



Endoscopic Holmium Laser Lithotripsy for Therapy of Bouveret Syndrome



Beth Israel Deaconess
Medical Center

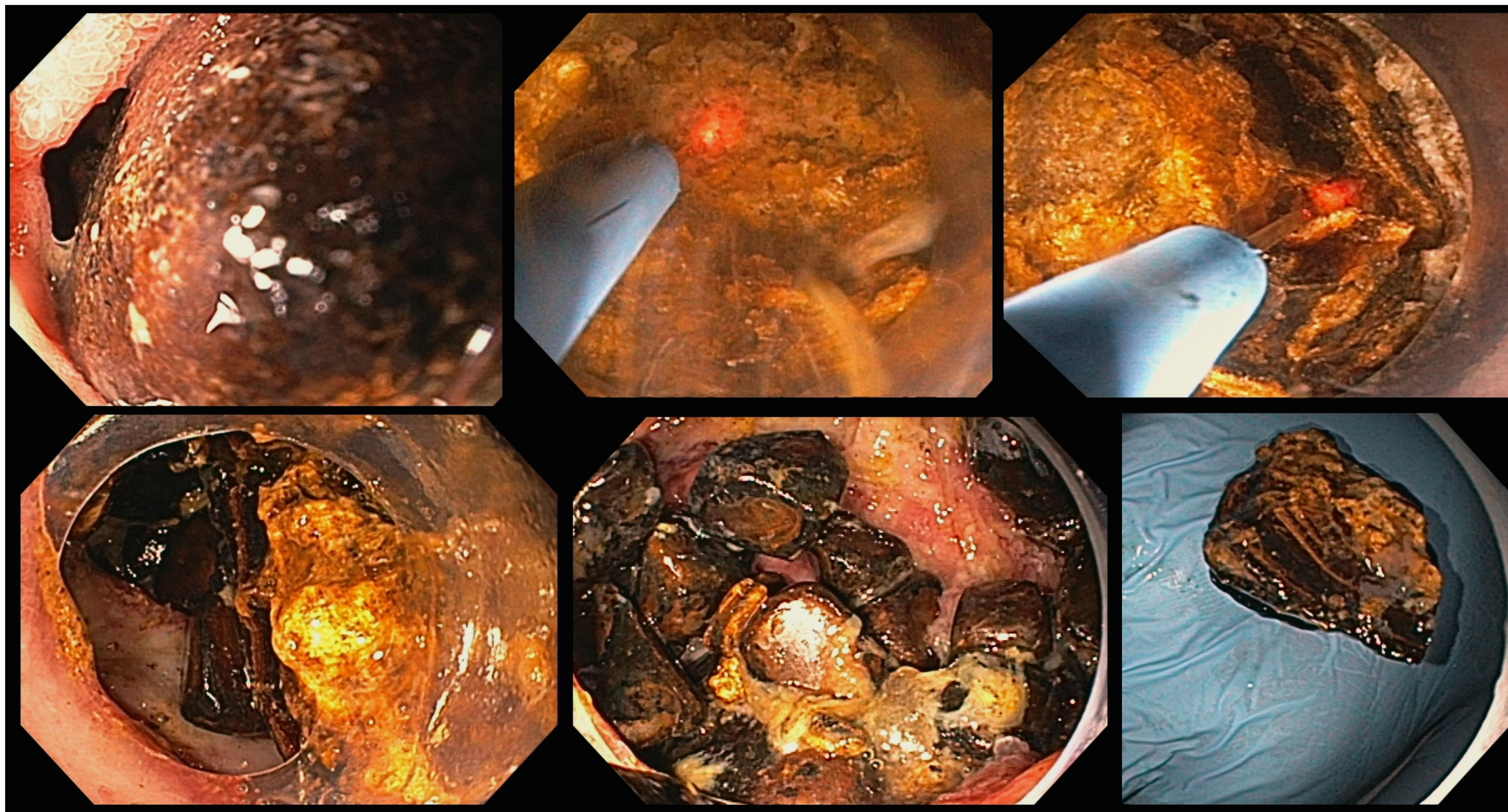
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INTRODUCTION

- Bouveret syndrome is a rare condition characterized by the impaction of a gallstone in the stomach or duodenum via a fistulous tract resulting in gastric outlet obstruction or ileus in the setting of cholecystitis.^{1,2}
- For patients who are unable to undergo surgery, laser lithotripsy can be an alternative therapy.
- Here, we present a case of a patient with recurrent gallstone ileus and subsequent Bouveret syndrome successfully treated by endoscopic Holmium laser lithotripsy.

CASE PRESENTATION

- A 79-year-old woman with multiple co-morbidities including coronary artery disease, obesity and chronic cholecystitis presented with right upper quadrant abdominal pain.
- Abdominal computed tomography (CT) scan demonstrated emphysematous calculous cholecystitis, a cholecystoduodenal fistula and a 30 mm gallstone lodged in the terminal ileum with a worsening small bowel ileus.
- She emergently underwent an ileocecal resection and partial right colectomy, confirming the diagnosis of gallstone ileus and a small bowel perforation.
- 10 days post-surgically, the patient again developed nausea, vomiting, and right upper quadrant pain. CT imaging re-demonstrated a 40 mm gallstone within the gallbladder fossa, at the opening of the fistulous tract.
- Surgical options were limited due to a friable duodenum and inflammation of the cholecystoduodenal fistula. After a multidisciplinary discussion, endoscopic therapy was planned.
- Endoscopically, a large gallstone measuring about 40 mm was encountered upon entry into the duodenal bulb eroding the duodenum consistent with the known cholecystoduodenal fistula.
- A Holmium: YAG laser generator with Flexiva™ Pulse ID Tractip™ fibers was used to fragment the stone through a standard gastroscope. An underwater technique with frequent irrigation was used to clear debris and allow for laser penetration without refraction.
- Due to the size of the gallstone this procedure was performed in two sessions with an overall duration of almost 4 hours. During the first session, the stone was successfully fractured into smaller fragments. In the subsequent session, the remaining gallstone measuring about 28 mm was fragmented until the fistula tract was fully cleared. The larger gallstone fragments were removed using a Roth net and a stone retrieval basket while the remaining smaller stones fragments passed spontaneously into the duodenum.
- Full resolution of symptoms was achieved. No immediate or delayed complications were noted. The patient is now doing well 3 months post-procedurally.



DISCUSSION

- Bouveret syndrome is an uncommon, yet challenging clinical condition.
- Although surgery is often required for definitive therapy, endoscopic management remains a feasible option in select cases with appropriate expertise.
- Here, we present a case of successful endoscopic therapy utilizing Holmium laser lithotripsy in a high-risk surgical patient with Bouveret syndrome.
- Although utilizing this technique is lengthy and requires advanced endoscopic expertise, it provides a great benefit in terms of tissue preservation, recovery time and safety.

REFERENCES



INFO

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