

Endoscopic ultrasound-guided duodenojejunostomy for management of refractory benign hepaticojejunal anastomotic stricture

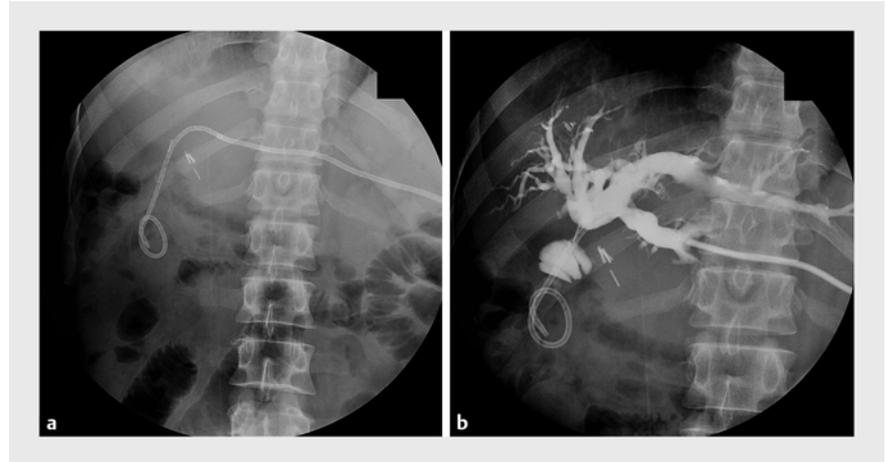
A 45-year-old man was referred to our endoscopy unit because of a benign refractory hepaticojejunal anastomotic stricture. Previous transhepatic anastomotic dilations had failed to guarantee long-term patency. We proposed endoscopic ultrasound (EUS)-guided duodenojejunostomy created using a lumen-apposing metal stent (LAMS) to allow endoscopic management of the bilioenteric stricture. The efferent limb was filled with water and contrast medium from the percutaneous biliary transhepatic drainage (PTBD) (► **Fig. 1 a, b**). Then under EUS guidance, a LAMS (Hot-Axios, 10 × 15 mm) was deployed from the duodenal bulb into the target jejunal loop, using pure cut effect 4. A long 0.025-inch guidewire was coiled inside the loop. Under fluoroscopic and endoscopic guidance both flanges of the LAMS were successfully deployed without complications (► **Video 1**).

In the same session, a fully covered self-expandable metal stent (FCSEMS) (Wallflex; Boston Scientific) was deployed across the stenosed bilioenteric anastomosis (► **Fig. 2**).

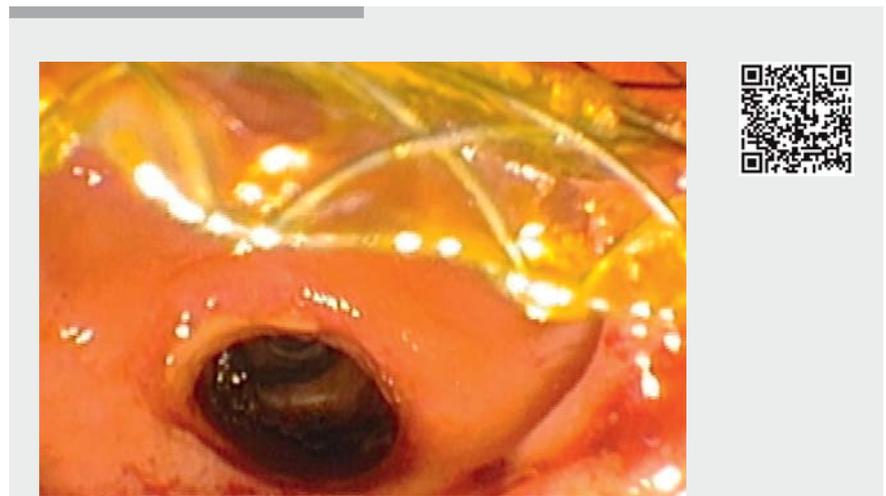
The patient started on an oral diet the same day and he was discharged on day 1. At 6-month follow-up, upper endoscopy was performed with easy passage through the LAMS to remove the FCSEMS. Subsequent evaluation highlighted a good patency of the anastomosis with no secondary biliary stones (► **Video 1**).

At 9 months after the EUS-guided duodenojejunostomy and 3 months from FCSEMS removal the patient is asymptomatic with normal liver test results. The LAMS is still in place.

Benign stricture may occur in up to 24% of cases after bilioenteric anastomosis [1], and PTBD is the gold standard treatment. EUS-guided anastomosis using a LAMS is becoming standardized in tertiary centers, for cholecystogastrostomy,



► **Fig. 1 a** Percutaneous biliary transhepatic drainage (PTBD) in a patient with a benign refractory hepaticojejunal anastomotic stricture. **b** Contrast medium delivered via the PTBD, showing the bilioenteric anastomotic stricture and filling of the efferent jejunal loop.



► **Video 1** Endoscopic ultrasound (EUS)-guided duodenojejunostomy created using a lumen-apposing metal stent (LAMS) to enable endoscopic management of a bilioenteric anastomotic stricture. The duodenojejunostomy allowed delivery of a fully covered self-expandable metal stent (FCSEMS) across the stricture in the same session.

gastrojejunal anastomosis, and in cases of altered anatomy [2, 3].

We report one of the first cases of EUS-guided duodenojejunostomy where a prior PTBD was used to fill the target jejunal loop with water and contrast medium.

Direct EUS-guided transgastric hepatic injection in order to fill the jejunal loop is another viable option that would allow a single-operator single-session procedure.



► **Fig. 2** Fluoroscopy showing the lumen-apposing metal stent (LAMS) and the fully covered self-expandable metal stent (FCSEMS) in place, with contrast opacification of the biliary tree, the efferent jejunal loop, and the stomach.

Permanent duodenojejunostomy using a LAMS seems a feasible and safe technique for the management, of bilioenteric anastomotic stricture in selected cases.

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Competing interests

The authors declare no conflict of interest.

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