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A rare case report of an ilio-psoas abscess due to entero-retroperitoneal fistula from gallstones post cholecystectomy

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ABSTRACT

INTRODUCTION AND IMPORTANCE: This is a novel case of a 50-year-old female presenting with several months of left iliac fossa pain, on a background of a cholecystectomy 5 years prior. The aetiology of her pain was an ilio-psoas abscess secondary to an entero-retroperitoneal gallstone fistula, a condition not previously reported in the literature.

CASE PRESENTATION: CT imaging revealed an abscess superior to the left psoas muscle, with a clear fistula to the small bowel and two calcified stones at the site of the fistula.

The patient was managed operatively, with the fistula disconnected and a 5 cm section of small bowel disconnected.

CLINICAL DISCUSSION: This is a novel case whereby a left sided iliopsoas abscess occurred due to entero-retroperitoneal fistulation of gallstones several years after the patient underwent laparoscopic cholecystectomy. Gallstone fistulation from within the small bowel does not appear to have previously been documented and the exact pathogenesis is unknown.

CONCLUSION: Gallstones should remain an important, albeit rare, differential diagnosis of small bowel fistulation and abscess formation following cholecystectomy.

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1. Introduction

This is a novel case whereby a left sided iliopsoas abscess occurred due to entero-retroperitoneal fistulation of gallstones several years after the patient underwent laparoscopic cholecystectomy. Retroperitoneal abscess formation, on the other hand is a rare but documented delayed complication of laparoscopic cholecystectomy. This most commonly results from dropped gallstones at the time of surgery which then gain access to the retroperitoneum after lodging behind the right colon. Gallbladder perforation into the retroperitoneum has also been documented as a causal factor for retroperitoneal abscess [1]. However, both these mechanisms lead to retroperitoneal abscess on the right side which was not the case in our patient who presented with a left sided abscess. The ability of gallstones to fistulate is widely documented in cholecysto-enteric fistulae [2–4] but to the best of our knowledge an entero-retroperitoneal fistula due to gallstones several years after cholecystectomy has not been reported previously.

This case has been reported in accordance with SCARE criteria [5].

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2. Presentation of case

A 50-year-old female was referred with several months history of left iliac fossa pain associated with left leg pain and weakness. She also described having constitutional symptoms, particularly hot sweats, decreased appetite and general malaise. Her bowels had been variable, alternating between constipation and loose stools with some occasional fresh PR bleeding.

She had a medical history of mild COPD and thyroidectomy for a goitre following which she had been on thyroxine. Notably she had a cholecystectomy approximately 5 years prior to presentation. There was no significant family history.

Observations were stable apart from a low-grade pyrexia. On abdominal examination she was tender in the left iliac fossa without any palpable mass or organomegaly. Lower limb examination revealed normal pulses in both legs, but the patient was noted to have reduced power on flexion of her left hip.

Given her symptomology, she was believed to have diverticulitis with a possible abscess and as such was started on an oral course of co-amoxiclav. An urgent CT scan of abdomen and pelvis was arranged in addition to MRI scan of spine to investigate her symptoms further. The scans identified a collection superior to the left psoas muscle and running underneath the left iliacus muscle with a clear fistula to the small bowel. Interestingly, two calcified stones were noted within the small bowel at the site of the fis-

tula. In regard to the spine, only mild degenerative changes at C4–6 were noted on MRI without any other abnormality to explain her hip weakness or pain. She also underwent a colonoscopy which showed normal mucosa throughout.

The patient underwent a diagnostic laparoscopy performed by a consultant surgeon during which a mid-ileal small bowel fistula was noted connecting to the left ilio-psoas region at the pelvic brim. A calcified stone within the small bowel at the fistula site was also identified and removed. The rest of the small bowel from the distal jejunum to the terminal ileum was unremarkable. The fistula was disconnected and a 5 cm section of small bowel surrounding the fistula was resected followed by a primary side to side stapled anastomosis. The fistula site was washed, and a 24 Fr Robinson's drain was left in situ.

Histological examination of the specimen confirmed that the fistula tract consisted of inflamed granulation tissue with areas of fibrosis and associated lymphoid aggregates within the bowel wall. There was no evidence of dysplasia or malignancy. It was noted that the area of ulceration was very localised at the site of fistulation. Examination of the stone revealed a 33 × 14 mm crystalline stone most likely representing a gallstone.

Following surgery, the patient had a short ileus which resolved with conservative management and her hip pain had completely resolved on discharge.

At follow up 1-month post-op the patient remained well with no abdominal symptoms or fever. However, she still had some weakness in her left hip flexors (4.5/5) and underwent a further MRI which showed a small 3 cm collection in the ilio-psoas region which was radiologically drained. Notably there was no evidence of joint effusions or osteomyelitis within the left hip. Two weeks following drainage her power within her hip flexors had both subjectively and objectively improved.

One year post-operatively the patient remained well and symptom free, and reports she was happy with the care received.

3. Discussion

To the best of our knowledge an entero-retroperitoneal fistula secondary to gallstones has not previously been reported. The rarity of this case is what provides its value to the existing body of literature. This case has two key points for discussion, the presence of gallstones within the gastrointestinal tract several years after cholecystectomy and the resulting fistula from the mid-ileum to the left retroperitoneum.

Gallstones enter the GI tract most commonly via cholecysto-enteric fistulae and this has been identified as the primary route in patients presenting with gallstone ileus. The passage of gallstones directly through the ampulla of Vater has also been described [3,6]. We do not know how the gallstones entered the small bowel in this patient but given that the patient underwent an uncomplicated laparoscopic cholecystectomy five years ago it is unlikely that she had a cholecysto-enteric fistula. Another scenario is of spilled gallstones during the initial laparoscopic cholecystectomy causing formation of retroperitoneal abscess. However, in this case the stones were found inside the small intestine at the site of fistulation, thereby disputing this possibility. We assume that the gallstone formed de-novo within the biliary tree post operatively and passed spontaneously via the ampulla of Vater, expanding over time in the GI tract. This also explains the significant latent period. Whilst we can only speculate on the origins of the stone, complications resulting from gallstones within the GI tract are documented many years after cholecystectomy, and are important to include in differentials [7,8].

Gallstone fistulation from within the small bowel does not appear to have previously been documented and the exact patho-

genesis is unknown. This case demonstrates gallstone pathology as a differential for small bowel fistulation and iliopsoas abscess formation and should remain a rare but important differential in patients even many years after cholecystectomy.

4. Conclusion

It is important to remember that post cholecystectomy stones can form de-novo in the CBD. Although a rare differential, this novel case highlights small bowel fistulation and subsequent abscesses can occur secondary to gallstones, even with a previous cholecystectomy.

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Ethical approval was not required for this manuscript.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Author contribution

Study concept and design: Daniel Campioni-Norman, Jack Faulkner, Lalit Kumar, Andrew Day.

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Interpretation and organisation of figures: Daniel Campioni-Norman, Jack Faulkner, Lalit Kumar, Andrew Day.

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