Case	(236) Gallstone ileus: a correlation between sonography and ct
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CASE PRESENTATION

An 85 year-old male presented to the Emergency Department complaining with right upper quadrant pain, nausea, abdominal distension and no deposition for 24 hours. Leucocytosis and elevated cholestasis and cytolysis markers were detected. These findings raised clinical suspicion of acute cholecystitis. An emergent abdominal sonography was performed.

A thick-walled but non-distended gallbladder associated with a positive echographic Murphy sign and pericholecystic inflammatory changes were identified. Echogenic material consistent with sludge was detected inside the gallbladder. Dilated small bowel loops and an echogenic focus with posterior acoustic shadowing seemingly located within one of these loops were noted. An emergent contrast-enhanced CT scan was performed to better characterise these findings.

Jejunum, duodenum and stomach dilation with a transition point in jejunum in keeping with a 27 mm impacted stone, pneumobilia and a cholecystoduodenal fistula were evinced at CT. Gallbladder wall thickening and pericholecystic inflammatory changes were confirmed.

DISCUSSION

The aforementioned radiological findings were consistent with gallstone ileus. This is an uncommon cause for bowel obstruction (up to 3% of bowel obstruction cases). It usually occurs in the setting of subacute or chronic cholecystitis, in which an impacted gallstone progressively erodes the gallbladder wall and so creates a cholecystoenteric fistula.

The gallstone exits the gallbladder through the fistula and impacts in a small bowel loop. Gallstones should measure at least 2.5 cm in diameter to be liable to impact, most frequently in the terminal ileum or jejunum (approximately 75% and 25% of cases respectively).

Suggestive radiological findings include:

- Gallbladder wall thickening and pericholecystic inflammatory changes

- A colecystoenteric fistula. Gallbladder might be thus partially collapsed

- Pneumobilia, secondary to communication between the biliary tract and the bowel

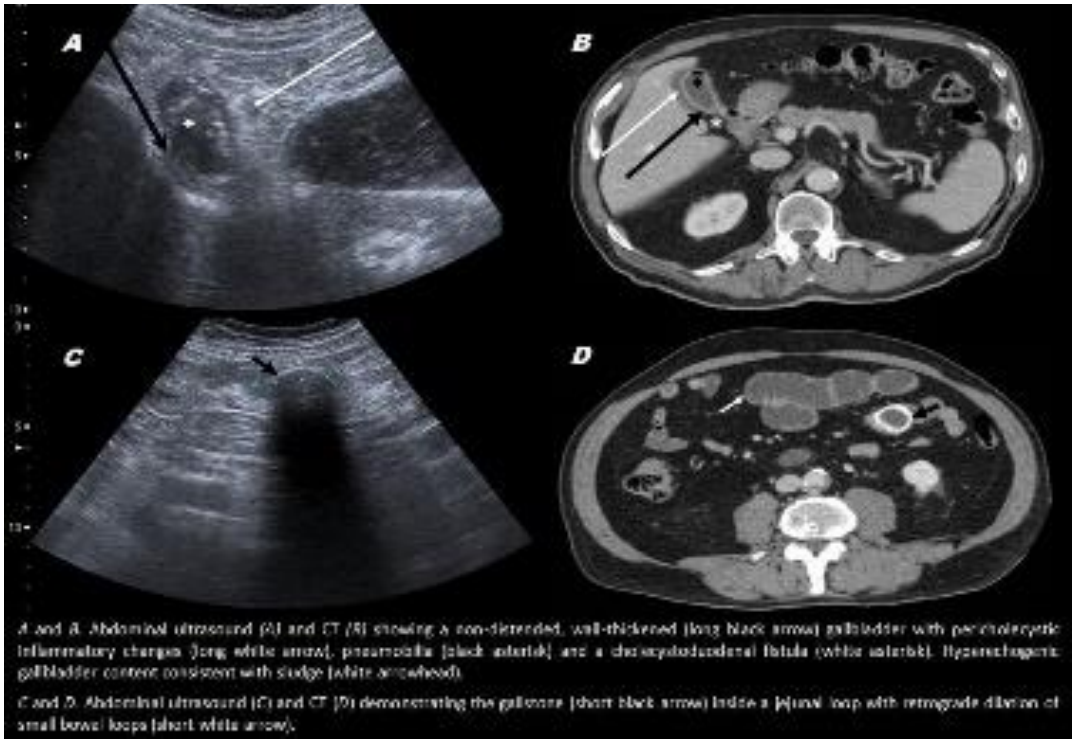
- An ectopic gallstone, usually impacted within small bowel loops in the right iliac fossa

- Retrogradely dilated small bowel loopsThese three latter findings are frequently referred to as Rigler's triad. It was first described in plain radiographs, although CT is currently the

most accurate technique for its detection. Sonography also provides useful information for the initial diagnostic approach.

CONCLUSION

Gallstone ileus is an infrequent cause for bowel obstruction. It should be suspected in patients with cholecystitis and intestinal obstruction. CT is the most accurate technique for its diagnosis. Most remarkable radiological findings are those of cholecystitis, a cholecystoenteric fistula and Rigler's triad (pneumobilia, an ectopic gallstone and dilation of small bowel loops).



A and *B*. Abdominal ultrasound (A) and CT (B) showing a non-distended, wall-thickened (long black arrow) gallbladder with pericholecystic inflammatory changes (long white arrow), pneumobilia (black asterisk) and a cholecystoduodenal fistula (white asterisk). Hyperechogenic gallbladder content consistent with sludge (white arrowhead).

C and *D*. Abdominal ultrasound (C) and CT (D) demonstrating the gallstone (short black arrow) inside a jejunal loop with retrograde dilation of small bowel loops (short white arrow).

BIBLIOGRAPHY

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