Combined duodenal stenting and endoscopic ultrasound-guided hepatico-gastrostomy using forward-viewing echoendoscope: a one-scope technique

Gastric cancer is the second leading cause of cancer mortality all over the world. Although early detection has increased the curative resection, many cases still present in an advanced stage with gastric outlet obstruction and lymph node metastasis [1, 2]. Here, we report a novel technique for palliative management of pyloric obstruction and obstructive jaundice in the same session using a forward-viewing echoendoscope.

A 71-year-old patient with advanced gastric cancer presented with pyloric obstruction and hilar obstructive jaundice (Fig. 1). We decided on palliative management including duodenal stenting and an endoscopic ultrasound (EUS)-guided hepatico-gastrostomy using a forward-viewing echoendoscope.

First, we marked the esophagogastric junction with an endoclips to avoid trans-esophageal puncture. We advanced the forward-viewing echoendoscope down to the gastric antrum. Under fluoroscopic guidance, the stricture site was determined and then cannulated with a 0.25-inch guidewire within the catheter (Fig. 1). A 2.2-cm×12-cm uncovered duodenal stent (HANAROSTENT; Olympus, Tokyo, Japan) was advanced over the guidewire traversing the stricture site, both ends of the stent were carefully monitored, and then the stent was successfully deployed (Fig. 2).

Second, we visualized the liver and determined the bile duct of segment 2 (B2) with the same endoscope. We punctured B2 using a 22-gauge needle (Expect Slimline SL; Boston Scientific, Marlborough, Massachusetts) with a preloaded 0.018-inch guidewire (Fig. 3). After bile duct confirmation by contrast medium, we dilated the track by using a 7-Fr mechanical dilator (ES dilator; ZEON Medical, Tokyo, Japan). We successfully deployed the hepatico-gastrostomy stent (5.9-Fr delivery system, HANAROSTENT Benefit, 6mm×10cm, fully covered; Boston Scientific) (Fig. 4).

Here, we recommend a forward-viewing echoendoscope for both duodenal stenting and EUS-guided hepatico-gastrostomy. With a wide working channel and forward-view orientation, this endoscope allows the output of the duodenal stent easily over the guidewire. Moreover, it enabled us to perform the hepatico-gastrostomy at the same time. In comparison to the curved echoendoscope, the forward-viewing echoendoscope
makes transgastric B2-puncture easier because of the forward-view orientation [3]. We successfully deployed the duodenal stent and performed the hepaticogastrostomy easily using only a forward-viewing echoendoscope (▶ Video 1).

Endoscopy_UCTN_Code_CPL_1AH_2AD

Competing interests

The authors declare that they have no conflict of interest.

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Endoscopy 2022; 54: E516–E517
DOI 10.1055/a-1640-8177
ISSN 0013-726X
published online 25.10.2021
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Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany