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DEN Video Article

Endoscopic ultrasound-guided biliary drainage for complete obstruction of hepaticojejunostomy using a forward-viewing echoendoscope and novel spiral dilator

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BRIEF EXPLANATION

BALLOON ENTEROSCOPY-ASSISTED ENDOSCOPIC retrograde cholangiopancreatography (BE-ERCP) has become the first-line therapy for biliopancreatic anastomotic strictures in patients with surgically altered anatomy (SAA).[1] However, BE-ERCP is difficult in patients with SAA who have complete obstruction of the anastomosis. On the other hand, endoscopic ultrasound (EUS)-guided transanastomotic drainage using a forward-viewing echoendoscope (FV-EUS) has been reported to be useful in these patients.[2,3] Recently, the usefulness of a novel spiral dilator in cases of severe stricture has also been reported.[4,5] Here, we describe biliary drainage using an FV-EUS and this novel dilator.

A 79-year-old woman who had undergone pancreaticoduodenectomy for intraductal papillary mucinous carcinoma was admitted to another hospital for anastomotic stricture. Percutaneous transhepatic biliary drainage was attempted, but contrast medium could not flow through the anastomosis, indicating complete obstruction. Therefore, the patient was referred to our hospital. BE-ERCP was attempted first, but canalization was unsuccessful (Fig. 1). Next, EUS-guided choledochojejunostomy using FV-EUS was performed. First, we inserted the FV-EUS into the anastomosis site. Then, after detecting the dilated bile duct, we punctured it with a 19G needle (EZshot3 plus; Olympus Medical Systems, Tokyo, Japan) and placed the 0.025 inch guidewire into the bile duct. Next, a 7Fr mechanical dilator (ES dilator; Zeon Medical, Tokyo, Japan) was inserted to dilate the puncture tract but could not pass through the anastomosis due to severe stricture. Therefore, we used the novel 7Fr spiral dilator (Tornus ES; Olympus Medical Systems). The spiral dilator was inserted smoothly, and the puncture tract

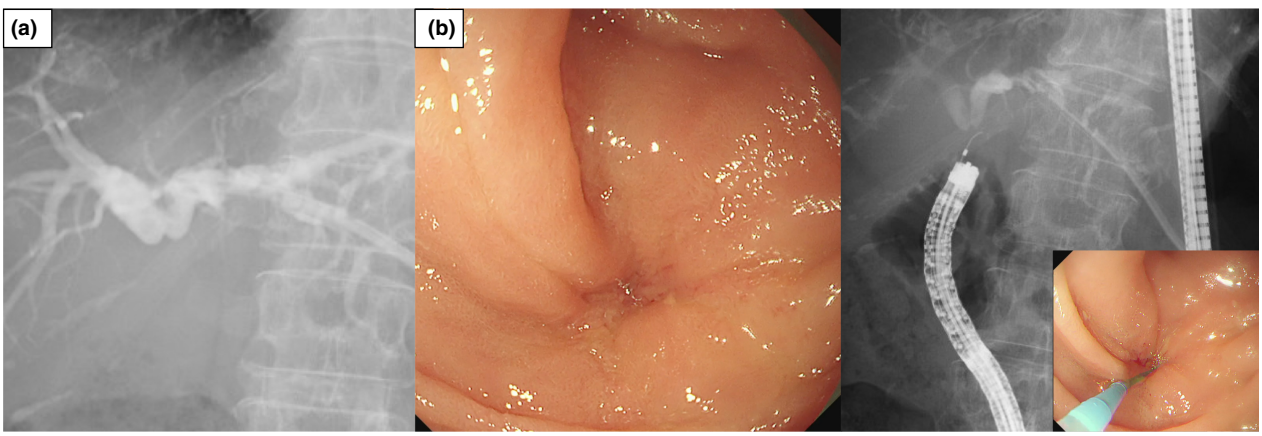

Figure 1 (a) Cholangiography shows contrast medium cannot flow through the anastomosis. An endoscopic image shows complete obstruction of the anastomosis. (b) Balloon enteroscopy-assisted endoscopic retrograde cholangiopancreatography is attempted, but canalization is not possible.

