IMAGE OF THE ISSUE

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The "Tumbling Gallstone Sign" of Obstructive Gallstone Ileus

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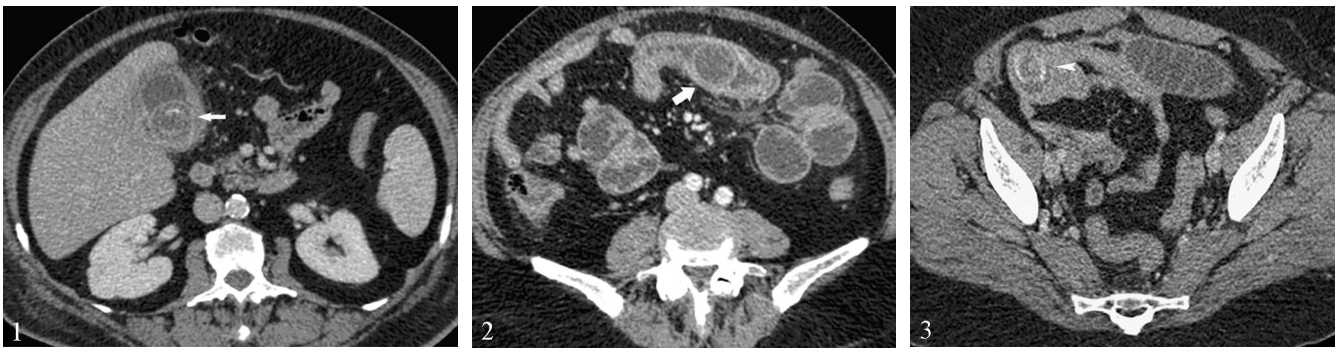

A 64-year-old woman presented with paroxysmal pain in the right upper quadrant and vomiting. Laboratory analysis showed a white blood cell count of 11,800/μl. Abdominal computed tomography (CT) revealed a large gallstone (arrow) causing acute cholecystitis with thickening of the gallbladder wall and pericholecystic fluid (Fig. 1). Inflammation was treated with broad-spectrum antibiotics and the patient was discharged. After 8 months, the patient was re-admitted with acute abdominal pain and no bowel movements for 3 days. CT scans showed that the gallstone had passed to the ileum and was lodged in the intestinal lumen, causing small bowel obstruction (thick arrow) (Fig. 2). Electrolyte imbalance secondary to gallstone ileus was corrected. One week later, repeat CT scans showed that the gallstone had dislodged travelling distally, and was finally impacted in the ileum at a level lower than that previously seen (arrowhead) (Figs. 3). On emergency laparotomy the migrated, impacted gallstone was extracted and symptoms resolved promptly.

Gallstone ileus complicating cholelithiasis accounts for up to 4% of cases of obstructive ileus [1]. The "tumbling gallstone sign" refers to intermittent episodes of gallstone obstructive ileus caused by sudden changes in the position of the gallstone(s) within the intestinal lumen from the upper to the lower segments of the bowel [2-4]. The tumbling gallstone sign has been likened in appearance to the classic childrens' tumbling tower balancing game with quick removal of a wood block from one level to another causing the block tower to fall. Chronic pericholecystic inflammation with formation of biliary-enteric fistula(s) may allow for free entry of gallstone(s) into the intestines, or smaller gallstone(s) may pass into the duodenum through the ampulla of Vater as in this patient [1, 5]. Best seen on serial radiographs or CT images of the abdomen, the tumbling gallstone sign indicates temporary intestinal obstruction caused by gallstones migrating distally [6].

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Conflicts of interest: None to declare.

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