

Rigler Triad and Bouverets Syndrome of Gallstone Ileus

Pantongrag-Brown L

Gallstone ileus is an unusual complication of chronic cholecystitis. Cholecystoenteric fistula may occur, as a result of chronic gallbladder (GB) perforation and fistulous communication with bowel. Cholecystoduodenal fistula is by far much more common than cholecystocolonic or cholecystojejunal

fistulae⁽¹⁾. Once a fistula is established, air may pass from bowel to the GB and biliary tract, and stone may pass from the GB to bowel. This stone may cause mechanical bowel obstruction, hence the term “gallstone ileus”⁽²⁾.

“Rigler triad”, named after Leo George Rigler,

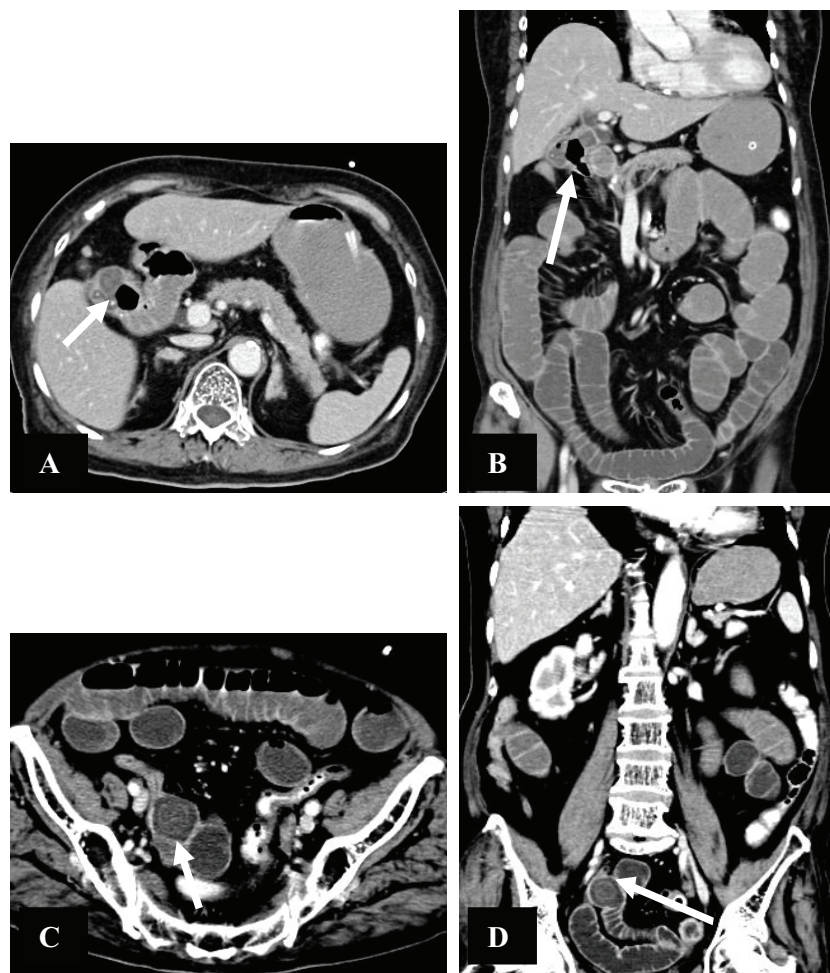


Figure 1. Rigler triad in gallstone ileus.

- A, B : Axial and coronal CT reveals cholecystoduodenal fistula with air within the GB (aerobilia) (arrows). Diffuse small bowel dilatation is noted at the coronal view (B), consistent with small bowel obstruction.
C, D : Axial and coronal CT reveals a large ectopic gallstone at the ileum (arrows).

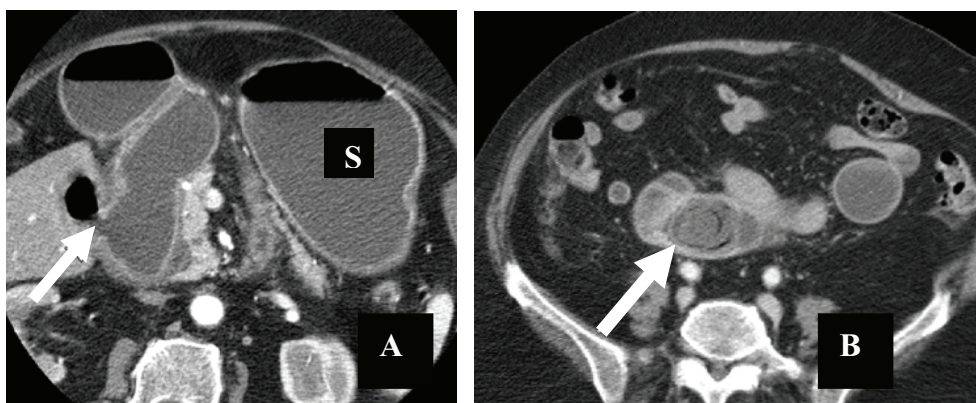


Figure 2. Impacted gallstone at the duodenum causing gastric outlet obstruction (Bouveret syndrome).

A : There is evidence of cholecystoduodenal fistula (arrow) with air in the GB (aerobilia). The stomach (S) is markedly dilated.

B : A large gallstone is impacted within the 3rd part of the duodenum (arrow).

who described this triad in 1941⁽³⁾. It is the imaging triad help for diagnosis of gallstone ileus. The triad is found in about 25% of gallstone ileus and includes (Figure 1):

1. Pneumobilia
2. Small bowel obstruction
3. Gallstone in ectopic location

The gallstone that causes bowel obstruction is relatively large, at least 2 cm in size. It is usually impacted at the ileum or ileocecal valve. However, rarely, the stone may be impacted at the duodenum resulting in gastric outlet obstruction. This unusual site of gallstone impaction is termed “Bouveret syndrome” (Figure 2). This syndrome was first described by Leon Bouveret in 1896⁽⁴⁾. It has the clinical implication in a way that the surgical mortality rate could be as high as 30%⁽⁵⁾.

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