Choledochoduodenostomy

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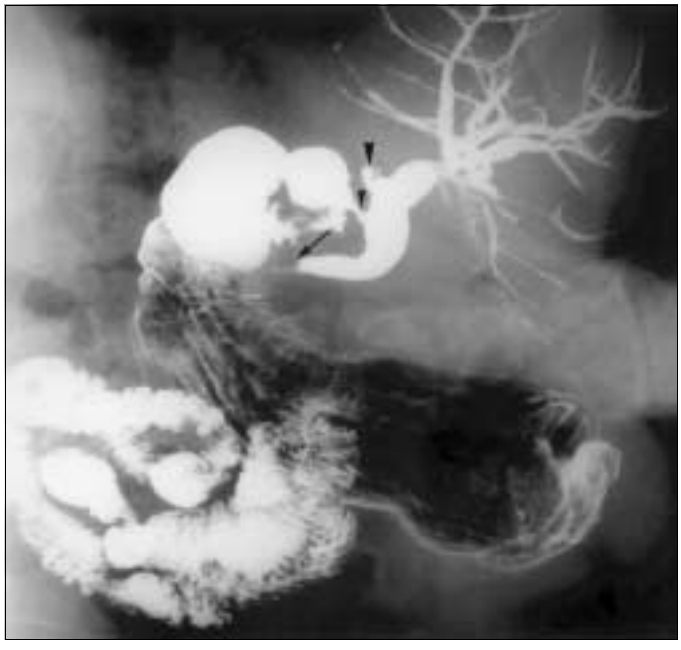
A 60 year old woman who had recently immigrated from the former Soviet Union presented with postprandial epigastric pain and dyspepsia. Physical examination revealed an afebrile patient not in any apparent distress. The patient was not jaundiced. A scar was noted in the right upper quadrant, which the patient said was the result of a cholecystectomy performed 10 years earlier. The abdomen was soft without tenderness or peritoneal signs.

Gastroscopy revealed bile gastritis, and what appeared to be a fistula or deep diverticulum in the apex of the duodenal bulb. A barium upper gastrointestinal study [Figure] reveals opacification of the intrahepatic and extrahepatic biliary ducts via an abnormal communication (small arrowhead) between the apex of the duodenal bulb and the inferior border of the proximal common bile duct, slightly distal to the cystic duct remnant (large arrowhead). A stone is obstructing the distal CBD (arrow). The biliary ducts are not dilated.

The radiographic findings are consistent with the postoperative appearance of cholecystectomy with choledochoduodenostomy. This form of internal biliary drainage involves a side-to-side anastamosis between the duodenum and common bile duct and is usually applied as a means of emergent decompression of the biliary system [1]. Choledochoduodenostomy is rarely performed today since the advent of minimally invasive endoscopic and radiologic techniques for managing biliary stone disease.

CBD = common bile duct



Two complications specific to choledochoduodenostomy are bile reflux and the sump syndrome. It is thought that the greater incidence of bile reflux results from neutralization of the mechanical barrier normally provided by the sharp angle between the first and second parts of the duodenum, thereby facilitating duodeno-gastric reflux [2]. Treatment with sucralfate, 1 g four times a day, resulted in near complete resolution of symptoms in this patient. Sucralfate binds bile acids in addition to its other anti-dyspeptic effects.

Following choledochoduodenostomy the distal CBD becomes an unused, virtually excluded segment for bile secretion. Digested material may also collect in the distal CBD or sump. Patients may present with abdominal pain and fever years after the surgery. The treatment of choice is endoscopic papillotomy, allowing for adequate drainage of the CBD distal to the choledochoduodenostomy [3].

The radiographic and clinical features of this case are easily differentiated from those of spontaneous internal biliary fistulas, which usually arise from the gallbladder. Only 19% are choledochoduodenal [4].

References

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