

Management of Bouveret Syndrome: A Case Report

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Introduction

- Bouveret syndrome is an unusual complication of gallstone disease, causing less than 0.2% of small bowel obstructions. It often requires multidisciplinary approaches for treatment. We present here a unique case report of Bouveret syndrome, managed successfully using Holmium LASER alone.

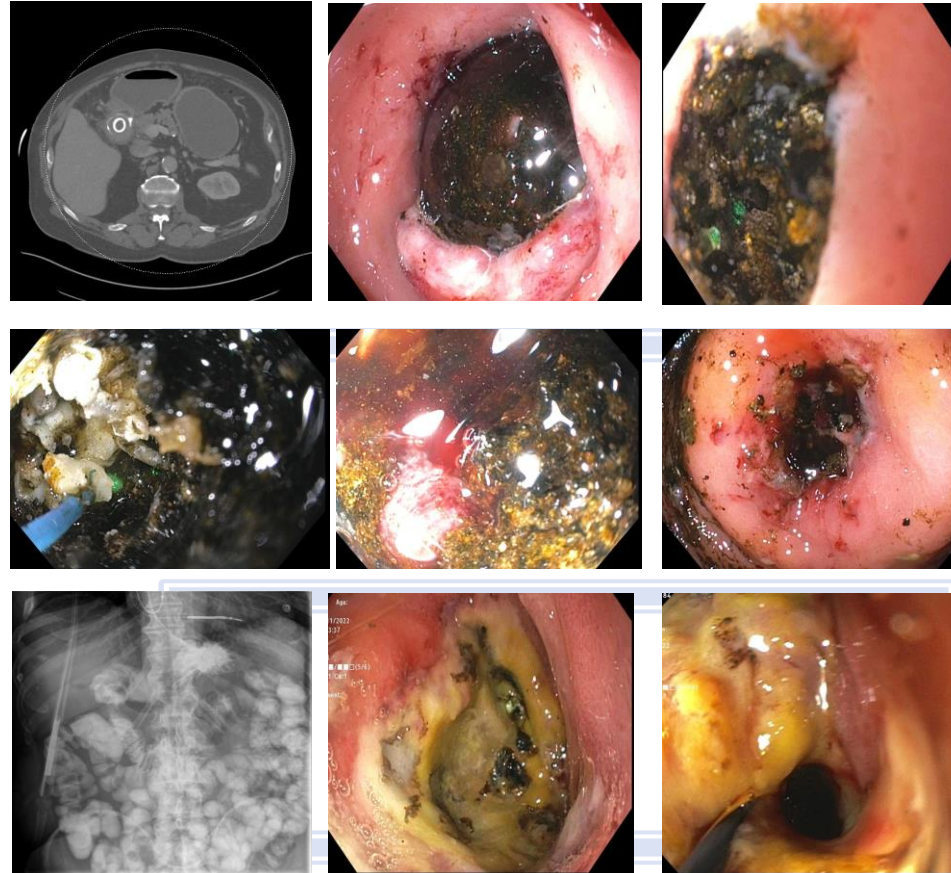
Case Description

- 74 year old man with vomiting, decreased appetite, periumbilical pain and nausea. He denied heartburn, fever, chills or jaundice. His past medical history was significant for cardiomyopathy (EF 35%).

He had been admitted 3 months prior with acute cholecystitis and elevated liver function tests. Due to cardiac comorbidities, he was treated with IV Zosyn, cholecystostomy tube and ERCP with sphincterotomy with improvement and he was discharged. 6 weeks later, a tube check confirmed correct placement of the tube and decompression of the gall bladder.

This time, his pain differed from the right upper abdominal pain of prior admission. His tube drainage had reduced considerably in the previous day. Physical examination revealed epigastric and supraumbilical tenderness with no guarding or rebound. The cholecystostomy bag had purulent drainage.

WBC count was $11.95 \times 10,000/\text{cu. mm}$; liver enzymes and S. Lipase were normal. CT scans showed a change in the position of a previously seen large gallstone. During the previous admission, it was in the gall bladder neck. At this time, it was occupying the duodenal bulb lumen, indicating development of a cholecystoduodenal fistula, and causing complete obstruction. The surgical team recommended endoscopic treatment due to anticipated friability of the tissue.



Top Row, L to R. CT demonstrating Bouveret syndrome; Gallstone obstructing D1; LASER lithotripsy begun. Middle Row, L to R. LASER treatment of calcified and pigmented stone; D1 mucosa being exposed; smaller stone still obstructing pylorus. Bottom Row, L to R. Residual stone in RUQ; large duodenal ulcer at site; narrowed lumen leading to D2.

Management

Endoscopic evaluation showed complete obstruction of the duodenal bulb by a large smooth stone, not allowing passage of even a guidewire beyond the stone. Lithotripsy was chosen to help relieve the obstruction. 410 micron and 990 micron Holmium LASER probes were used with assistance from Urology, via an antegrade approach from the pylorus through a gastroscope. After 2 sessions of lithotripsy 4 days apart, each breaking through pigmented and calcified stone, the stone passed through the small bowel, relieving the obstruction.

Conclusion

- This case illustrates the feasibility of Holmium LASER to treat heavily calcified and pigmented gallstones. Holmium LASER should be developed for use in GI Endoscopy.