

## When surgical candidacy is limited by comorbid conditions, endoscopy is the preferred and possibly only therapeutic option.

**INTRODUCTION:** Bouveret's syndrome is a gastric outlet obstruction (GOO) caused by an impacted gallstone in the duodenum or stomach via a bilioenteric fistula. The treatment is primarily surgical, but endoscopic therapy may be the only option for patients that are non-surgical candidates.

**CASE DESCRIPTION:** 78-year-old man presented with hematemesis and CT scan suggesting cholecystoenteric fistula leading to GOO. Due to multiple comorbidities, he was deemed a non-surgical candidate.

- First EGD: large Forrest Class IIb ulcer in the duodenal bulb that was not amenable to endoscopic therapy
- Day five, second EGD: 3 cm gallstone impacted in the duodenal bulb. Under the gallstone was a partially obstructing Forrest Class IIc ulcer. Unsuccessful removal of the gallstone was attempted using a mechanical lithotripter basket and Roth net.
- Day ten, the gallstone was removed endoscopically using electrohydraulic lithotripsy (EHL) at a pulse rate of 10 and medium power setting. One stone fragment (~1 cm) remained, obscuring the lumen distal to the duodenal bulb.
- Day 14, fourth EGD: remaining gallstone was fragmented with rat-tooth forceps and lithotripsy basket. After balloon sweep of the presumed cholecystoduodenal fistula tract, contrast injected into the tract was seen draining into the duodenal bulb, precluding full fluoroscopic assessment of the fistula.

The patient was discharged to a skilled nursing facility on day eighteen.

**DISCUSSION:** Bouveret's syndrome is a rare complication of cholelithiasis. Most common symptoms include epigastric pain, nausea, and vomiting. Patients can also present with non-specific signs, such as gastrointestinal bleeding, as did our patient. Gallstone removal may be done endoscopically, with mechanical, electrohydraulic, or laser lithotripsy. For impacted stones, mechanical fragmentation can be accomplished by using a basket, snare, forceps, mechanical lithotripsy, or EHL prior to extraction and removal. All stone fragments should be removed after mechanical fragmentation to avoid complications like gallstone ileus. In our case EHL was followed by mechanical fragmentation to accomplish complete fragmentation and removal.



Duodenal Bulb : Foreign Body, Ulcer ; duodenal bulb gallstone



Duodenal Bulb : gallstone fragments



Gallstone