Novel technique of additional anchor plastic stent placement during endoscopic ultrasound-guided gallbladder drainage

A fully covered self-expanding metal stent (FCSEMS) is frequently used for endoscopic ultrasound-guided gallbladder drainage (EUS-GBD) in some countries where the use of lumen-apposing metal stent for EUS-GBD is not approved [1, 2]. Coaxial placement of a double-pigtail plastic stent (DPPS) as an anchor within the FCSEMS for EUS-GBD is preferred to prevent food impaction, delayed bleeding, and stent migration [2, 3]. However, placing the additional stent through the distal end of the FCSEMS can be challenging and risky, as the pushing force of the DPPS may be transmitted to an inappropriate axis on the bent portion of the long FCSEMS (Fig. 1a). We developed a novel technique to overcome these technical difficulties (Fig. 1b).

A 75-year-old woman with unresectable distal bile duct cancer who had previously undergone FCSEMS placement in the bile duct underwent EUS-GBD for acute cholecystitis (Fig. 2). Following puncture with a 19-gauge needle and dilation with a 4-mm balloon dilator, an FCSEMS (HANAROSTENT Benefit, 8 × 100 mm) was deployed from the gallbladder to the duodenum. As 6 cm of the FCSEMS was positioned in the duodenum, additional placement of a plastic stent through the distal end of the FCSEMS appeared to be technically challenging. Therefore, we placed a plastic stent using a novel technique (Video 1, Fig. 3). A standard catheter and guidewire were inserted into the FCSEMS and gallbladder from the side of the FCSEMS near the duodenal wall and after puncturing the membrane of...
the FCSEMS using the catheter under direct endoscopic visualization. A DPPS (7-Fr × 7 cm) was inserted into the gallbladder through the guidewire without dilation. It was positioned as a bridge connecting the gallbladder, FCSEMS, and duodenum in a lambda-shaped configuration. Using this novel technique, additional DPPSs can be readily placed, even in cases where an exceptionally long portion of FCSEMS is located in the duodenum.

Endoscopy_UCTN_Code_TTT_1AS_2AH

Conflict of Interest

The authors declare that they have no conflict of interest.

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Endoscopy 2024; 56: E283–E284
DOI 10.1055/a-2277-0615
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Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany

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