How to endoscopically repair a biliodigestive fistula complicating a perforated peptic ulcer: a customized “natural” choledochooduodenal anastomosis

A perforated peptic ulcer is associated with a 30% mortality and 50% morbidity and is usually managed as a surgical emergency [1]. To seal the perforation, applying interrupted sutures with omental apposition is the most commonly used technique [2]. In a few cases, a perforated peptic ulcer may be complicated by a choledochoduodenal fistula, which is managed surgically by laparoscopic digestive resection [3] or medically with a protein pump inhibitor and endoscopic retrograde cholangiopancreatography (ERCP). We present a case of a biliary fistula complicating a perforated peptic ulcer that was managed endoscopically in an original way.

An 84-year-old man presented with abdominal pain and fever. Clinical results showed an inflammatory syndrome associated with normal findings from hepatic tests. A perforated peptic ulcer was confirmed by computed tomography (CT) and antibiotic therapy was started (piperacillin/tazobactam 12g daily). The patient had emergency surgery with suturing and abdominal drainage. The drain started producing biliary fluid 1 week later at a volume of 300 to 500mL/day. At 1 month, imaging confirmed a persistent duodenal leak, and the patient was transferred to our tertiary center.

Endoscopically, we found an ulcer located in the bulb in contact with the surgical drain hiding the choledochoduodenal fistula (▶ Fig. 1a, ▶ Video 1). First, a straight catheter with a guidewire was introduced into the choledochoduodenal fistula and opacification allowed visualization of the biliary tree (▶ Fig.1b). Second, a fully covered metal biliary stent was deployed, with the proximal flange in the common bile duct and the distal flange in the stomach, to channel the biliary flow. Third, an enteral metallic fully covered stent was deployed that covered the bulb ulcer (▶ Fig. 2). There was no perioperative complication. At day 1, no biliary fluid persisted in the drain, which was removed. At 6 weeks, an endoscopic control showed after stent removal a complete cicatrization of the bulb (▶ Fig. 3a) with a “natural” choledochooduodenal anastomosis (▶ Fig.3b).

This case illustrates the possibilities of therapeutic endoscopy to treat complex biliary fistulas by directing the bile towards the digestive tract.

Endoscopy_UCTN_Code_TTT_1AR_2AG
Competing interests
None

The authors
Laurent Monino1,2, Jean-Michel Gonzalez2, Marc Barthet2
1 Department of Hepatogastroenterology, Université catholique de Louvain, Cliniques universitaires Saint-Luc, Brussels, Belgium
2 Department of Hepatogastroenterology, Assistance Publique des Hôpitaux de Marseille, Aix-Marseille Université, Hôpital Nord, Marseille, France

Corresponding author
Laurent Monino, MD
Department of Hepatogastroenterology, AP-HM, Aix-Marseille Université, Hôpital Nord, Chemin des Bourrely, 13015 Marseille, France
Fax: +33-4-91968737
laurent.monino@uclouvain.be
monino.laurent@hotmail.fr

References


Bibliography
DOI https://doi.org/10.1055/a-0978-4760
Published online: 2019
Endoscopy
© Georg Thieme Verlag KG
Stuttgart - New York
ISSN 0013-726X

ENDOSCOPY E-VIDEOS
https://eref.thieme.de/e-videos

Endoscopy E-Videos is a free access online section, reporting on interesting cases and new techniques in gastroenterological endoscopy. All papers include a high quality video and all contributions are freely accessible online.

This section has its own submission website at
https://mc.manuscriptcentral.com/e-videos

Fig. 3 Control of endoscopic treatment at 6 weeks. a Choledochoduodenal anastomosis lumen. b Fluoroscopic control showing a customized "natural" choledochoduodenal anastomosis.