CASE REPORT

A rare case of gallbladder fistulation with a 60-year-old appendicectomy scar

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SUMMARY

We present an extremely unusual case of an external biliary fistula in an 87-year-old woman who presented with a 1-day history of spontaneous green discharge from a 60-year-old appendicectomy scar. Examination revealed a sinus in the right iliac fossa overlying her appendicectomy scar, with a raised white cell count and C reactive protein. A CT scan revealed a complex fistula connecting the gallbladder to the subcutaneous tissue in the right flank, which further connected inferiorly with a fistula to the previous appendicectomy scar and a small iliopsoas collection. Endoscopic retrograde cholangiopancreatography revealed several stones in the common bile duct, which were removed using a balloon catheter. The patient was further managed with a long course of antibiotics and discharged with a long-term drainage bag. A literature search revealed no previously reported cases of an external biliary fistula communicating with an appendicectomy scar.

BACKGROUND

Biliary fistulas are an extremely rare complication of chronic choledocolithiasis, with biliary-cutaneous fistulas being the rarest subtype. Biliary-cutaneous fistulas are most commonly associated with recent hepatobiliary surgery. There are no similar cases in the literature of a biliary fistula communication with a scar of this age and in this anatomical location.

CASE PRESENTATION

An 87-year-old woman presented with a 1-day history of spontaneous green discharge from her 60-year-old appendicectomy scar, associated with fever, bowels not opening for 3 days and approximately 2 stone weight loss over the past year.

Her medical history included angina, hypertension, raised body mass index, osteoarthritis, glaucoma and gastritis.

Examination revealed a soft abdomen with a fistula sinus of green discharge from a 60-year-old appendicectomy scar in the right iliac fossa.

INVESTIGATIONS

1. Blood tests showed raised inflammatory markers with a C reactive protein of 262 mg/L and white cell count of $15.3 \times 10^9/L$.
2. CT scan of the abdomen and pelvis showed a fistula that connected the gallbladder to a fluid collection in the subcutaneous tissue in the right flank and which further connected inferiorly with a fistula to the previous appendicectomy scar. In addition, there was a small collection in

the right iliopsoas muscle with no evidence of extension into the pelvis (figures 1–4).

3. MRI of the pelvis showed persistent collection in the right iliopsoas muscle, contiguous with extensive inflammatory changes and a further small collection in the right iliacus and adductor muscle myositis and focal bone marrow oedema in the right femoral neck and acetabulum.

DIFFERENTIAL DIAGNOSIS

- Gallbladder fistulation with a 60-year-old appendicectomy scar.
- Enterocutaneous fistula $\pm$ intra-abdominal abscess.

TREATMENT

The patient was managed with intravenous fluids and antibiotics. A stoma bag was placed over the fistula sinus to allow output monitoring. The case was discussed at the upper gastrointestinal multidisciplinary team meeting and a decision was made to proceed to endoscopic retrograde cholangiopancreatography. Several radio-opaque stones were seen in the common bile duct (largest 8 mm) and completely removed using a balloon catheter.

OUTCOME AND FOLLOW-UP

Definitive management of the fistula by cholecystectomy was not indicated in this patient due to her frailty and multiple comorbidities. The patient

Figure 1 CT scan of the abdomen and pelvis showing a fistula connecting the gallbladder to a fluid collection in the subcutaneous tissue in the right flank and further connecting inferiorly with a fistula to the previous appendicectomy scar.

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Figure 2 CT scan of the abdomen and pelvis showing a fistula connecting the gallbladder to a fluid collection in the subcutaneous tissue in the right flank and further connecting inferiorly with a fistula to the previous appendectomy scar.

Figure 4 CT scan of the abdomen and pelvis showing a fistula connecting the gallbladder to a fluid collection in the subcutaneous tissue in the right flank and further connecting inferiorly with a fistula to the previous appendectomy scar.

completed an extended course of intravenous and oral antibiotics for ongoing intra-abdominal sepsis associated with the complex fistula. She was discharged with a long-term drainage bag in situ to allow the fistula to continue to drain and will be followed-up as an outpatient to assess fistula output. With the resolution of the common bile duct obstruction, it is expected that the fistula output will reduce over time.

DISCUSSION

Biliary fistulas occur more commonly internally than externally. External biliary fistulas open most commonly in the

right hypochondrium.¹ However, other sites have also been reported, including the left hypochondrium, umbilicus, right iliac fossa and even the gluteal region.^{2 3} Spontaneous external biliary fistulas are extremely rare with <100 cases reported in the 20th century.¹ From searching the literature, we have not found another reported case of an external biliary fistula communicating with an appendectomy scar. Reported external fistulas involving appendectomy scars include appendiceal faecal fistulas and, much more rarely, external pancreatic fistulas.⁴

Internal biliary fistulas and spontaneous external biliary fistulas both usually arise as a result of the inflammatory process of an acute cholecystitis, on the background of cholelithiasis. Patients with external biliary fistulas are usually elderly, have a history of cholelithiasis and present with a discharging sinus. Older patients are more vulnerable to acute cholecystitis and their symptoms are more likely to be non-specific and complicated by comorbidities and delayed presentation.⁵

External biliary fistulas can be diagnosed using endoscopic retrograde cholangiopancreatography or sonogram, where contrast is administered externally into the opening.¹ Acute management may require resuscitation, antibiotics and analgesia.

Figure 3 CT scan of the abdomen and pelvis showing a fistula connecting the gallbladder to a fluid collection in the subcutaneous tissue in the right flank and further connecting inferiorly with a fistula to the previous appendectomy scar.

Learning points

- ▶ In cases presenting with green discharge from wound scars, it is important to consider and exclude gallbladder fistulation despite its rarity.
- ▶ The treatment of gallbladder fistulation in elderly people with multiple comorbidities is usually conservative with fluids and intravenous antibiotics.
- ▶ Biliary fistulas are a rare but recognised complication of chronic choledocolithiasis. While these fistulas are commonly biliary-enteric, biliary-cutaneous fistulas can also occur.

Some external biliary fistulas may heal spontaneously; yet, cholecystectomy with fistula tract excision is the preferred definitive treatment.¹ However, since external biliary fistulas are usually seen in older patients with comorbidities, a conservative approach is often more appropriate.

Competing interests None declared.

Patient consent Obtained.

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