



Images in medicine

Bouveret's Syndrome

Síndrome de Bouveret

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Fig. 1. A: Conventional X-ray of the abdomen shows pneumobilia (white arrowheads). B: Oral contrast-enhanced X-ray shows distension of the gastric chamber (white arrowheads), contrast-filling of the gallbladder (asterisk) and a filling defect in the third portion of the duodenum (white arrows). C & D: Contrast-enhanced CT shows a cholecystoduodenal fistula (asterisks), pneumobilia (black arrowheads) and a non-calcified gallstone in the third portion of the duodenum (white arrows).

An 83-year-old woman presented to the emergency department with nausea and vomiting. Anamnesis included a right colectomy and history of cholelithiasis. Routine blood analysis showed leukocytosis ($13 \times 10^9/L$). Plain abdominal X-ray showed pneumobilia (Fig. 1.A, white arrowheads). Oral water-soluble radiological contrast agent was administered (Fig. 1.B), showing gastric distension (white arrowheads), contrast-filling of the gallbladder (asterisk) and a filling defect within the third portion of the duodenum (arrows). Contrast-enhanced computed tomography (CT) of the abdomen (Fig. 1.C and D) revealed a cholecystoduodenal fistula (asterisks), pneumobilia (black arrowheads) and a non-calcified gallstone in the third portion of the duodenum (arrows), confirming the imaging diagnosis of Bouveret's syndrome.

Gallstone ileus is a rare complication of cholelithiasis and consists of bowel obstruction secondary to migrated gallstone through a bilio-digestive fistula. Bouveret's syndrome is a rare form of gallstone ileus, in which obstruction occurs in the gastric or duodenal lumen. Clinically it manifests as gastric outlet obstruction.

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Abdominal radiography is rarely the primary diagnostic tool for gallstone ileus; however, it can be suspected when Rigler triad is present (bowel obstruction, pneumobilia, and an ectopic gallstone). Oral contrast-enhanced imaging of the upper digestive tract may identify endoluminal filling defects (corresponding to gallstone) and contrast filling of the orifice of the fistula. CT remains the diagnostic modality of choice, as it allows diagnosis of Bouveret's syndrome and identification of other complications such as intra-abdominal collections or pneumoperitoneum.

Management of Bouveret's syndrome consists of removing the obstructing gallstone, which can be performed surgically or endoscopically.