



Bouveret's Syndrome- A Case Report With Review of Literature

KEYWORDS

Bouveret's syndrome – Gall stone – Cholecystoduodenal fistula – Endoscopic removal.

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ABSTRACT

Bouveret's syndrome, an obstruction at the gastric outlet is a rare complication of gall stone. It is due to duodenal impaction of large gall stone which passes into duodenal bulb through a cholecysto gastric or cholecysto duodenal fistula. We report a case of Bouveret's syndrome in an elderly male patient that was treated successfully with endoscopic snare.

Introduction:

Bouveret's syndrome is a rare case of gastric outlet obstruction. Bouveret's syndrome usually presents with nausea, vomitings and epigastric pain in older females. The diagnosis is usually made with Gastroscopy. Endoscopic extraction is preferred method of stone removal, followed by cholecystectomy.

Case report:

A 71 year old male was admitted with complaints of sudden onset of severe epigastric pain, non radiating in nature increasing post prandially for 5 days. He was non alcoholic and non smoker with no comorbidities. On examination he was afebrile and hemodynamically stable. General, physical, and systemic examinations were normal. Hemograms and liver function tests were normal. His electrocardiogram was normal. Ultra sound showed normal pancreas and grade one fatty infiltration of liver and contracted gall bladder. Video gastroscopy revealed large rounded pigmented stone impacted at D1 – D2 junction. CT scan showed dilated CBD, pneumobilia and radio opaque calculus seen in the pyloric region/proximal duodenam with dilated body of stomach. The stone was disimpacted with snare and later fragmented and removed endoscopically with snare. There is a large fistulous opening in D1 with edematous mucosa. He is discharged in stable condition to follow up with surgeons. Surgical opinion was taken and advised interval laparoscopic cholecystectomy after 3 weeks.

Discussion:

Bouveret's syndrome is defined as gastric outlet obstruction caused by duodenal impaction of large gallstone which passes into duodenal bulb through cholestogastic or cholecystoduodenal fistula. In 1896, Leon Bouveret¹ reported the first 2 cases of gastric outlet obstruction because of gallstones. Bouveret's syndrome is an uncommon form of gallstone ileus, comprising only 1-3 % of cases. Normally distal small bowel is the site of obstruction because it is the narrowest part of the small bowel and duodenum is rarely a site of obstruction.

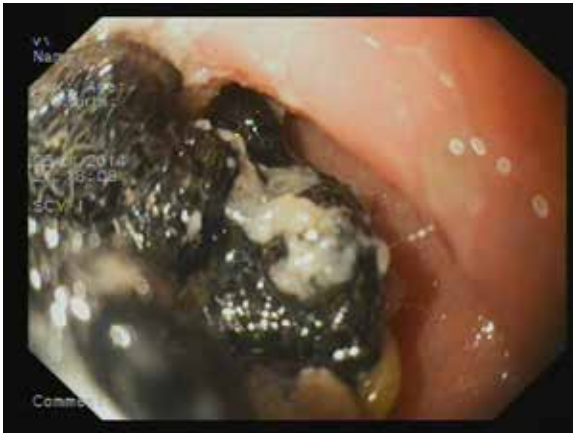
The diagnosis of Bouveret's syndrome is often overlooked because of its rarity and non-specific presentation. The diagnosis is usually suspected in a patient with gallstones

with clinical manifestations of pain abdomen, vomiting, and presence of pneumobilia and demonstration of duodenal impaction of stone and visualisation of stone by gastroscopy or other imaging modality³. Common symptoms are nausea, vomiting, abdominal pain or discomfort, early satiety. Common signs are abdominal tenderness, abdominal distention, obstructive jaundice and pyrexia.

The findings of Rigler's triad (small bowel obstruction, ectopic gall stone and pneumobilia) are observed on plain film⁴ and also identified on abdominal CT images. The fistula may be demonstrated by oral or contrast material.

Grove in 1976 first made the diagnosis of Bouveret's syndrome by gastroscopy⁵, with endoscopic retrieval by Bedogni⁶ et al. In 1985. Gastroscopy will reveal gastroduodenal obstruction in almost all cases and many show the obstructing stone in many cases. The fistulous stoma was seen in only 13% of examination. Bowel gas obscures ultrasound examination and sometimes demonstrates "double arch" sign which is considered as pathognomonic. Abdominal CT findings are pneumobilia, filling defects, thickened gall bladder wall, contracted gall bladder and gastroduodenal mass.

Endoscopic treatment of Bouveret's syndrome should be considered as a first line option despite the low success rate reported in the literature. The first successful endoscopic extraction was described in 1985 by Bedogni⁶ et al. The success of endoscopic extraction depends on stone size. If endoscopy treatment fails, the patient will require surgical management. Surgical options include combinations of enterolithotomy and cholecystectomy and fistula repair. But surgery is associated with significant morbidity and mortality. Fistula repair is debatable as it is closed spontaneously, particularly when cystic duct is patent and no residual stones are present in the gall bladder.



Large gall stone in the D1-D2 junction

References:

1. Bouveret L. Stenose du pylore adherent a la vesicule(French) Rev Med 1896;16: 1-16.
2. Langhorst J, Schumacher B, Deselaers T. Successful endoscopic therapy of a gastric outlet obstruction due to gallstone with intracorporeal laser lithotripsy. A case of Bouveret's syndrome. Gastrointestinal endoscopy 2000; 51: 209-13.
3. sans M, Feu F, Panes J, Teres J. Duodenal obstruction by biliary lithiasis (Bouveret' syndrome). Gastroenterol Hepatol 1996;19(10): 519-20.
4. Pickhardt PJ, Bhalla S, Balfe DM. Acquired gastrointestinal fistulas: classification, etiologies and imaging evaluation. Radiology 2002; 224: 9-23.
5. Grove O. Acute pyloric obstruction by a gallstone: A report of a case diagnosed by gastroscopy. GastrointestEndosc 1976;22:212-13
6. Bedogni G, Contini S, Meinero M, Pedrazzoli C, Piccinini Gc. Pyloroduodenal obstruction due to a biliary stone(Bouveret's syndrome) managed by endoscopic extraction. GatsrointestEndosc 1985;31: 36-38.