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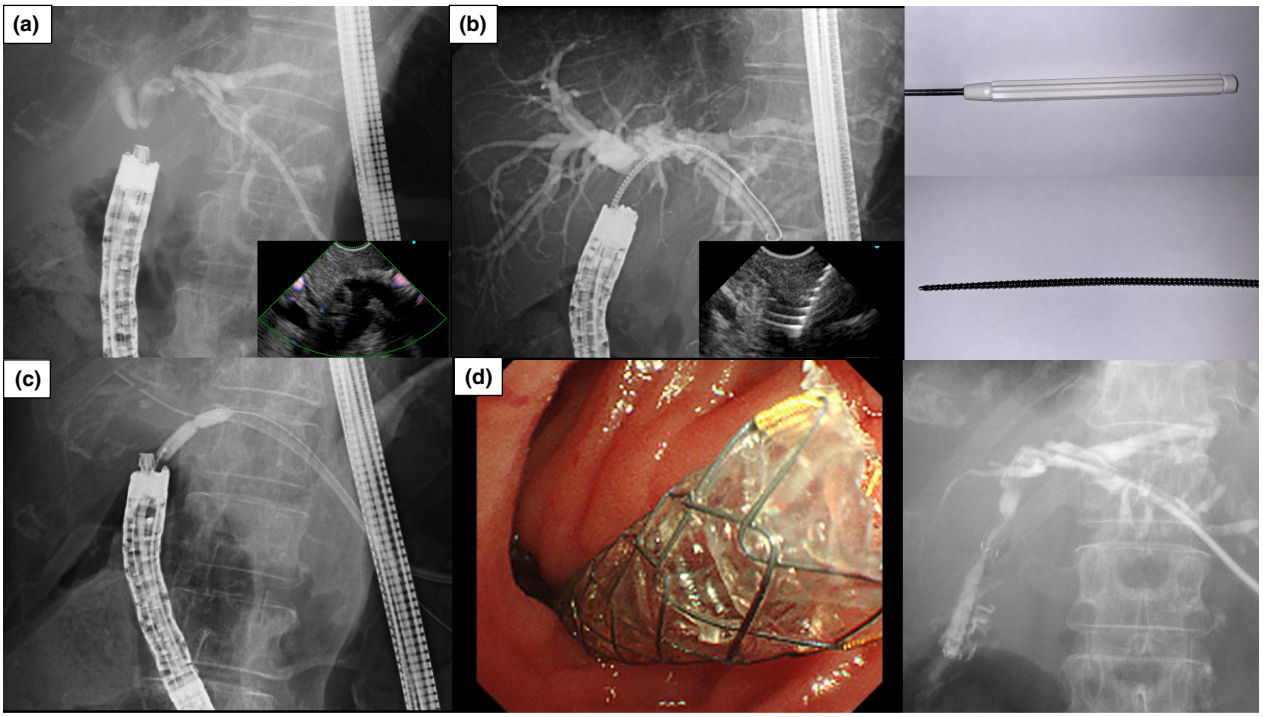

Figure 2 (a) The forward-viewing echoendoscope is inserted into the anastomosis site and the dilated bile duct is detected. (b) A novel 7Fr spiral dilator is able to be inserted and dilate the puncture tract smoothly with the tip moving forward while the assistant turns the spiral dilator handle clockwise. The dilator has a screw-shaped structure and the handle is easy to rotate. (c) A balloon catheter is dilated at the anastomosis. (d) A covered metal stent is placed and the contrast medium can flow through the anastomosis.

could be bluntly dilated. After the puncture tract was further dilated with a balloon catheter (REN; Kaneka Medix Corp., Osaka, Japan), a covered metal stent (HANARO; M.I.Tech, Seoul, South Korea) was placed. The procedure was successfully completed with no adverse events (Fig. 2, Video S1).

Authors declare no conflict of interest for this article.

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SUPPORTING INFORMATION

ADDITIONAL SUPPORTING INFORMATION may be found in the online version of this article at the publisher's web site.

Video S1 A case of endoscopic ultrasound-guided biliary drainage for complete obstruction of hepaticojejunostomy using forward-view endoscopic ultrasound and a novel spiral dilator.