Bouveret-Syndrome with Gallbladder Fistula

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Definition
Bouveret-Syndrome is a rare complication of cholecystolithiasis; a particular type of obstruction, where a gallstone migrates from the gallbladder to the duodenum via a fistula, and becomes impacted in the duodenal bulb.

Case Report
• 61y old woman with forceful vomiting + abdominal pain
  • First EGD: empty stomach, obstruction in the duodenal bulb
  • Gall stone migrated through gallbladder fistula (see Figure1)
  • Insertion of a nasoduodenal tube for nutrition
  • Second EGD: electrohydraulic lithotripsy (EHL) – 9 5F-probes used in a 2h session, removal of half of the stone in fragments
  • Third EGD: Repeat EHL (8 5F-probes) until fragmentation stone sufficient for removal by forceps and Roth-net.
  • Difficulties in retrieving the largest fragment: temporary impaction of the retrieval net in the esophagogastric junction and the upper esophageal sphincter due to anatomical reasons
  • Large fistula between gall bladder and duodenal bulb due to stone perforation, slight signs of inflammation and self-limiting bleeding after stone extraction
  • Fourth EGD: two small stones in the duodenum and gallbladder, removed with retrieval net. (Figure 3) Gallbladder-duodenum fistula with luminal diameter of approx. 25mm (Figure 4), minimal inflammation and no free abdominal perforation. Small lacerations to the esophageal mucosa.

Discussion
Traditionally, very large stones can be safely removed by surgery at the price of relatively high invasiveness including duodenotomy and general anesthesia. In this case, it was the patient’s preference to have the obstruction removed by minimally invasive methods.

An increasing number of reports show that endoscopic lithotripsy and removal is a viable alternative to a surgical duodenotomy with similar success rates. There are three methods of endoscopic stone fragmentation apart from removal in toto (if possible):
• Laser lithotripsy;
• Mechanical lithotripsy;
• Electrohydraulic lithotripsy (EHL), as in our case. These methods are most successful for small stones and/or stones that are mobile.

Conclusion
The EHL procedure was carried out in step-by-step stages, without major difficulties and without risk of creating further complications to the patient. During treatment, patient nutrition was maintained via the use of a nasoduodenal tube passing the stone. The large fistula required no treatment, and the patient was free of complaints one month later, declining further examinations or therapies.

Learning outcome:
• The case report demonstrates the endoscopic treatment of the Bouveret’s syndrome with EHL.
• The described problem solving strategies during assistance and patient care will be explained with imaging.

References:
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Einleitung

Material und Methoden

Ergebnisse

Zusammenfassung

Schlussfolgerung

Daten, Tabellen, Abb.

Können ggf. mit farbigen Flächen hinterlegt werden.