut off by adhesions from the general cavity. The blood count showed a marked polynuclear leucocytosis. The man had never served abroad, and had no history of malaria or dysentery.

On December 14th, 1909, under chloroform anaesthesia, the liver was aspirated in several directions without result. An incision in the flank was then made over the most oedematous point, down to the peritoneum; no pus was found. The appendix region was then explored and pus found, but no sign of the appendix was seen. There were very extensive adhesions. Through drainage, by a large drainage tube, was established from the appendix incision to the one in the loin. The man was much collapsed, and saline transfusion was performed during the later stages of the abdominal operation.

On December 21st, 1909, it was noticed that not much pus was draining from the wound. The oedema over the lower ribs had increased. A Pravaz syringe, plunged into the liver above the eighth rib, in the posterior axillary line, withdrew thick yellow pus. On examination this material was found to consist, largely, of masses of felted branching mycelium.

Next day the patient was anaesthetised; 1½ inches of the eighth rib were rapidly removed subperiosteally. After packing off the plural cavity (as there were no adhesions) drainage was established from the abscess by a large tube. Very little pus escaped; what did come, however, showed the "sulphur granule" appearance in a marked degree. The man, however, did not improve, but gradually sank, and died at 7.20 a.m. on December 26th, 1909.
Post-mortem Notes by Captain Cowan. Thirty-six Hours after Death.—

Chest: The right pleura contained a large amount of clear greenish fluid. There was one adhesion at the apex of the right lung (patch of old pleurisy over tuberculous deposit). Firm adhesions existed between base of lung and diaphragm. No pus was found. The left pleural sac was obliterated by recent adhesions. Right lung: There was congestion of lower lobe, and a scar of old tuberculous deposit at the apex; the left lung was congested. The pericardium contained a fair amount of fluid; no pericarditis was present. The heart weighed 12½ ounces; the left ventricle was hypertrophied, and the right dilated. There was no valvular disease. The abdomen contained a large amount of intraperitoneal fluid; coils of intestine were matted together by adhesions, especially in the right hypochondriac and in both iliac regions. There was pus in front of the cæcum and ascending colon, but it was everywhere shut off by adhesions. The great omentum was almost free from peritonitis. The spleen weighed 8 ounces and appeared healthy. The right kidney weighed 6½ ounces, and the left 8 ounces. The liver weighed 84 ounces; the right lobe was firmly adherent to parietal peritoneum. Occupying about half the substance of the right lobe was a large abscess, apparently the result of the coalescence of a large number of small necrobic areas. The abscess cavity was completely filled with necrosed liver substance and thick viscid pus. The sulphur granule colonies of actinomyces were plainly seen when the pus was spread on a slide. The stomach was dilated, and the mucous membrane atrophied. The mucous membrane of the duodenum was much congested; there were no ulcers; the remainder of
the small intestine was apparently healthy. There was a good deal of peritonitis in the neighbourhood of the cæcum. The vermiform appendix was bound down by adhesions behind the abscess cavity, which had been drained, but it was quite normal. The lumen was shut off from the cæcum and contained clear mucus. The mucous membrane of the cæcum and large intestine was congested; there was no ulceration. The pancreas was firmly adherent to the duodenum; there was no abscess or other lesion.

Note on the Microscopical Appearance of the Mycelium.—The pus was thick and viscid and difficult to spread in a thin smear. Stained by Gram’s method, but not counter-stained, it showed:

1. Large densely stained masses of irregular outline. The thinner parts showed the mass to consist of a feltwork of mycelium threads, the majority showing degeneration into chain spores.

2. Smaller masses, some of which had the typical radial arrangement. Many of the threads were spirillar. Branching was well shown.

3. Large numbers of short threads resembling bacilli. No typical club-shaped forms were seen. The streptothrix was not acid-fast, and the only satisfactory method of staining was with gentian-violet.

Aerobic and anaerobic cultures were made on glycerine-agar. Shake cultures on glucose agar were also made. None of these were successful.

Remarks.—This case is reported as the condition is a rare one. In the Service one sees so much of the “tropical” variety of liver abscess that one is rather apt to overlook the fact that of course there are numerous causes of abscess of the liver, which may occur in people who have never left England; but of these causes, actinomycosis is certainly one of the rarest.

A NOTE ON THE STERILISATION OF “ALL-GLASS” HYPODERMIC SYRINGES.

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The method of sterilising hypodermic syringes chiefly employed in the Army is that which was originally recommended by Sir A. E. Wright—by drawing into the syringe oil heated to temperature of 160° C., or thereabouts. This method has the disadvantage of being dirty, but otherwise, when used with the Roux pattern syringe, has proved satisfactory, and experiments carried out by one of us showed that the method was reliable for that pattern of syringe. But a series of contaminations with blood cultures, made after withdrawing blood with an “all-glass” syringe, “sterilised” by hot oil, drew our attention to the possibility that, for this pattern syringe, this method of sterilisation was not reliable. It was determined, therefore, to put the matter to the test of experiment with the following results.