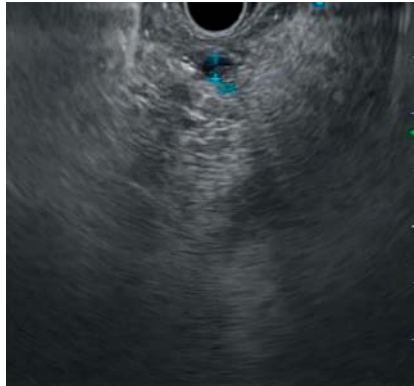


Biliary rendezvous through the gallbladder using a lumen-apposing metal stent

Endoscopic ultrasound (EUS)-guided rendezvous is a feasible and safe technique to provide biliary access when endoscopic retrograde cholangiopancreatography (ERCP) fails [1,2]. Recently, EUS-guided gallbladder stent deployment has been used as an alternative drainage method [3]. Local treatment of biliary perforations aims to divert bile and allow spontaneous wound healing [4]. We describe a modified biliary rendezvous technique using a transmural gallbladder stent.

A 41-year-old woman presented with upper abdominal pain, nausea, and vomiting. Laboratory tests showed abnormal liver function tests, with normal bilirubin, and abdominal ultrasound displayed gallstones and a dilated common bile duct (CBD). EUS revealed choledocholithiasis (► **Fig. 1**). During ERCP, a prophylactic plastic stent was placed due to inadvertent guidewire insertion into the pancreatic duct. However, after five attempts of biliary cannulation, intraprocedural perforation (Stapfer type II) was suspected. To avoid biliary leakage, EUS-guided gallbladder drainage was performed, using a linear echoendoscope, and a lumen-apposing metal stent (Hot AXIOS, 15×10 mm; Boston Scientific, Marlborough, Massachusetts, USA) was deployed between the duodenal bulb and the gallbladder (► **Fig. 2**). Following the procedure, the patient was started on intravenous antibiotics. The patient showed clinical improvement in a few days, although mild cholestasis was still observed at discharge.

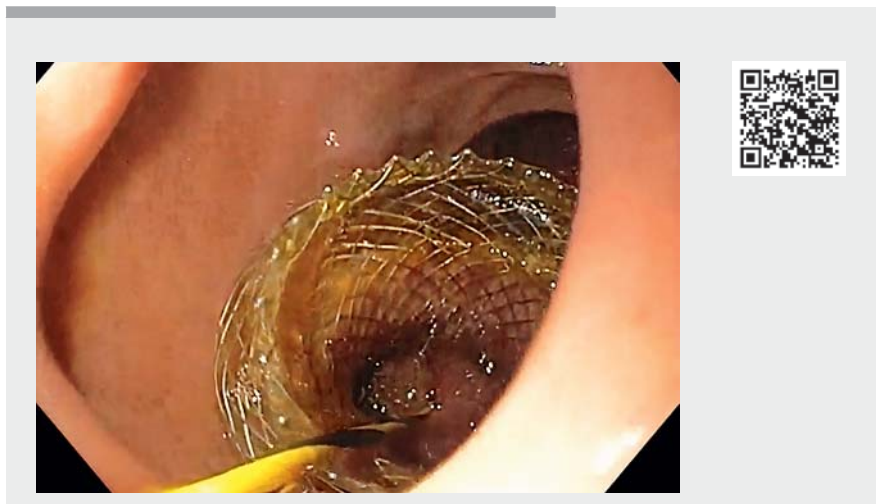
As shown in ► **Video 1**, a second procedure was performed. Using a gastroscope, under fluoroscopic control, a hydrophilic 0.035 inch guidewire was introduced through the gallbladder lumen until the papilla was reached (► **Fig. 3**, ► **Fig. 4**). The duodenoscope was then introduced over the guidewire and biliary cannulation and sphincterotomy were achieved (► **Fig. 5**). No remaining choledocholithiasis was observed. During the



► **Fig. 1** Endoscopic ultrasound showed lithiasis in the common bile duct.



► **Fig. 2** Endoscopic ultrasound-guided placement of a lumen-apposing metal stent between the gallbladder and the duodenal bulb.



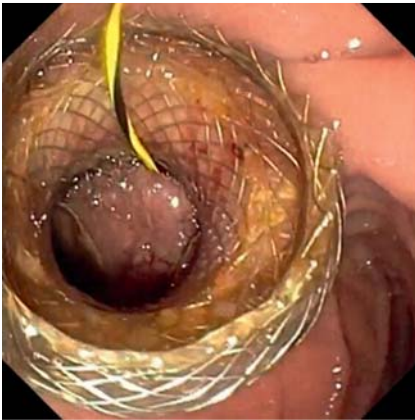
► **Video 1** A rendezvous procedure was accomplished by inserting a guidewire through a previously deployed gallbladder lumen-apposing metal stent. After the papilla was reached, over-the-guidewire biliary cannulation was performed.

same procedure, the stent was removed with a biliary stent extractor and the transmural tract was closed using an over-the-scope clip (OTSC System Set 12/6 mm, type t; Ovesco Endoscopy AG, Tübingen, Germany). After stent removal, the patient was referred for cholecystectomy.

Endoscopy_UCTN_Code_TTT_1AS_2AG

Competing interests

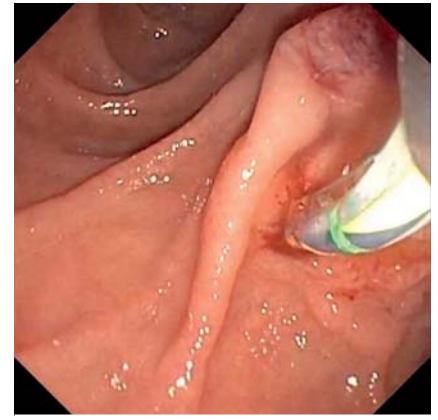
The authors declare that they have no conflict of interest.



► **Fig. 3** Endoscopic view of guidewire introduction using the gallbladder stent.





► **Fig. 4** Cholangiography and visualization of the guidewire through the papilla.



► **Fig. 5** Biliary cannulation and sphincterotomy.

The authors

Margarida Flor de Lima  **Nuno Nunes, Diogo Bernardo Moura, Carolina Chálim Rebelo**  **Vera Costa Santos, José Renato Pereira, Maria Antónia Duarte**

Gastroenterology Department, Hospital do Divino Espírito Santo de Ponta Delgada EPE, Ponta Delgada, Portugal

Corresponding author

Margarida Flor de Lima, MD

Gastroenterology Department, Hospital do Divino Espírito Santo de Ponta Delgada EPE, Avenida D. Manuel I Matriz, 9500 – 370 Ponta Delgada, Portugal
margaridaflordelima@hotmail.com

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