Recanalization of an obstructive pancreaticojejunal anastomosis with direct visualization by using antegrade peroral pancreatoscopy

A 60-year-old man came to our hospital complaining of upper abdominal pain possibly due to stenosis of a pancreaticojejunal anastomosis with upstream dilation of the main pancreatic duct (Fig. 1). Because an endoscopic transluminal approach via the afferent loop failed, we performed endoscopic ultrasound (EUS)-guided pancreatic drainage with a 19-gauge needle (EZ Shot 3 Plus; Olympus Co., Tokyo, Japan). However, no contrast medium flowed out of the dilated main pancreatic duct to the jejunum (Fig. 2), and a 0.025-inch guidewire could not be inserted across the anastomosis. A 7-Fr plastic stent was exchanged, 1 month later, for a 6-mm fully covered self-expandable metallic stent (Niti-S Biliary S-type Stent, Century Medical Co., Ltd., Tokyo, Japan) across the pancreaticogastrostomy to perform peroral pancreatoscopy (POPS) (Fig. 3). A SpyGlass DS system (Boston Scientific Co., Marlborough, Massachusetts, USA) was used to perform POPS to visualize the anastomosis from the inside of the main pancreatic duct (Video 1). We found the duct completely obstructed at the anastomotic site and covered with

**Fig. 1** Contrast-enhanced computed tomography (coronal views) showing the dilated main pancreatic duct of the remnant pancreas (arrow).

**Fig. 2** Endoscopic ultrasound-guided pancreatic drainage. a The dilated main pancreatic duct (arrow) was punctured with a 19-gauge needle under endoscopic ultrasound guidance. b From fluoroscopy, no contrast medium flowed out of the dilated pancreatic duct (arrow-head).

**Fig. 3** A 6-mm fully covered self-expandable metallic stent was inserted across the pancreaticogastrostomy.

**Video 1** Recanalization of the stenosis of a pancreaticojejunal anastomosis under direct visualization by using antegrade peroral pancreatoscopy via endoscopic ultrasound-guided pancreaticogastrostomy.
fibrotic tissues (▶Fig. 4). It was difficult to break through this obstruction even with POPS guidance. However, repeated poking with a guidewire partially broke the fibrotic tissues and a guidewire could finally be passed through the anastomosis. After dilation of this anastomosis using a 7-Fr catheter and a 6-mm balloon catheter, contrast medium immediately flowed from the main pancreatic duct to the jejunum. No procedure-related adverse events were observed, and the abdominal symptoms improved after treatment.

Although the efficacy of EUS-guided pancreatic drainage for stenosis of the pancreaticojejunal anastomosis has been described [1, 2], the procedure is still challenging. Recently, the usefulness of cholangioscopy for stenosis of the biliary-enteric anastomosis has been reported [3, 4]. Therefore, direct visualization using POPS via EUS-guided gastrostomy appears to be a promising alternative method if fluoroscopic interventions have failed.

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Competing interests

The authors declare they have no conflict of interest.

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