

# Chronic Cholelithiasis with Gallstones Lodged in an Isolated Subserosal Intramural Gastric Pouch

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## INTRODUCTION

Gallstones presenting as cholecystoduodenal, cholecysto-choledochal and cholecysto-gastric fistulae causing gastric outlet obstruction (Bouveret's syndrome) or the classical gallstone ileus are well documented. Gallstones penetrating the gastric wall but not the gastric mucosa, and lying in an isolated subserosal, intramural portion of the stomach wall, have not been reported and therein lay the uniqueness of this case.

## CASE REPORT

A 26-year-old female presented with complaints of pain in the right upper abdomen and two episodes of vomiting for a day. A clinical diagnosis of acute cholecystitis was made. An ultrasound examination showed multiple calculi in the gallbladder with a pericholecystic collection and a normal common bile duct. The patient was managed conservatively and she responded favourably in 48 hours. She was subsequently discharged to return for an elective cholecystectomy. The patient was subsequently lost to follow-up.

The patient again presented to the outpatient department after six months with a history of recurrent pain in the right upper abdomen. Her haemogram, liver function tests and other biochemical parameters were normal. It was decided to perform a laparoscopic cholecystectomy. Dense adhesions were seen around the fundus of the gall bladder in relation to the duodenum and distal stomach. A hard mass was noticed in the distal part of the lesser curvature of the stomach. In view of the findings, the laparoscopic procedure was converted to an open procedure. On further dissection, the gallbladder was easily separated from the first part of the duodenum and the stomach. The wall of the gall bladder was completely intact without any evidence of perforation or fistula formation. A black coloured hard mass was noticed in relation to the lesser curvature and the gastrohepatic ligament; it was thought to be a lymph node or possibly a malignancy. On palpation, however, no irregularity could be felt in the gastric mucosa. It was decided to take a wedge biopsy for histologic diagnosis. An incision was made along the mass which opened up and there were six multifaceted gallstones in this cavity. The hard mass was actually a

collection of gallstones without any obvious communication with the gallbladder, completely covered by gastric wall muscle and without any breach of the gastric mucosa (Fig.). The stones were removed and the gastric muscle closed in layers. The patient had an uneventful postoperative recovery. The biopsy report confirmed the diagnosis of chronic cholecystitis. The patient has remained asymptomatic during subsequent follow-up.

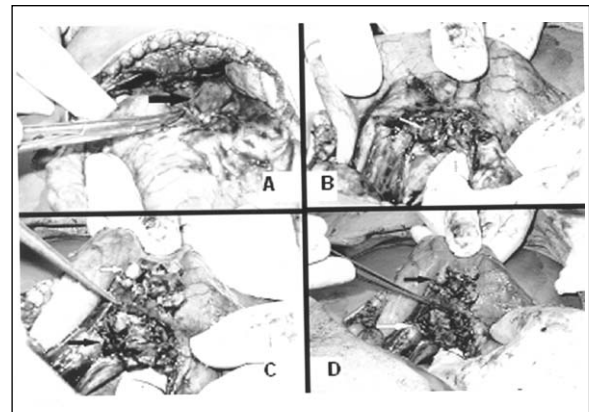


Fig: Operative photograph showing a tumour-like mass in the lesser curvature of the stomach (A) and the multifaceted stones (black arrow) being gradually extruded from the gastric pouch (white arrow) finally numbering six in number (B - D)

## DISCUSSION

Bouveret's syndrome has been defined as obstruction of the duodenum by a large gallstone that has passed into the lumen of the bowel through a biliary-enteric fistula (1). Approximately 225 such cases have been reported (2); all cases resulted from formation of bilio-enteric fistulae. Gallstone ileus accounts for 1%–3% of all cases of obstructing ileus that require surgery and complicates 0.3%–0.5% of cases of cholelithiasis (3, 4). Impaction of gallstones more commonly occurs at the terminal ileum, proximal ileum or jejunum. Less commonly, impaction occurs in the stomach, duodenum (the classical Bouveret's syndrome) or colon (3). Entrapment of stones in the stomach is known to occur in up to 14% of all cases of gallstone ileus (3). Bouveret's syndrome is known to present as an uncommon cause of gastrointestinal bleeding and gastric retention (5). There is a report of a duodenal perforation in the posterior aspect of the fourth part due to chronic impaction (2). There

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is also a case report of an intragastric gallstone induced bezoar (6). However, review of the literature did not reveal any case report where gallstones were found in an intramural pouch of the stomach without any breach of the gastric mucosa and without any communication with the gall bladder. Our observation in this case could be an early stage in the entire process of the formation of a cholecystogastric fistula where the communication with the gall bladder closed before breach of the gastric mucosa could occur.

### CONCLUSION

There are more than 225 cases of Bouveret's syndrome in the literature. The rarity of the condition can present a dilemma to the surgeon especially during minimal invasive surgery for gall bladder disease.

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