Endoscopic ultrasonography-guided fine-needle biopsy from the pancreatic head of a patient with Roux-en-Y reconstruction

Although endoscopic ultrasonography-guided fine needle biopsy (EUS-FNB) has been developed, its implementation is still challenging in patients with surgically altered anatomy [1–3]. A 68-year-old man who had undergone laparoscopic total gastrectomy with Roux-en-Y reconstruction for gastric cancer 40 months previously was admitted to our department. His serum carcinoembryonic antigen (CEA) level was increased at 43.6 ng/mL. Abdominal computed tomography (CT) scanning revealed an obscure mass beside the pancreatic head (▶Fig.1a). An 18F-fluorodeoxyglucose positron emission tomography/CT scan revealed abdominal accumulation of tumor near the surgical staples (▶Fig.1b). The patient underwent transjejunal EUS-FNB. First, a double-balloon endoscope (DBE; EI-530B; Fujifilm, Tokyo, Japan) was inserted into the afferent limb. Next, a 0.035-inch ultrastiff guidewire (Wrangler SUS endoscopic guidewire; Piolax Medical Devices, Yokohama, Japan) was placed in the afferent limb. Thereafter, a new curved linear echoendoscope (CLE; EG-580UT; Fujifilm) was inserted into the afferent limb over the guidewire under fluoroscopic and endoscopic guidance. The trajectory of the CLE was close to the surgical staples, these being a tumor landmark (►Fig.2; ►Video 1). The EUS revealed a hypoechoic mass beside the pancreatic head near the surgical staples. Finally, EUS-FNB was performed using a 22-gauge Franseen needle (Acquire; Boston Scientific Japan, Tokyo, Japan) without any complications (►Fig.3; ►Video 1). The cytopathological diagnosis showed adenocarcinoma, consistent with recurrence of the gastric cancer. EUS-FNB for patients who have undergone Roux-en-Y reconstruction, particularly from the pancreatic head, is still challenging [1–3]. The following tips have been illustrated by this case: (i) DBE-guided ultrastiff guidewire placement can correct flexion of the afferent

► Fig.1 Images of a tumor mass near to the surgical staples in a patient who had undergone laparoscopic total gastrectomy with Roux-en-Y reconstruction: a contrast-enhanced computed tomography (CT) scan, showing an obscure mass beside the pancreatic head; b positron emission tomography (PET)/CT scan, showing an appearance suggestive of pancreatic cancer or a recurrent gastric cancer.

► Video 1 Step-by-step process of endoscopic ultrasonography-guided fine needle biopsy of the pancreatic head through the afferent limb in a patient who had undergone previous Roux-en-Y reconstruction.
limbs; (ii) a new CLE enables safe and reliable intubation into the afferent limb because of the frontal endoscopic view and flexible scope tip [3]. The combination of DBE-assisted ultrastiff guidewire placement and new CLE intubation facilitates EUS-FNB from the pancreatic head for patients with surgically altered anatomy.

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**Competing interests**

None
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