

# An unusual cause of abdominal pain in a middle-aged man

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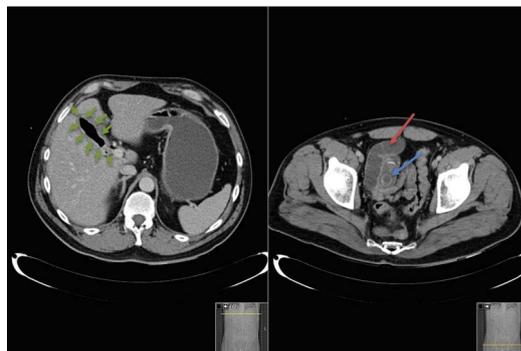
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## DESCRIPTION

A 53-year-old man with a history of hypercholesterolaemia and symptomatic cholelithiasis presented with a 1-day history of bilious vomiting, intermittent abdominal pain, anorexia and absolute constipation. Physical examination revealed a mildly distended, tense abdomen that was tender in the lower quadrants. Percussion note was tympanic and bowel sounds were absent on auscultation. An urgent CT of the abdomen and pelvis was requested (figure 1). CT showed evidence of mild fatty infiltration of the liver and emphysematous cholecystitis without cholelithiasis. There was also evidence of a moderate amount of pneumobilia, mildly dilated small bowel loops and a well-defined radiodense material noted in the ileum. The patient was resuscitated and underwent laparotomy and enterolithotomy, with the consequent retrieval of a large 4 cm gallstone (figure 2). The postoperative course was uneventful and the patient was discharged following 2 weeks of hospital stay.

The features described are characteristic of gallstone ileus, namely, Rigler's triad, which classically includes mechanical bowel obstruction, ectopic gallstone within the bowel lumen and pneumobilia. Plain abdominal radiographs usually display non-specific findings as only a few (10%) gallstones are sufficiently calcified to be seen radiographically. Abdominal ultrasound scan may confirm presence of gallstones and a fistula. However, abdominal CT scan is the gold standard in diagnosing gallstone ileus due to its superior resolution. Lanssandro and colleagues found that Rigler's triad was present in 11.11% of patients on abdominal ultrasound scan, 14.81% on plain abdominal radiograph and 77.78% on abdominal CT scan. Use of CT scan may result in a faster diagnosis and also aids decision-making in the surgical management.<sup>1 2</sup>



**Figure 1** Axial contrast-enhanced CT of the abdomen showing air in the gallbladder and common bile duct (green arrows: pneumobilia), gallstone in the small bowel (blue arrow) and dilated loops of small bowel (red arrow) in keeping with gallstone ileus.



**Figure 2** Surgical specimen of the retrieved gallstone.

## Learning points

- ▶ Characteristic radiological appearance of gallstone ileus are as described in Rigler's triad.
- ▶ Early diagnosis is key and the gold standard imaging modality is an abdominal CT scan.
- ▶ Gallstone ileus should be suspected in patients with a history of previous symptomatic cholelithiasis who present with an acute abdomen.

**Competing interests** None declared.

**Patient consent** Obtained.

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