Medical Memoranda

External Biliary Fistula, with Portal Hypertension, Due to Multiple Tuberculous Abscesses of Liver

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Tuberculosis of the liver seldom presents as a surgical problem, though tuberculous lesions of the liver often complicate pulmonary or miliary tuberculosis (Curry and Alcott, 1955). Rarely is the liver the only organ involved (Brandt and Stephenson, 1962).

CASE REPORT

A male Pakistani aged 37 was admitted to hospital on 12 May 1963. For six weeks prior to admission he had experienced an aching pain in the epigastrium associated with pyrexia, occasional rigors, and loss of weight. There was no history of vomiting, jaundice, cough, or contact with persons suffering from open tuberculosis. Defaecation and micturition were normal.

Examination revealed a pale man, running a hectic temperature reaching 104° F. (40° C.) at times, and a pulse rate of 130. The liver was enlarged, firm, and non-tender; the spleen was just palpable. Lymph nodes in the neck, axillae, and inguinal regions were not palpably enlarged. Cardiovascular and respiratory systems appeared to be normal.

Investigations.—Haemoglobin 44%; W.B.C. 3,700/c.mm.; E.S.R. (Westergren) 80 mm./hour; blood chemistry and sternal puncture normal; urine and stools normal. Though chest x-ray examination revealed old scarring at hilar regions but no active disease, tubercle bacilli were isolated in the sputum on one occasion.

On 26 May an abscess developed in the epigastrium; it was drained two days later. It appeared to originate in the right lobe of the liver. Culture of the pus showed *Haemophilus parainfluenzae*, but *Mycobacterium tuberculosis* was not grown.

Pyrexia continued unabated and on 5 June an external biliary fistula became established after the epigastric incision. Repeated severe melaena occurred in spite of blood transfusion the haemoglobin level remained between 40% and 50%.

A report on a barium swallow and meal on 12 June reads as follows: "Air bubbles are present on the oesophageal views but there are also irregular ridges suggesting lower oesophageal varices. There is ulceration half-way down the lesser-curvature aspect of the stomach towards the posterior wall. . . . There is mucosal distortion towards the apex of the duodenal cap, consistent with shallow ulceration. . . . Hepatomegaly and splenomegaly are noted."

A laparotomy was carried out on 2 July to ascertain the cause of the melaena. The liver was found to be enlarged and the site of multiple abscesses. The gall-bladder was normal. Grossly distended veins in the hilum of the liver and on the surface of the stomach made it impossible to identify the state of the common bile-duct. No ulceration in either stomach or duodenum could be demonstrated. The jejunum, ileum, and colon appeared to be normal. The spleen felt to be at least three times its normal size. It was evident that severe portal obstruction had developed, in all probability due to multiple liver abscesses, and was the most likely cause of the severe gastro-intestinal haemorrhage.

Pus from one of the liver abscesses was sent for culture; a liver biopsy was taken. *M. tuberculosis* was cultured from the pus: the liver-biopsy report was: "Granulation tissue with a few giant cells and many endothelial cells, with few small areas of caseation and a well-marked polymorphonuclear infiltration; findings consistent with liver tuberculosis."

Treatment with antituberculous drugs was instituted—streptomycin 1 g., isoniazid 300 mg., and P.A.S. 12 g. daily. It should be noted that isoniazid and P.A.S. are the drugs of choice in the treat-

ment of hepatic tuberculosis (Terry and Gunnar 1957). In the absence of peptic ulceration, prednisolone 5 mg. t.d.s. was also prescribed, since steroids might help to reduce the amount of fibrosis round the bile-ducts.

The patient's general condition started to improve slowly, but the biliary fistula continued to discharge about 500 ml. of bile daily.

On 20 July, after a further severe melaena, the haemoglobin fell to 20%, necessitating further blood transfusions. His general condition started to improve again, though the discharge from the biliary fistula continued unabated. His stools were clay-coloured.

A further laparotomy was carried out on 2 September in order to make sure that no organic obstruction of the lower end of the common bile-duct was present. At operation it was again impracticable to expose the common bile-duct on account of the grossly dilated collateral veins entering the hilum of the liver along the free border of the lesser omentum. It was noticed, however, that this collateral circulation was less prominent, indicating that the portal obstruction had been partially relieved. There was no evidence of any remaining liver abscesses. The abdomen was closed and treatment continued with antituberculous drugs, steroids, and Bilron (capsules containing bile acids and iron).

Sinography on 20 September was reported as follows: "The injected medium passed immediately into radicles in anterior part of the liver, subsequently entering hepatic ducts and further hepatic radicles, and eventually faintly outlining the common bile-duct, but none of the medium could be made to enter the duodenum. It seems that the fistula connects with the liver radicles anterior to the hilum so that the main hepatic ducts fill secondarily. The common bile-duct is not dilated, but its upper end is irregular where it may have become involved in the inflammatory process, causing some narrowing for about 1½ in. [3.8 cm.] where it lies close to duodenal cap."

Further improvement took place: the pyrexia subsided and gradually the amount of bile draining through the fistula started to decrease. In December the fistula closed completely. The patient was discharged from hospital one month later, though treatment with antituberculous drugs was continued during the next six months. When seen in November 1964 he was enjoying a normal life and had had no further trouble. A barium swallow carried out in April 1964 reads as follows: "Barium passed down the oesophagus without delay. There has been a considerable improvement since the last examination and no varices are now obvious either in the oesophagus or in the cardiac end of the stomach. The stomach itself now shows no evidence of ulceration. Follow-through films showed a normal appearance in the small bowel."

COMMENT

This case is worthy of note for two reasons: (1) the spontaneous development of an external biliary fistula after drainage of a liver abscess; and (2) the development of extremely severe portal hypertension secondarily to the lesions in the liver. The extensive venous collateral circulation which developed resulted in several very severe episodes of gastro-intestinal haemorrhage. Both of these conditions responded to intensive treatment with antituberculous drugs, and so far as can be judged the patient has now returned to a normal life.

We are indebted to our medical colleagues at St. Luke's Hospital who have helped us in investigating this case, and whose advice has been sought concerning his treatment.

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