

CLINICAL IMAGES

Rigler triad in gallstone ileus

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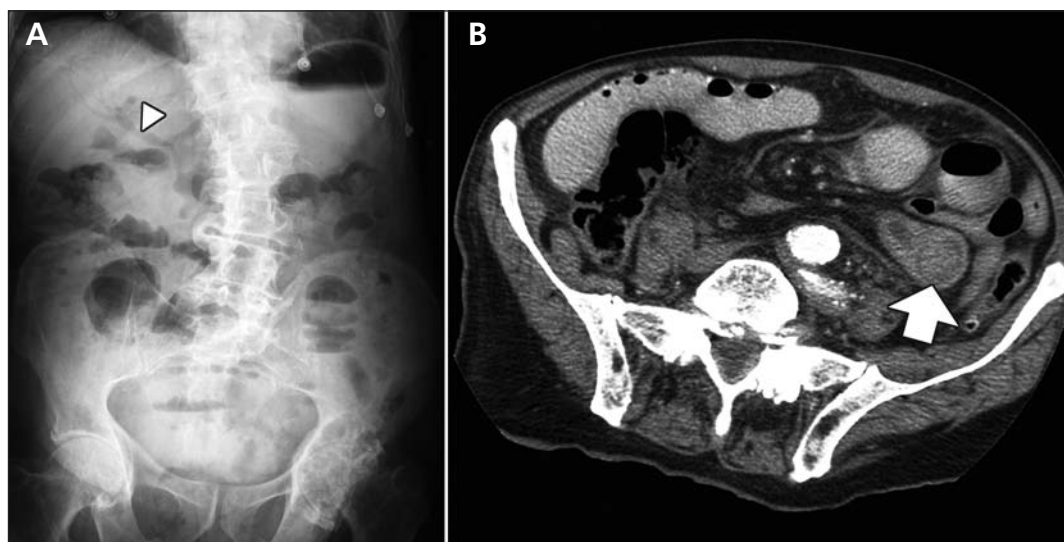


Figure 1: (A) Plain abdominal radiograph of a 90-year-old man with acute retrosternal pain showing air–fluid levels, predominantly in the small bowel, and pneumobilia (arrowhead). (B) Computed tomography scan showing an ectopic gallstone impacted in the lumen of the small bowel (arrow).

A 90-year-old man was admitted with acute-onset, pressing retrosternal pain and diffuse abdominal discomfort. Electrocardiography and cardiac troponin levels ruled out an acute coronary syndrome. Plain radiography of the abdomen (Figure 1A) showed multiple air–fluid levels and air in the biliary tree (pneumobilia). Computed tomography (CT) scanning showed an impacted ectopic gallstone, consistent with a diagnosis of gallstone ileus (Figure 1B). We removed a 4-cm gallstone from the jejunal lumen during explorative laparotomy; because of the patient’s age, we chose not to repair his cholecystoduodenal fistula. After an initially uncomplicated postoperative course, he died of cardiac arrest 1 week after surgery.

Gallstone ileus, a rare complication of cholelithiasis, is caused by intestinal impaction of a gallstone that has migrated through a cholecystoenteric fistula. Mortality is high, up to 22.7%,¹ largely because most patients are elderly with associated comorbidities. The nonspecific clinical presentation tends to delay diagnosis and treatment.¹ The classic radiologic sign of gallstone ileus is the Rigler triad

(also called Rigler sign): pneumobilia, intestinal obstruction and an ectopic gallstone.^{2,3} Plain abdominal radiography can be valuable in the initial workup of a suspected small-bowel obstruction. However, gallstone ileus is easily missed on plain radiographs, because most gallstones are radiolucent and all 3 elements of the Rigler triad show up in only 15% of cases.² Although formal guidelines are lacking, expert opinion supports the early use of abdominal CT scanning when gallstone ileus is suspected, with the Rigler triad seen in up to 80% of cases when CT is used.^{2,3} The decision to intervene surgically depends on the patient’s clinical condition. Enterolithotomy alone (without cholecystectomy and fistula repair) is the preferred option in frail, older patients.¹

References

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