

Clinical Image

The Asymptomatic Spontaneous Biliary-Colonic Fistula

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CLINICAL IMAGE

An asymptomatic 72 year-old male with no surgical history was referred with deranged liver function tests (LFTs) and per-rectal bleeding. Biochemistry revealed persistently elevated alkaline phosphatase (ALP) at 612 U/L and gamma glutamyl-transferase (GGT) at 1282 U/L, but normal autoimmune and tumour markers. He presented well with no abdominal pain and an unremarkable physical examination.

An outpatient CT scan showed a soft tissue mass adherent to the inferior right lobe of the liver (Figure 1). His colonoscopy revealed oedematous mucosa at the hepatic flexure (biopsies negative for dysplasia). His abdominal ultrasound suggested a collapsed gallbladder in the gallbladder fossa, which was not visualised on CT-cholangiogram either however there was structuring noted around the biliary confluence and porta-hepatis.

On magnetic resonance cholangiopancreatography (MRCP), the common hepatic duct (CHD) was not visualised but a loop of bowel was seen in close approximation to the porta-hepatis (Figure 2). This was queried to represent an anastomosis



Figure 1 Initial CT scan showing an anatomical anomaly at the porta hepatis (black arrow) reported as a "soft tissue mass".

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Figure 2 The MRCP with structuring at the porta hepatis, a non-visualized common hepatic duct (white arrow), but normal intrahepatic biliary radicles.

between the bowel and CHD. The cholangiogram during the ensuing endoscopic retrograde cholangiopancreatography (ERCP) showed the right colon unexpectedly filling with dye (Figure 3). The findings were suggestive of a biliary-colonic fistula involving the hepatic flexure. Biliary brushings were negative for malignancy.

The consensus after an essential multidisciplinary radiology meeting was that the findings most likely represented a biliary-colonic fistula, due to subclinical chronic cholecystitis with obliteration of the CHD at the porta-hepatis and formation of a fistula due to longstanding chronic inflammation. This bypassing biliary drainage would explain the lack of any previous biliary sepsis and absence of a dilated intra-hepatic biliary system.

Biliary-colonic fistulas, different to cholecysto-colic fistulas, are rare but there have been a few case reports in the literature over the decades. Most cases are either a complication post-cholecystectomy, or iatrogenic bile duct injury [1]. Others have been described in patients with chronic luminal inflammation i.e. Crohn's disease or malignancy [2,3].

The diagnosis is often confirmed at time of cholecystectomy

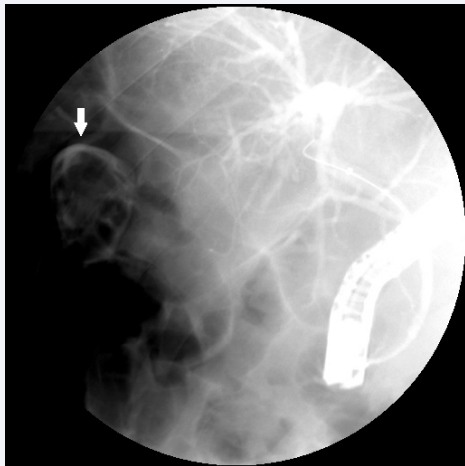


Figure 3 ERCP showing contrast leakage into the bowel lumen (white arrow) during the cholangiogram.

or through an intra-operative cholangiogram, otherwise radiologically with a barium meal or enema, CT scan, MRCP or at time of ERCP revealing contrast in the bowel as well as biliary tree [4,5]. Management of a biliary-colonic fistula is quite extensive requiring a repair and closure of fistula and biliary reconstruction, with an experienced hepatobiliary surgeon. The extent of surgical intervention necessary is dependent on the location of fistula, its communications, and associated complications which

includes biliary sepsis (i.e. cholangitis or liver abscess) [5,6]. Lack of intervention in patients with complicated biliary-colonic fistulae risks significant and recurrent biliary sepsis, which alongside appropriate antibiotics would ultimately require surgical repair to prevent future episodes [6]. Although a suitable surgical candidate, the multidisciplinary consensus here was for conservative management given absence of symptoms or sepsis, and intervention if complications arose.

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