Endoscopic ultrasound-guided salvage for a disconnected choledochojejunostomy anastomosis through a jejunal stoma

► **Fig. 1** Fluoroscopic image suggesting a complete disconnection between the jejunum and the bile duct at segment 7 (arrows) in a patient with a history of Roux-en-Y choledochojejunostomy.

A 25-year-old man with a history of deceased-donor liver transplantation using a right lobe graft with Roux-en-Y choledochojejunostomy was referred for endoscopic management of cholangitis due to anastomotic strictures [1] (► **Fig. 1**). The patient developed postoperative bile leakage and disconnection of the choledochojejunostomy anastomosis. He underwent percutaneous transhepatic placement of catheters for the bile ducts in segments 5, 6, and 7 (B5–7). Re-canalization was achieved by percutaneous procedures for B5 and B6, whereas a complete disconnection between B7 and the jejunum was not amenable to the percutaneous approach or double-balloon endoscopy. Therefore, we decided to perform endoscopic ultrasound-guided drainage to re-anastomose B7 with the jejunum.

We inserted an echoendoscope (EG580UT; Fujifilm Corp., Tokyo, Japan) through a pre-existing jejunal stoma, after dilating the fistula with a 20-mm balloon catheter. With the help of contrast injection through the biliary catheter, B7 was punctured using a 19-gauge

► **Fig. 2** Radiographic images during endoscopic ultrasound-guided biliary drainage showing: **a** a guidewire passed through the fistula of a percutaneous catheter; **b** balloon dilation of the puncture site.

► **Video 1** Endoscopic ultrasound-guided choledochojejunostomy for an anastomotic disconnection in a patient with a history of Roux-en-Y choledochojejunostomy. Three self-expandable metal stents are inserted. After their removal 3 months later, the choledochojejunostomy anastomosis is left widely open.

needle and a 0.025-inch guidewire was passed through the fistula of a percutaneous catheter. After inserting a balloon catheter over the guidewire with exter-

nal traction, we dilated the puncture site and deployed a 10-Fr percutaneous catheter into the jejunum across B7 (► **Fig. 2**).

► **Fig. 3** Radiographic image showing three fully-covered self-expandable metal stents placed endoscopically into the three biliary branches.

► **Fig. 4** Endoscopic image suggesting that the choledochojejunostomy anastomosis was widely open after removal of the self-expandable metal stents.

In the following session, we inserted a forward-viewing endoscope (GIF-2T240; Olympus Medical, Tokyo, Japan) through the stoma and replaced each of the percutaneous catheters with fully-covered self-expandable metal stents (8 mm × 4 cm; BONASTENT M-Intraductal; Sewoon Medical Co., Ltd., Chungcheongnam-do, South Korea) (► **Fig. 3**) [2]. The metal stents were subsequently removed endoscopically 3 months later, with no recurrence of cholangitis (► **Fig. 4**).

EUS-guided biliary drainage for a complicated anastomotic disconnection was feasible through a jejunal stoma (► **Video 1**). Given recent advances in EUS-guided pancreatobiliary interventions [3, 4], the use of a jejunal stoma as a port for endoscopic biliary access could further expand this developing frontier of non-surgical management for post-operative complications [5].

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Competing interests

None

The authors

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References

- [1] Tsujino T, Isayama H, Kogure H et al. Endoscopic management of biliary strictures after living donor liver transplantation. *Clin J Gastroenterol* 2017; 10: 297–311
- [2] Moon JH, Choi HJ, Koo HC et al. Feasibility of placing a modified fully covered self-expandable metal stent above the papilla to minimize stent-induced bile duct injury in patients with refractory benign biliary strictures (with videos). *Gastrointest Endosc* 2012; 75: 1080–1085
- [3] Nakai Y, Isayama H, Yamamoto N et al. Indications for endoscopic ultrasonography (EUS)-guided biliary intervention: Does EUS always come after failed endoscopic retrograde cholangiopancreatography? *Dig Endosc* 2017; 29: 218–225
- [4] Teoh AYB, Dhir V, Kida M et al. Consensus guidelines on the optimal management in interventional EUS procedures: results from the Asian EUS group RAND/UCLA expert panel. *Gut* 2018; 67: 1209–1228
- [5] Hu B, Sun B, Cai Q et al. Asia-Pacific consensus guidelines for endoscopic management of benign biliary strictures. *Gastrointest Endosc* 2017; 86: 44–58

Bibliography

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