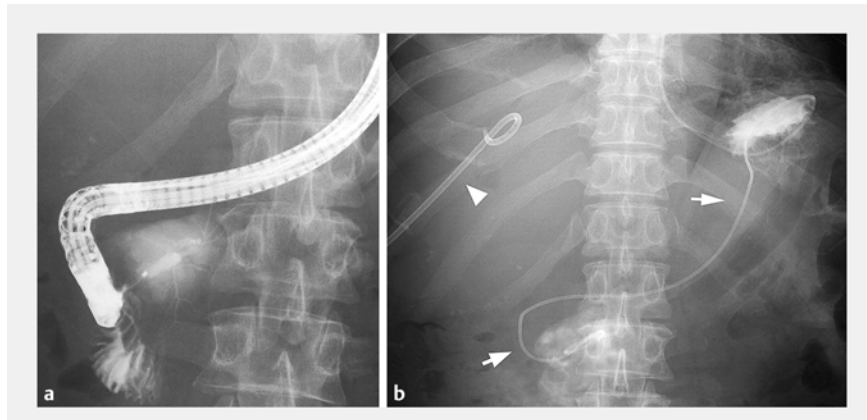


## Salvage endoscopic ultrasound-guided rendezvous technique for disconnected pancreatic duct syndrome in a patient with severe acute pancreatitis

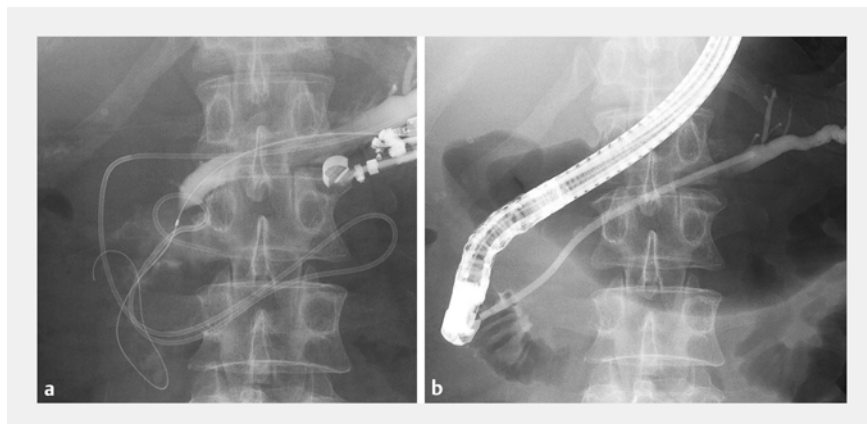


► **Fig. 1** Computed tomography at the previous hospital revealed multiple walled-off necrosis (arrows).

Disconnected pancreatic duct syndrome (DPDS) is characterized by extraductal leakage of pancreatic juice and destruction of tissue surrounding the pancreas [1]. Many DPDS cases need surgical treatment [2]. Transpapillary pancreatic stenting and endoscopic ultrasound (EUS)-guided transmural drainage of PD and walled-off necrosis (WON) are also reported to be effective for DPDS [2–4]. The EUS-guided rendezvous technique (EUS-RV) was shown to be effective as a salvage procedure to connect to the disruption directly when drainage procedures to treat DPDS proved ineffective. A 60-year-old man suffered from severe pancreatitis after endoscopic retrograde cholangiopancreatography (ERCP) for PD stenosis of the pancreatic head. He was transferred to our hospital for further treatment because his WON-related symptoms (► **Fig. 1**) had worsened. We performed EUS-guided transmural drainage for the infected WON and percutaneous drainage for the abdominal effusion with a high amylase level. ERCP was performed for drainage to relieve the DPDS. Pancreatography showed only the proximal PD and extravasation of contrast medium in the WON (► **Fig. 2a**). A nasocystic tube was placed in the WON



► **Fig. 2** Pancreatography. **a** The proximal pancreatic duct without the distal duct and extravasation of contrast medium to the walled-off necrosis. **b** A nasocystic drainage tube (arrows) was placed in the walled-off necrosis that communicated with the pancreatic duct. Percutaneous drainage of the abdominal effusion had been performed previously (arrowhead).



► **Fig. 3** The endoscopic ultrasound-guided rendezvous technique. **a** A hydrophilic guidewire was advanced across the papilla of Vater after puncture of the pancreatic duct, using the nasocystic tube as a guide. **b** A pancreatic stent was placed to connect to the disconnected pancreatic duct.

via the PD because guidewire negotiation to the distal PD had failed (► **Fig. 2b**). Pancreatic juice still leaked, so EUS-RV was performed to treat the DPDS (► **Video 1**).

The PD was punctured transgastrically by a 19-gauge needle (EZ shot 3 Plus; Olympus Medical, Tokyo, Japan), and a 0.025-inch hydrophilic guidewire was manipulated through the duodenal papilla along

the nasocystic tube (► **Fig. 3a**). The echoendoscope was switched to a duodenoscope. The guidewire was grasped and brought into the accessory channel. Another catheter was cannulated over the guidewire to the PD. Finally, an 8.5-Fr pancreatic stent (Olympus Medical) was placed across the disconnected PD (► **Fig. 3b**). The exudate fluid was markedly reduced with external drainage, so



**Video 1** Effective endoscopic ultrasound-guided rendezvous technique to connect to a pancreatic duct that had become disconnected due to severe acute pancreatitis.

the patient was transferred to the previous hospital 9 days after PD stenting without any complications.

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### Competing interests

The authors declare that they have no conflicts of interest.

### The authors

**Shinichi Hashimoto, Hiromichi Iwaya, Shiroh Tanoue, Yusuke Fujino, Makoto Hinokuchi, Shiho Arima, Akio Ido**

Digestive and Lifestyle Diseases, Kagoshima University Graduate School of Medical and Dental Sciences, Kagoshima, Kagoshima, Japan

### Corresponding author

**Shinichi Hashimoto, MD**

Digestive and Lifestyle Diseases, Kagoshima University Graduate School of Medical and Dental Sciences, Kagoshima, 8-35-1 Sakuragaoka, Kagoshima 890-8520, Japan  
Fax: +81-99-2643504  
kumdsh@m.kufm.kagoshima-u.ac.jp

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