Forward-viewing echoendoscope is useful for recanalization of postoperative biliary anastomotic atresia in endosonography-guided biliary drainage

One possible cause of biliary peritonitis and stent migration as adverse events of transgastrohepatic endosonography-guided biliary drainage (EUS-BD) [1] is a puncture site in the stomach wall and liver that is not fixed. Magnetic compression anastomosis (MCA) is applied to fix two organs, the gastrointestinal tract and the bile duct [2, 3]. Herein, we present an alternative technique to fix these organs without MCA through recanalization of postoperative biliary anastomotic atresia with EUS-BD using a forward-viewing echoendoscope.

A 78-year-old man who underwent pancreateoduodenectomy because of cholangiocarcinoma was admitted with retrograde cholangitis. We tried to insert internal–external drainage tubes as percutaneous transhepatic biliary drainage tubes; however, the guidewire could not be inserted through the bile duct owing to complete atresia of the anastomosis site (Fig. 1).

We then performed EUS-BD with a forward-viewing echoendoscope (TGF-UC260J, EU-ME1; Olympus Medical Systems, Tokyo, Japan) (Fig. 2, Video 1). We identified the anastomosis site by endoscopy and confirmed by endoscopic ultrasound that the guidewire that was inserted through a percutaneous transhepatic approach was in the bile duct. We punctured the bile duct at the anastomosis site with a puncture needle and placed the guidewire into the bile duct. Although we tried to dilate the bile duct with a balloon dilator, the device could not go through the needle tract. Therefore, the bile duct was dilated with a wire-guided diathermic dilator. We reinserted the balloon dilator and exchanged it initially for a plastic stent (QuickPlaceV; Olympus Medical Systems) (Fig. 3) and subsequently for a wide-caliber stent, before adding another stent to dilate the recanalization route (Fig. 4). No adverse events of EUS-BD were observed. One year after EUS-BD was performed, the patient was free from all stents (Fig. 5).
A forward-viewing echoendoscope may allow us to approach the anastomosis site more vertically and shorten the puncture distance, contributing to the feasibility and safety of the procedure [4].

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Competing interests

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