

Gastric outlet obstruction due to impacted gallstone

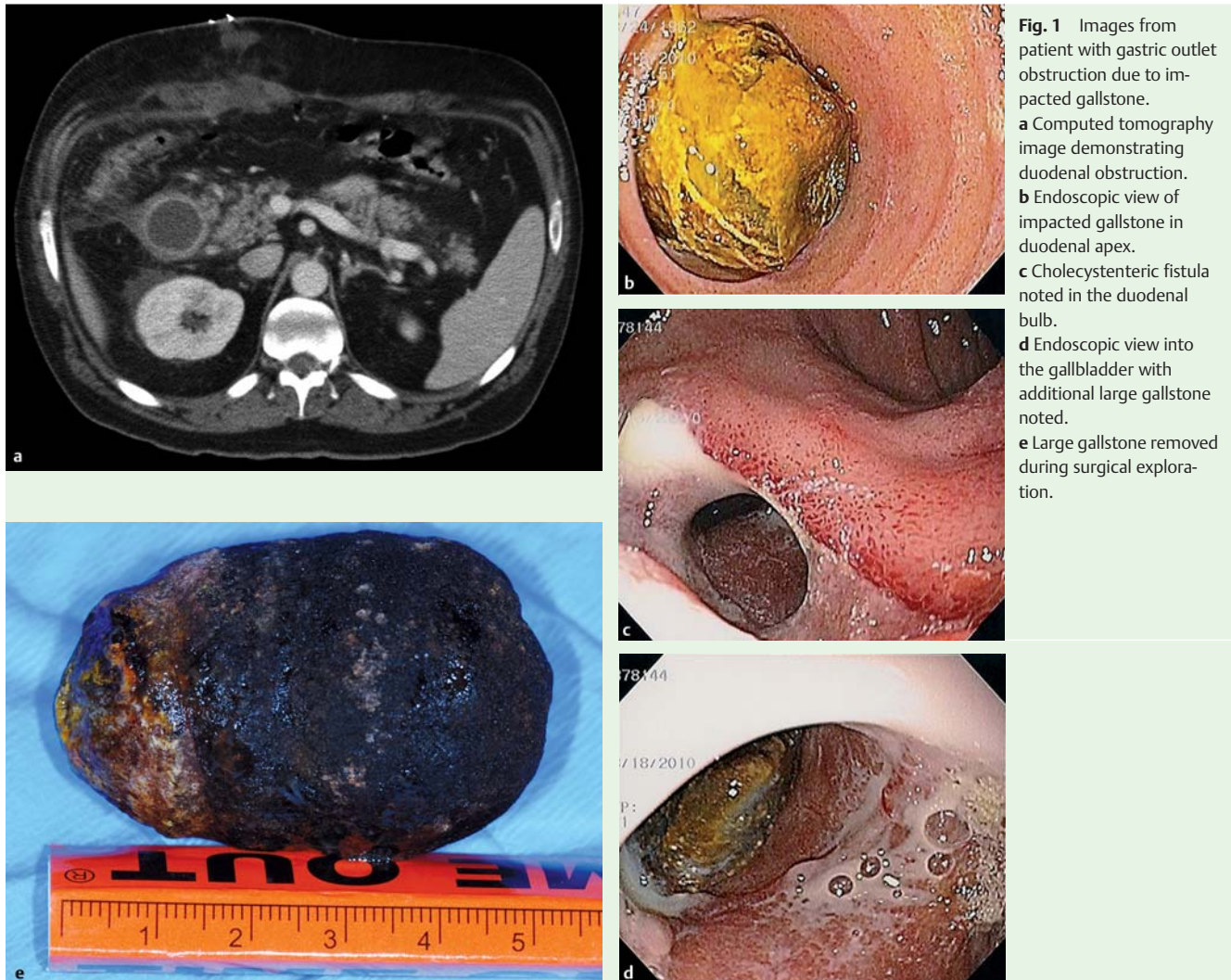


Fig. 1 Images from patient with gastric outlet obstruction due to impacted gallstone. **a** Computed tomography image demonstrating duodenal obstruction. **b** Endoscopic view of impacted gallstone in duodenal apex. **c** Cholecystenteric fistula noted in the duodenal bulb. **d** Endoscopic view into the gallbladder with additional large gallstone noted. **e** Large gallstone removed during surgical exploration.

A 47-year-old male with cholelithiasis presented with acute abdominal pain, nausea, and vomiting. Computed tomography (CT) scan showed gangrenous cholecystitis. Cholecystectomy was attempted but aborted due to gallbladder inflammation with complex omental encasement and adherence to the gastroduodenum. Several days later, the patient had recurrence of similar symptoms. A repeat CT scan demonstrated a laminated calcified structure within the duodenum (3.6 × 3.9 cm), with proximal distension of the duodenal bulb and gastric antrum consistent with gastric outlet obstruction (Fig. 1a). Esophagogastroduodenoscopy confirmed a large gallstone impacted within the duodenal apex (Fig. 1b).

Multiple endoscopic tools were employed to extract or crush the stone, including snare, retrieval net, regular and lithotripsy baskets, as well as electrohydraulic lithotripter probe. However, the stone could not be extracted but was reduced in size resulting in disimpaction and further migration downstream. A moderate-sized defect was apparent in the floor of the duodenal bulb confirming a cholecystenteric fistula (Fig. 1c). An additional 1-cm gallstone was visualized within the lumen of the gallbladder (Fig. 1d). Although the acute gastric outlet obstruction was relieved, the patient ultimately required repeat laparotomy with an enterotomy for stone extraction (Fig. 1e). He recovered well postoperatively.

These findings suggest gallstone ileus with gastric outlet obstruction known as Bouveret's syndrome. Gallstone ileus is an unusual cause of small-bowel obstruction and usually results in impaction of a large stone within the terminal ileum [1]. However, a large biliary calculus can become dislodged in the proximal duodenum after exiting the gallbladder through a cholecystenteric fistula. This results in a mechanical gastric outlet obstruction [2,3]. Endoscopic therapy to remove or crush the stone is a challenging task and often requires definitive surgical intervention with stone removal, cholecystectomy, and possible repair of the fistula [4].

Competing interests: None

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