

CASE REPORT

Cholecystocutaneous fistula: an unusual complication of a para-umbilical hernia repair

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SUMMARY

This case describes a 94-year-old woman who presented 2 years postsutured para-umbilical hernia repair with a painful black lump protruding through her scar with blood stained discharge. This was initially thought to be either ischaemic bowel secondary to strangulated incisional hernia or a large organised haematoma. An urgent CT scan was performed following which the patient passed two large calculi and bile-stained fluid spontaneously through the wound, making the diagnosis somewhat clearer. The scan revealed an incisional hernia containing the gallbladder and two large calculi at the skin surface and an incidental large caecal cancer with surrounding lymphadenopathy. Frail health and the incidental finding of a colon cancer rendered invasive surgical management inappropriate. Therefore, she was managed conservatively with antibiotics. A catheter was inserted into the fistula tract to allow free drainage and alleviate pressure-related symptoms. The patient was discharged following a multidisciplinary team discussion.

BACKGROUND

Cholecystocutaneous fistulae are a rare complication of cholelithiasis which have been described as early as in the 17th century. An abnormal communication between gallbladder and skin occurs usually secondary to an inflammatory process, however, occasionally a malignant process is underlying. Prompt antibiotic and surgical management of cholelithiasis has seen the occurrence drop below 20 new cases in the past 50 years.¹ They generally present in the right upper quadrant; however, they have also previously been described in the epigastric, left upper quadrant, umbilical and gluteal regions.² No previous case reports have described cholecystocutaneous fistulae as a complication of hernia surgery. There are a few case reports on spontaneous cholecystocutaneous fistula secondary to gallbladder perforation or cholecystitis. The usual management of such cases is cholecystectomy and excision of the fistula³ but there is no general consensus on how these patients should be managed.

CASE PRESENTATION

A 94-year-old woman with a known history of gallstones, diagnosed in 2010 following recurrent episodes of biliary colic, was admitted to the emergency surgical assessment unit. She was 2 years postelective para-umbilical hernia repair and had suffered with chronic problems of wound discharge and non-healing wound. Her comorbidities included arthritis and she had poor exercise

tolerance. She lived alone with care support and denied any significant familial medical conditions.

On admission, she presented with a 2-day history of para-umbilical pain, bloody discharge and a hard, black mass protruding through the abdominal wound. She was haemodynamically stable and non-feverish. Abdominal examination revealed a 3 cm×4 cm brownish-black bilobar lump in the epigastrium which was extremely tender and non-reducible. The cough impulse was difficult to assess due to tenderness. The rest of her abdominal and systemic examination was normal.

INVESTIGATIONS

Blood tests were largely unremarkable apart from chronic microcytic anaemia as shown in [table 1](#).

An urgent CT scan was arranged and on return to the ward the patient passed two large calculi spontaneously, making the diagnosis somewhat clearer ([figures 1 and 2](#)). The scan revealed an incisional hernia containing the gallbladder and two large calculi at the skin surface ([figures 3 and 4](#)). Incidentally, the CT scan also identified a large

Table 1 Blood analysis results

| Investigation | Value |
|---------------------------|-------|
| White cell count | 8.35 |
| Haemoglobin | 95 |
| Mean corpuscular volume | 75 |
| C reactive protein | 11 |
| Bilirubin | 3 |
| γ-glutamyl transpeptidase | 19 |
| Alkaline phosphatase | 140 |
| Alanine aminotransaminase | 15 |

**Figure 1** Wound with two calculi.

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Figure 2 Calculi.

neoplastic lesion in the caecum with surrounding lymph node involvement.

She then had an magnetic resonance cholangiopancreatogram and fistulogram to assess common bile duct (CBD) and fistula tract as outpatient investigations. The CBD was reported normal and the gallbladder did not have any more stones.

DIFFERENTIAL DIAGNOSIS

The differential diagnosis was ischaemic bowel secondary to strangulated hernia or a wound haematoma.

TREATMENT

The frail nature of this patient, and the incidental finding of a colon cancer rendered invasive surgical management inappropriate. Therefore, she was managed conservatively with antibiotics. A catheter was also inserted into the tract to allow free drainage and alleviate pressure-related symptoms.

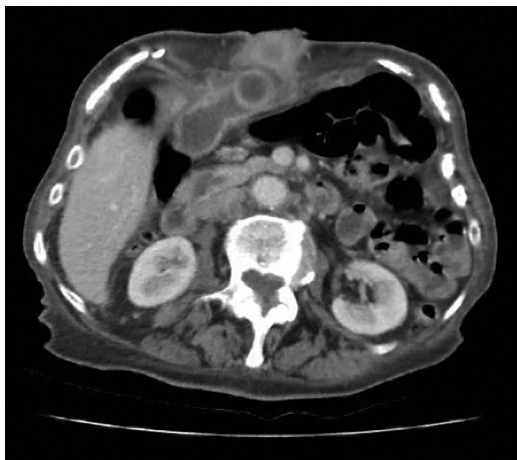


Figure 3 CT appearance of calculi in fistula (axial view).



Figure 4 CT appearance of calculi in fistula (sagittal view).

OUTCOME AND FOLLOW-UP

The patient returned home following a multidisciplinary team discussion. Regular outpatient clinic review is ongoing and she is currently asymptomatic. The long-term plan is to remove the catheter once the fistula tract heals and stops draining bile.

DISCUSSION

Cholecystocutaneous fistulae are most commonly a result of chronic cholecystitis secondary to gallstones; however, cases have also been described of spontaneous acalculus cholecystocutaneous fistulae.¹ The right upper quadrant is the commonest site of cholecystocutaneous fistulae. Cases have also been described of fistulae draining into the umbilicus, right groin, anterior chest wall, gluteal region and right breast.^{2,3}

The management is often surgery and requires relatively fit patients. Elective laparotomy, cholecystectomy and open excision of the fistula are the preferred approach.⁴ However, a laparoscopic approach with dissection of the fistula tract has also been described for those with comorbidities.⁵ Furthermore, patients who are not fit for surgical intervention may require a conservative approach with antibiotic prophylaxis, symptom control and reassurance.⁶

This case supports the consideration of cholecystocutaneous fistulae in non-healing abdominal surgical wounds with a fistula which can be diagnosed by a fistulogram/CT or MRI.

Learning points

- ▶ Cholecystocutaneous fistulae should be considered in patients with non-healing discharging surgical wounds of the abdominal wall.
- ▶ Previous hernia sites should always be examined in patients with further abdominal wall abnormalities.
- ▶ Fistulogram/CT is useful in the diagnosis and management of such cases.
- ▶ Careful consideration of each patient as an individual should dictate management plans.
- ▶ A conservative approach can be acceptable in many patients who are unfit for surgical intervention.

Contributors All the authors were involved in the acute clinical care of this patient. The report was written by SD with advice and editing from MS and SH.

Competing interests None.

Patient consent Obtained.

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