Endoscopic ultrasound-guided pancreaticojejunostomy with a forward-viewing echoendoscope as a treatment for stenotic pancreaticojejunal anastomosis

A 59-year-old man presented with repeated episodes of pancreatitis. His medical history included a Whipple resection for gastric carcinoma at the age of 54. A computed tomography scan showed a sac-like enlargement of the main pancreatic duct, which had obviously developed over a period of time (● Fig. 1).

We first attempted to perform endoscopic retrograde pancreatography (ERCP). This identified the site of the anastomosis; however, we were unable to cannulate the pancreatic duct. Therefore, we decided to perform endoscopic ultrasound (EUS)-guided pancreaticojejunostomy. The procedure was carried out with a forward-viewing echoendoscope (TGF-UC260J; Olympus, Tokyo, Japan). After reaching the anastomosis site, we observed the dilated pancreatic duct by means of EUS. The pancreatic duct was then punctured with a 19-gauge needle (EchoTip Ultra; Cook Medical, Bloomington, Indiana, USA) (● Fig. 2). After the puncture procedure, contrast medium was injected to confirm that the needle was located in the pancreatic duct. Next, a guidewire (VisiGlide 2; Olympus) was inserted into the pancreatic duct through the puncture needle, and the needle was then removed whilst the guidewire remained in place (● Fig. 3). The fistula was subsequently dilated in a stepwise manner with a 4-Fr tapered tip cannula (Star-Tip V; Olympus) and 6-, 7-, and 9-Fr dilation catheters (Soehendra biliary dilation catheters; Cook Medical), which allowed us to place a plastic stent (QuickPlace V, 7.2-Fr; Olympus) across the pancreaticojejunostomy (● Fig. 4).

Recently, EUS-guided transgastric puncture has been reported to be a useful treatment for pancreatic duct obstruction [1–3], although the technique carries the risk of pancreatic juice leakage. On the

Fig. 1 A 59-year-old man, who had undergone Whipple resection for gastric carcinoma 5 years previously, presented with repeated episodes of pancreatitis. **a** A computed tomography (CT) 2 years previously showed mild dilation of the main pancreatic duct. **b** The dilation of the main pancreatic duct had obviously developed over a period of time.

other hand, EUS-guided retrograde pancreatic stent placement using a conventional echoendoscope has also been reported [4]; however this was associated with difficulties in creating and dilating the fistula. Therefore, we consider the use of a forward-viewing echoendoscope to be a more feasible approach to performing EUS-guided pancreaticojejunostomy.

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Fig. 2 The dilated main pancreatic duct was punctured with a 19-gauge needle.

Fig. 3 Contrast medium was injected, and a guidewire was inserted into the pancreatic duct.

Fig. 4 A plastic stent was placed across the pancreaticojejunostomy: **a** endoscopic view; **b** computed tomography (CT) image.

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