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Use of a transpapillary stent as a guidepost for endoscopic ultrasound-guided pancreatic duct drainage in the treatment of disconnected pancreatic duct syndrome

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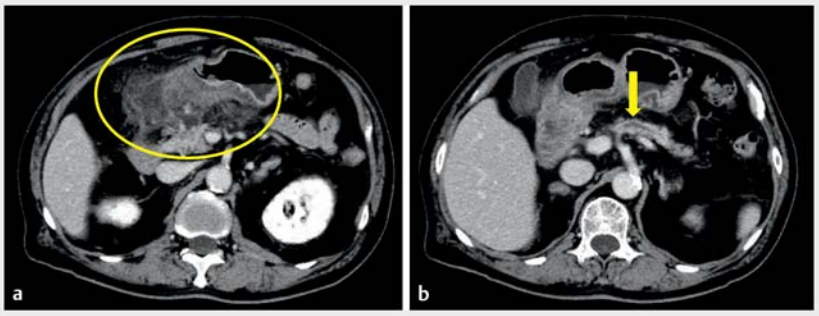
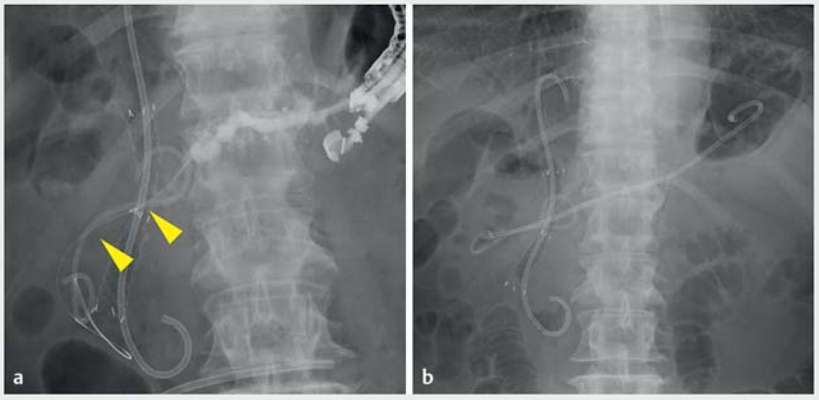


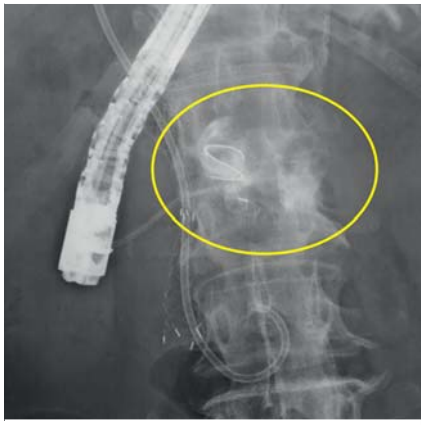
▶ **Fig. 1** A 71-year-old man was diagnosed with disconnected pancreatic duct syndrome caused by severe acute pancreatitis. **a** A pancreatic fistula had been worsening with pain (yellow circle). **b** There was dilation upstream of the pancreatic duct (PD) (yellow arrow).



▶ **Fig. 3** We performed endoscopic ultrasound-guided pancreatic duct drainage from upstream of the dilated dorsal duct to bridge the disruption. **a** The prior double-pigtail PS could be used as a guidepost (yellow triangle). **b** We successfully bridged from the upstream dorsal duct to the minor papilla.

Disconnected pancreatic duct syndrome (DPDS) is an important complication in patients with acute necrotising pancreatitis that leads to recurrent pancreatic fluid collection. Endoscopic treatments including transpapillary and/or ultrasound-guided drainage are typically used and are minimally invasive [1–3]. Although bridging the pancreatic duct (PD) over a disruption with a stent is ideal, it is a technically challenging procedure [4, 5]. Herein, we report a pincer method to bridge the PD via endoscopic ultrasound-guided pancreatic duct drainage (EUS-PD) using a transpapillary stent as a guidepost.

A 71-year-old man was diagnosed with DPDS caused by severe acute pancreatitis. A pancreatic fistula had been worsening with pain (▶ **Fig. 1 a**), and there was dilation upstream of the PD (▶ **Fig. 1 b**), so we performed transpapillary drainage.



▶ **Fig. 2** According to endoscopic retrograde pancreatography, the dorsal duct was completely disrupted in the body of the pancreas (yellow circle) with complete divisum. The upstream dorsal duct could not be visualised (complete PD disruption), so we placed a 6-French double-pigtail plastic stent (PS) via the minor papilla. Pancreatic fluid collection causes obstructive jaundice, and we also placed biliary stents.

According to endoscopic retrograde pancreatography, the dorsal duct was completely disrupted in the body of the pancreas with complete divisum (▶ **Fig. 2**). The upstream dorsal duct could not be visualised (complete PD disruption), so we placed a 6-French double-pigtail plastic stent (PS) via the minor papilla. Then we performed EUS-PD from upstream of the dilated dorsal duct to bridge the disruption (▶ **Fig. 3 a**). The previously placed PS was used as a guidepost, and we successfully bridged from upstream of the dorsal duct to the minor papilla (▶ **Fig. 3 b**, ▶ **Video 1**). Two months later, we changed the PS to a 10-French straight-type PS over the disruption to manage pancreatic-fistula exacerbations.

Bridging the PD over the disruption was hampered by the inability to negotiate the guidewire appropriately because of a lack of information beyond the disruption. The effectiveness of using a PS from

Video 1 Placement of a transpapillary stent aids endoscopic ultrasound-guided pancreatic duct drainage in the treatment of disconnected pancreatic duct syndrome.

the duodenum into the pancreatic fistula area is limited. However, while accessing from the distal PD, the prior PS from the duodenum laid out the appropriate path. This pincer method might facilitate complete bridging of the PD over a disruption in patients with DPDS.

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Competing interests

The authors declare that they have no conflict of interest.

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