Received: 8 January 2021 | Accepted: 2 February 2021

DOI: 10.1002/ccr3.3958

CLINICAL IMAGE

Clinical Case Reports Open Access WILEY

Bouveret syndrome in a cholecystoduodenal fistula

Pablo Cortegoso Valdivia[1] | **Marco Le Grazie**[1] | **Federica Gaiani**[1,2] | **Raffaele Dalla Valle**[3] | **Gian Luigi de'Angelis**[1,2]

[1]Gastroenterology and Endoscopy Unit, University Hospital of Parma, University of Parma, Parma, Italy

[2]Department of Medicine and Surgery, University of Parma, Parma, Italy

[3]Hepatobiliary Surgery Unit, Department of Medicine and Surgery, University of Parma, Parma, Italy

Correspondence
Pablo Cortegoso Valdivia, Gastroenterology and Endoscopy Unit, University Hospital of Parma, University of Parma, via Gramsci 14, 43126 Parma, Italy.
Email: cortegosopablo@yahoo.it

Abstract

The treatment of Bouveret syndrome lacks specific guidelines and is strictly interdisciplinary. Especially, if electrohydraulic lithotripsy is not available and endoscopic removal fails, a timely surgical approach is advised.

KEYWORDS

bouveret syndrome, endoscopy, gastrointestinal surgery, fistula, gastric outlet obstruction

Bouveret syndrome is a difficult clinical entity to diagnose and treat, characterized by high morbidity and mortality. This syndrome should be promptly considered in case of symptomatic cholelithiasis complicated by intestinal obstruction, in order to define the proper individualized treatment, endoscopic or surgical, without a therapeutic delay.

A 65-year-old woman with symptomatic cholelithiasis, waiting for elective cholecystectomy, presented with abdominal pain, fever, and vomiting. An emergent abdominal CT showed a cholecystoduodenal fistula and a 4 cm calcific gallstone in the duodenum, determining gastric ectasia due to gastric outlet obstruction (Figure 1).

EGDS confirmed the presence of an impacted stone in the duodenal bulb, leading to the diagnosis of Bouveret syndrome.[1] Several attempts to fragment and remove the biliary calculus were made using foreign body forceps, polypectomy snare, mechanical lithotriptor, and Fogarty catheter, all resulting unsuccessful due to the size, location, and hard consistency of the gallstone (Figure 2). Electrohydraulic lithotripsy could not be attempted, as this technique was not available in our institution. As the clinical condition determined occlusion and treatment could not be delayed, the patient underwent surgical laparoscopic duodenotomy with removal of the impacted calculus.[2] In postoperative

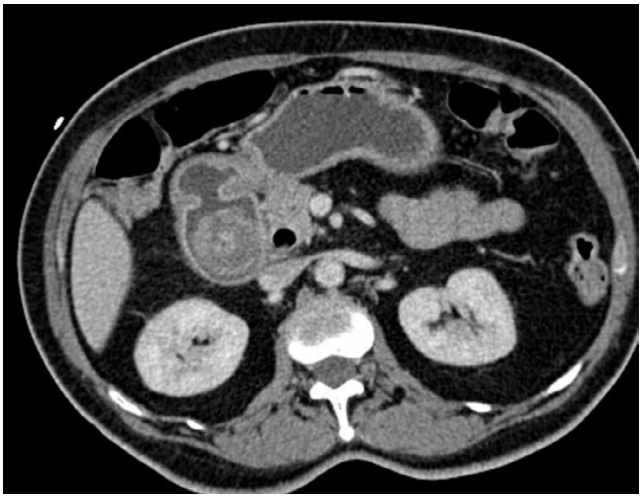

FIGURE 1 Abdominal CT showing a 4 cm gallstone in the duodenal lumen

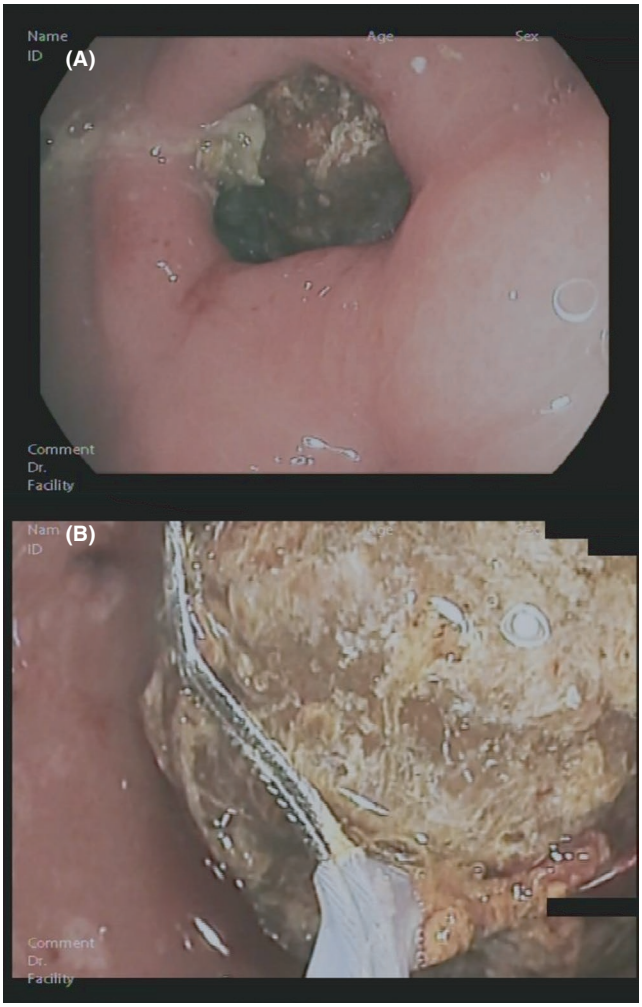

FIGURE 2 A, Gallstone in the duodenal bulb, seen through the pylorus; B, endoscopic attempts with accessories to remove the gallstone

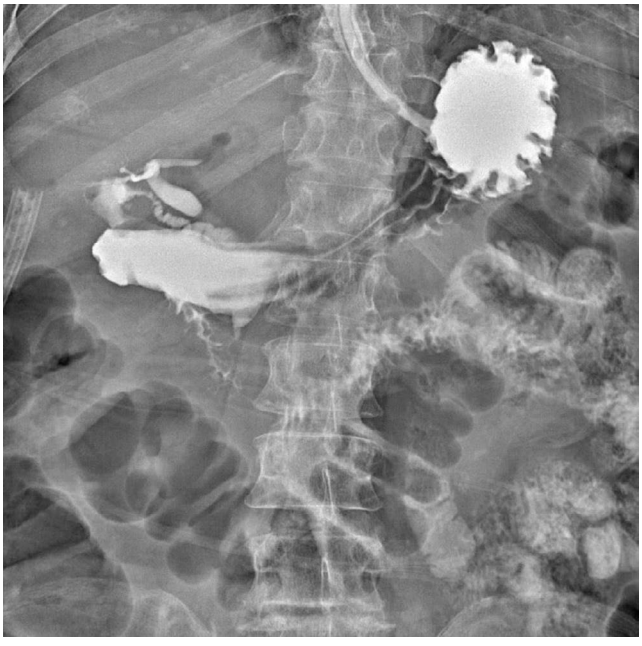

FIGURE 3 Small-bowel follow-through with retrograde opacification of the biliary tree

day 3, a radiological follow-through showed regular progression of gastrografin in the small bowel, with retrograde opacification of the biliary tree through the fistula (Figure 3). Eighteen months after surgery, the patient is fine and asymptomatic.

ACKNOWLEDGMENTS

None.

CONFLICT OF INTEREST

The authors have no conflict of interest to declare.

AUTHOR CONTRIBUTION

PCV: conceptualized the study, wrote the original manuscript, prepared the draft, and edited the manuscript. FG: conceptualized the study and edited the manuscript. MLG: edited the manuscript. RDV: supervised the study. GLdA: supervised the study.

ETHICAL APPROVAL

Informed consent was obtained from the patient for this report.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no datasets were generated or analyzed during the current study.

ORCID

Pablo Cortegoso Valdivia https://orcid.org/0000-0002-8793-5890
Marco Le Grazie https://orcid.org/0000-0003-0832-4408

REFERENCES

1. Ayantunde AA, Agrawal A. Gallstone Ileus: diagnosis and management. *World J Surg*. 2007;31(6):1292-1297. https://doi.org/10.1007/s00268-007-9011-9
2. Tan YM, Wong WK, Ooi LLPJ. A comparison of two surgical strategies for the emergency treatment of gallstone ileus. *Singapore Med J*. 2004;45(2):69-72.PMID: 14985844.

How to cite this article: Cortegoso Valdivia P, Le Grazie M, Gaiani F, Dalla Valle R, de'Angelis GL. Bouveret syndrome in a cholecysto-duodenal fistula. *Clin Case Rep*. 2021;9:2485–2486. https://doi.org/10.1002/ccr3.3958