Proximal duodenal obstruction – Bouveret's syndrome revisited



Fig. 1 Endoscopic transpyloric views showing: a the mass that was obstructing the duodenal bulb; b the mass in close-up view; c the incarcerated gallstone and the orifice of the fistula (arrows), which are visible after thorough flushing of A 62-year-old man presented to our emergency department with acute epigastric pain and vomiting. He was found to have elevated markers of inflammation with a white cell count of 16.1×10^9 /L and C-reactive protein (CRP) of 30 mg/L (normal <5 mg/L), impaired renal function with a creatinine of 1.8 mg/dL, and evidence of mild cholestasis with a bilirubin of 1.3 mg/dL and γ -glutamyltransferase (GGT) of 78 IU/L.

Esophagogastroduodenoscopy (FGD) showed grade 3 reflux esophagitis, and 3L of gastric fluid were aspirated. Passage of the endoscope beyond the pylorus was obstructed by a mass covered with creamy pus (**>** Fig. 1 a, b). After the area had been thoroughly flushed, an incarcerated gallstone was found, which was occluding the duodenal bulb with the orifice of the fistula moving relative to the gallstone (**> Fig. 1 c**). Endoscopic retrieval (by net, balloon, and snare) failed because of the large diameter of the stone. Computed tomography (CT) scanning revealed an air crescent within the gallbladder and a penetrating gallstone of 3 cm located within the duodenum, which was completely obliterating the lumen (**> Fig.2**), but there were no signs of intra-abdominal perforation.

During surgery, the penetration of the gallstone through a cholecystoduodenal fistula was confirmed (**•** Fig. 3). The large stone could only be removed after fragmentation (**•** Fig. 4). Local excision of the fistula tract was performed and the operation was completed by a cholecystectomy. The patient was discharged from hospital a few days later. On follow-up 3 months later, he had no specific complaints.

Proximal ileus caused by penetration of a large gallbladder stone is a rare clinical entity that was first described in 1896 by Bouveret [1], but has only rarely been reported since [2]. If technically feasible, endoscopic retrieval and spontaneous regression of the fistula tract have been reported [3] and this approach may be appropriate, especially in older patients or those with comorbidities, if close interdisciplinary follow-up is provided. However, surgical removal of the stone is often the more appropriate solution.

Endoscopy_UCTN_Code_CCL_1AB_2AZ_3AZ

Competing interests: None



Fig. 2 Computed tomography (CT) scan showing the gallstone that had penetrated into the duodenum (arrow) and an air crescent in the gallbladder (arrowhead).



Fig.4 Photograph of the fragmented gallstone after removal.

C. R. Werner¹, F. Graepler¹, J. Glatzle², D. Stüker², T. Kratt², J. Schmehl³, M. Bitzer¹, A. Königsrainer², N. P. Malek¹, M. Goetz¹

- ¹ Department of Gastroenterology, Hepatology, and Infectious diseases, University Hospital Tübingen, Medical Clinic, Tübingen, Germany
- ² Department of General, Visceral, and Transplant Surgery, University Hospital Tübingen, Tübingen, Germany
- ³ Department of Diagnostic and Interventional Radiology, University Hospital Tübingen, Tübingen, Germany

References

- 1 *Bouveret L.* Sténose de pylore adhèrent à la vesicule calceuse. Rev Med (Paris) 1896; 16: 1–16
- 2 *Cappell MS*, *Davis M*. Characterization of Bouveret's syndrome: a comprehensive review of 128 cases. Am J Gastroenterol 2006; 101: 2139–2146
- 3 Rogart JN, Perkal M, Nagar A. Successful multimodality endoscopic treatment of gastric outlet obstruction caused by an impacted gallstone (Bouveret's syndrome). Diagn Ther Endosc 2008; 2008: 471512

Bibliography

DOI http://dx.doi.org/ 10.1055/s-0033-1344324 Endoscopy 2013; 45: E231–E232 © Georg Thieme Verlag KG Stuttgart - New York ISSN 0013-726X

Corresponding author

C. R. Werner, MD University Hospital Tübingen, Medical Clinic Department of Gastroenterology, Hepatology, and Infectious diseases Otfried-Mueller-Str. 10 D-72076 Tübingen Germany Fax: +49-7071-295906 christoph.werner@med.uni-tuebingen.de



Fig.3 Photograph taken during surgery showing the cholecystoduodenal fistula with the cystic (arrowhead) and duodenal (arrow) sections visible. The brownish gallstone is also still in situ.