Choledocho-duodenal Fistula Due to Tuberculosis

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Abstract
An unusual case of caseating nodal tuberculosis causing a choledocho-duodenal fistula is reported. Anti-tubercular treatment led to closure of the fistula.

Key words: Choledocho-duodenal fistula, tuberculosis.

Introduction
Choledocho-duodenal fistulae account for only 3.5%–20% of all spontaneous internal biliary fistulae, penetrating duodenal ulcers being the cause in a majority of patients. No report is available in the English literature of tuberculosis being the cause of a choledocho-duodenal fistula.

Case Report
SD, a 30 year old male, was admitted with three months' history of upper abdominal pain radiating to the back. There were no associated bowel or urinary symptoms. Physical examination revealed a thin pale adult with an ill defined, firm, irregular, fixed, palpable, non-tender, epigastric lump without audible bruit. There was no jaundice or peripheral lymphadenopathy.

Investigations showed mild anaemia with normal leucocyte count. Chest and abdominal X-rays were unremarkable. Ultrasonographic examination of the upper abdomen revealed a sonolucent mass lying posterior to the aorta and in front of the vertebral body.

Two days after admission the patient had two bouts of massive haematemesis and went into shock, necessitating multiple blood transfusions for resuscitation. Keeping in mind a possibility of aorto-duodenal fistula, urgent left transfemoral arteriography was performed, which failed to reveal any aneurysmal dilatation of the aorta or any extravasation of the contrast. Upper gastrointestinal endoscopy showed the stomach to be filled with blood and a clot could be seen lying at the base of an ulcer in the first part of the duodenum. Since the patient was stable and the bleeding had stopped completely, a barium study was performed which showed some deformity of the duodenal bulb with reflux of barium into the biliary tree from this area (Fig). A diagnosis of choledocho-duodenal fistula of undetermined cause was made.

Laparotomy revealed a large mass of matted lymph nodes extending from the porta hepatis to the third part of the duodenum. The pyloro-duodenal area was densely adherent to the mass as well as to the under surface of the liver. After separating this area from the adhesions, a 6 cm linear gastro-duodenotomy was made to look for any actively bleeding ulcer in the proximal duodenum. An ulcer was found in the posterior wall of the duodenum, but no bleeding site could be seen. The incision was closed vertically. The gall bladder was normal. A nodal biopsy revealed the presence of frank caseating tuberculosis.

The patient was given anti-tubercular treatment. The abdominal mass disappeared completely after six months, and a barium study performed eight months later failed to demonstrate the fistula. The patient remains completely asymptomatic over a two year follow up.

Discussion
Stones in the bile ducts, penetrating duodenal ulcers, echinococcal disease and rarely tumors of the stomach and pancreas3,4 are known to cause choledocho-duodenal fistulae. Fistulae following penetrating duodenal ulcers are probably the most silent of all internal biliary fistulae,5 and a clinical diagnosis is difficult. In some patients gas may be seen in the biliary tree on erect X-ray of the abdomen, the finding being merely suggestive of an abnormal entero-biliary communication. Barium meal study with the filling of the bile ducts from the duodenum is diagnostic. Such filling of the bile duct may also be seen in the presence of a patulous ampulla of Vater, but the barium in this condition typically passes from the medial side of the midportion of the second part of the duodenum, about 10 cm from the pylorus.

The case under discussion probably had active ulcerative tuberculosis of the pyloro-duodenal area. Tubercular ulcers in this region have been reported.6 Erosion of these ulcers can produce both a fistula and bleeding. Enlargement of lymph nodes in the vicinity of the porta...
hepatis and common bile duct, as was seen in our patient, has been reported in about 35% of patients with hepatobiliary tuberculosis. Erosion of these diseased glands could also result into formation of a fistula.

References