Endoscopic ultrasound-guided gastroenterostomy using a metal stent for the treatment of afferent loop syndrome

A 79-year-old man with a history of pylorus-preserving pancreaticoduodenectomy for pancreatic head cancer and Child’s reconstruction underwent total pancreatectomy for remnant pancreatic recurrence 2 years later. Four months after total pancreatectomy, he developed cholangitis. Computed tomography (CT) (Fig.1) showed afferent loop syndrome arising from disseminated peritoneal nodule formation. We attempted to place an intestinal stent at the afferent loop stenosis site to resolve the obstructive jaundice and cholangitis.

Although the endoscope (CF-H260AI; Olympus Medical Systems, Tokyo, Japan) reached the stenotic region, advancing the guidewire was difficult and placing the stent was impossible because it was difficult to visualize the stenosis squarely (Fig.2). Thus, the procedure was converted to endoscopic ultrasound (EUS)-guided fistulization from the remnant stomach to the afferent loop (Video 1).

The afferent loop extending from the remnant stomach was confirmed by EUS, followed by puncture with a 19-gauge needle (EZ Shot 3 Plus; Olympus Medical Systems, Tokyo, Japan) (Fig.3a). After using contrast imaging to confirm that the needle had penetrated the intestinal tract, a 0.025-inch guidewire (VisiGlide 2; Olympus Medical Systems) was advanced into the dilated intestinal tract (Fig.3b). Blunt dilation using an ES Dilator (Zeon Medical, Tokyo, Japan) was attempted, but it was difficult; thus, the fistula was dilated using a diathermic dilator (Cysto-Gastro-Set; Endo-Flex GmbH, Voerde, Germany), followed by place-

Fig.1 Computed tomography scan showing intestinal and bile duct dilation. At the onset of afferent loop syndrome, disseminated nodules (arrow) were observed.

Fig.2 The intestinal bend and severe stenosis obstructed the guidewire. a Endoscopic image of the intestinal bend. b, c Fluoroscopic images showing severe stenosis.

Fig.3 Endoscopic ultrasound (EUS)-guided transgastric afferent loop drainage. a Puncture of the dilated intestinal tract under EUS guidance using a 19-gauge needle. b The guidewire was placed in the afferent loop.
ment of a fully covered metal stent (X-Suit NIR 10 mm 8 cm; Olympus Medical Systems) (Fig. 4). No complications were observed, and the patient’s liver dysfunction and cholangitis promptly improved (Fig. 5).

Although previous reports have described the use of plastic stents [1–3] and lumen-apposing metal stents [3–5], this is the first report on the use of a tubular type metal stent. This method is effective in treating afferent loop syndrome if placement of an endoscopic intestinal stent is difficult.

Endoscopy_UCTN_Code_TTT_1AP_2AD

Competing interests

None

The authors

Yasunari Sakamoto1, Susumu Hijioka1, Yuta Maruki1, Akihiro Ohba1, Yoshikuni Nagashio1, Takuji Okusaka1, Yutaka Saito2
1 Department of Hepatobiliary and Pancreatic Oncology, National Cancer Center Hospital, Tokyo, Japan
2 Endoscopy Division, National Cancer Center Hospital, Tokyo, Japan

Corresponding author

Susumu Hijioka, MD
Department of Hepatobiliary and Pancreatic Oncology, National Cancer Center Hospital, 5-1-1 Tsukiji, Chuo-ku, Tokyo, Japan
Fax: +81-3-35423815
shijioka@ncc.go.jp
References