Clinical and Other Notes.

SUBCAPSULAR RUPTURE OF THE SPLEEN WITH DELAYED INTRAPERITONEAL HÆMORRHAGE. "BILHARZIASIS."

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History.—A quarrel took place between two male attendants in a hospital on a Monday at about 3 p.m., and, though several blows were struck, neither of the combatants appeared to be any the worse immediately after the fight.

The men worked as usual during Tuesday without incident, but one of them, having complained of pain and diarrhoea during the night, was admitted to hospital on the following morning.

On examination by the house officer, there was no external evidence of injury, the pulse and temperature were normal, but pain and tenderness were noticed in the left epigastric and hypochondriac regions. There was no rigidity of the abdomen, which moved with respiration. A diagnosis was made of gastritis, and treatment suitable for this condition was adopted.

The patient's condition remained unchanged for the two succeeding days, but on the third day (Saturday) it became suddenly worse. On the following morning his condition was as follows: temperature normal, pulse 108 and moderately strong, abdomen distended, slight tenderness over the epigastrium with absolute constipation and no passage of flatus.

In view of the changed condition a diagnosis of intestinal obstruction was made, and an immediate operation was decided upon.

On opening the abdomen, about 400 cubic centimetres of blood were removed from the peritoneal cavity. As the source of this hæmorrhage was observed to be a rupture in the spleen, this organ was removed. The patient died the same day.

A post-mortem examination was performed the next morning. No external signs of violence were found. The abdominal cavity contained about 350 cubic centimetres of mixed blood and serum. The spleen was found to have been completely removed except that fragments of its tissues remained attached to the peritoneum. There were no signs of bruising about the tissues adjacent to the spleen, but a bruised area, two inches in
diameter, was found behind the caecum and the lower part of the ascending colon.

The liver was in a state of advanced cirrhosis, characteristic of bilharziasis.

The stomach and intestines appeared normal. The kidneys were the site of interstitial nephritis and there was evidence of bilharziasis of long standing in the bladder.

There was nothing of importance to note in the other organs or tissues.

The spleen was found to have been broken into two pieces during the operation. It was enlarged (weighing 650 grammes) but not friable. Owing to the fact that firm peritoneal adhesions had to be broken down to permit of removal of the organ, the capsule was much lacerated.

On section an extensive subcapsular clotted hæmorrhage, about one centimetre in thickness, was observed beneath the capsule on the external surface, while, towards the lower pole, there were three large circular hæmorrhagic areas extending through the splenic substance and which appeared to the naked eye as definite solid stems (fig. 1).

On microscopic examination these hæmorrhagic areas proved to be extravasations of blood which had followed, more or less, the course of the splenic sinuses.

The whole spleen was in a congested condition and showed a great increase of the trabeculae and fibrous tissue. Apart, however, from generalized fine fibrosis, the pulp was apparently normal. In spite of the fine fibrosis displayed, the free vessels at the hilum showed no evidence of thickening. In numerous areas there were extravasations of blood which in places had clotted though this had not occurred in their more central portions. These areas were fairly sharply defined from the splenic substance

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Fig. 1.
but there was no sign of attempted repair and, on examination under the higher powers of the microscope, it was found that the sharply defined contour was only apparent, red cells having spread into the surrounding tissues.

Round the areas of haemorrhage much pigment was observed in the phagocytic cells. This pigment had arisen from the extravasated blood, there being no evidence of malaria although search was made for the parasite.

In certain areas groups of bilharzial ova of the terminal-spined variety were found, some of which showed a partial calcification whilst all were surrounded by an area of reactionary fibrosis (fig. 2).

Throughout the spleen there were numerous eosinophil cells, but these were particularly numerous round the collections of ova. No giant cells could be found in these situations. In spite of careful examination, no definite fibrous nodules could be found which could be attributed to the irritation caused by bilharzial ova which had subsequently become absorbed. In the liver there was the "pipe-stem" periportal cirrhosis, which is so frequent in old-standing bilharzial infection, characterized by dense fibrosis of the portal areas surrounding islands of liver cells and the formation of numerous accessory bile ducts. In the cirrhused areas bilharzial ova, many of which were calcified, were found.

Throughout the organ pigment had been deposited, more especially in the peripheral areas of the lobules. This condition was again not due to malaria.
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The bladder was severely infected with bilharzia ova and a photomicrograph of its wall displays the degree to which the infection may reach in such a case (fig. 3).

DISCUSSION.

This case presents certain features of both pathological and medico-legal interest.

In the first place, rupture of the spleen, though frequent in malaria, is relatively rare in bilharziasis. Demonstration of bilharzial ova in the pulp of the spleen is not unattended with difficulty, and therefore a definite diagnosis of splenic bilharziasis can rarely be made, though Egyptian splenomegaly is usually due to this disease.

![Fig. 3.](image)

The discovery of ova of the terminal-spined variety is a further feature of interest, for it is usually understood that this variety does not infect the spleen.

There appears to be no doubt that death in this case was due to the rupture, by violence, of a spleen already the seat of bilharzial disease, while, from the bruising of the tissues about the cecum, it may be deduced that more than one blow was received in the abdomen.

The violence applied to the spleen caused a rupture of the parenchyma but not of the capsule. A hemorrhage occurred in the substance of the organ, gradually increasing in size, till the blood reached the capsule, under which it spread until the resulting pressure became sufficient to cause a further rupture into the peritoneal cavity.
It is further of interest to note that for about thirty-six hours after the injury had been sustained the victim was able to carry out his ordinary work, while no serious symptoms arose until a further eighty-four hours had elapsed.

The probability is, therefore, that the blow caused a rupture of a small vessel only in the spleen, with consequently but little hæmorrhage during the earlier period while the man was at work. The hæmorrhage gradually increased, and at the end of thirty-six hours sufficient pressure was exerted by it to cause pain and distress. On the other hand, a further three and a half days elapsed before sufficient pressure was exerted to cause a rupture of the capsule.

In this case the violence applied appears to have been by no means considerable, and under other circumstances the history of this injury might not have been elicited, and in consequence the case recorded as one of spontaneous rupture. The authors feel that, in a great many of the recorded cases of so-called spontaneous rupture of the spleen, the initial cause has been the application of external violence, and that spontaneous rupture of a spleen, whether healthy or enlarged, does not occur.

A point of clinical importance in this case is the fact that acute pain or other localizing features were entirely absent, this no doubt being due to the fact that the primary rupture took place within the substance of the organ.

A CASE OF ? GASTRIC SYPHILIS.

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The patient, aged 39, a warrant officer, was admitted to the Military Hospital, Gibraltar, complaining of chronic constipation and of anorexia, associated with a sense of fullness in the epigastrium after meals, of six months duration. He also complained of occasional attacks of nausea, rarely associated with vomiting. There was no history of hæmatemesis, and no history of alcoholism or venereal disease was admitted. He had not been losing weight.

His appearance was that of a chronic dyspeptic, and on admission to hospital his tongue was heavily furred, his breath offensive and there was some degree of ptyalism. Patient had an imperfectly fitting denture but his oral hygiene was fair. There was slight tenderness over the whole epigastrium on deep palpation but epigastric pain had apparently never been a feature of his illness. At first nothing abnormal could be discovered in chest or abdomen and his condition was considered to be one of chronic