Endoscopic ultrasound-guided choledochoduodenostomy (EUS-CDS) is a potential procedure for primary drainage in unresectable malignant distal biliary obstruction and can replace endoscopic retrograde cholangiopancreatography. However, adverse events following EUS-CDS are occasionally reported, the most common being bile leak due to fistula dilation [1, 2]. The safety of EUS-CDS without fistula dilation using two types of thin, fully covered self-expandable metallic stents (FCSEMs) has been previously reported [3–5]. Here we report a case in which EUS-CDS without fistula dilation was successfully performed using a novel FCSEM with a 5.9-Fr delivery system (Hanarostent Benefit; M.I.Tech, Seoul, Korea) (Fig. 1).

A 62-year-old man who had received chemotherapy for unresectable pancreatic body cancer developed a distal biliary obstruction. Computed tomography revealed a 25-mm mass on the pancreatic body and a dilated common hepatic duct (CHD) (Fig. 2a). We performed EUS-CDS for primary drainage. The dilated CHD was localized using a forward-viewing echoendoscope (TGF-UC260J; Olympus Medical Systems, Tokyo, Japan) from the duodenal bulb (Fig. 2b). First, the CHD was punctured with a 19-gauge needle (EZ Shot 3 Plus; Olympus Medical Systems). Cholangiography revealed a dilated CHD with distal obstruction. Second, a 0.025-inch guidewire (M-Through; ASAHI INTECC Corp., Tokyo, Japan) was inserted into the B4 branch. Fistula dilation was avoided, and the novel FCSEM (8 mm × 6 cm) was passed through the duodenum and CHD wall smoothly. Finally, the stent was placed in the CHD from the duodenal bulb (Fig. 3, Fig. 4; Video 1).

No adverse events occurred during or after the procedure. In previous reports, EUS-CDS without fistula dilation was performed using the FCSEMs with a 7-Fr or 7.5-Fr delivery system, with 31.6%–100% technical success rate [3–5]. This is the first report discussing EUS-CDS without fistula dilation using a FCSEM with a 5.9-Fr delivery system, which is the thinnest ever commercially available delivery system and is capable of simpler and safer EUS-CDS procedures.

**Endoscopy_UCTN_Code_TTT_1AS_2AD**

**Acknowledgements**

This work was supported in part by The National Cancer Center Research and Development Fund (31-A-13).

**Competing interests**

The authors declare that they have no conflict of interest.
The authors

Takehiko Koga¹, Susumu Hijioka¹, Yuya Hisada¹, Yuta Maruki¹, Yoshikuni Nagashio¹, Takuji Okusaka¹, Yutaka Saito²

¹ Department of Hepatobiliary and Pancreatic Oncology, National Cancer Center Hospital, Tokyo, Japan
² Department of Endoscopy, Gastrointestinal Endoscopy Division, National Cancer Center Hospital, Tokyo, Japan

Corresponding author

Susumu Hijioka
Department of Hepatobiliary and Pancreatic Oncology, National Cancer Center Hospital, 5-1-1 Tsukiji, Chuo-ku, Tokyo 104-0045, Japan
Fax: +81-3-3542-3815
shijioka@ncc.go.jp

References


▶Fig. 3 Endoscopic ultrasonography-guided choledochoduodenostomy without fistula dilation. a The common hepatic duct (CHD) was punctured with a 19-gauge needle. b Cholangiography revealed a dilated CHD with a distal obstruction. c A 0.025-inch guidewire was inserted into the B4 branch, and the fully covered self-expandable metal stent (FCSEMS) was inserted into the CHD without fistula dilation. d The FCSEMS was deployed into the CHD.

▶Fig. 4 Image findings after the procedure. a Fluoroscopic image. b Endoscopic image.
Video 1 The video shows an endoscopic ultrasonography-guided choledochoduodenostomy without fistula dilation performed using a novel fully covered self-expandable metal stent with a 5.9-Fr ultra-thin delivery system.