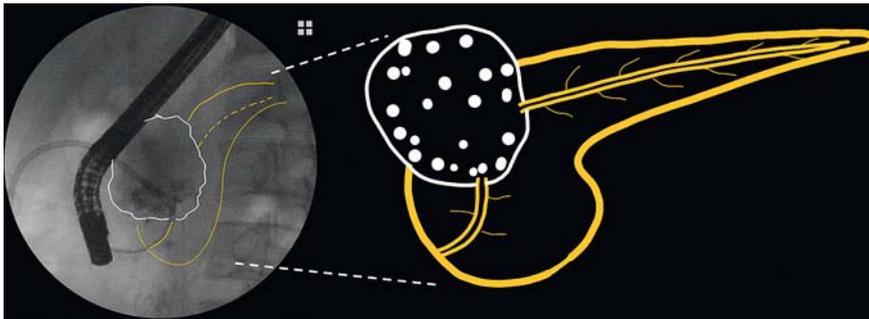
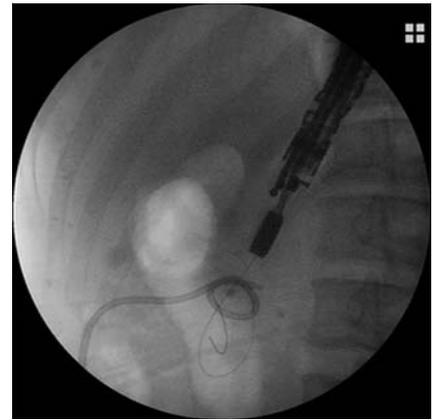


## A novel peroral pancreatoscopy combined endoscopic ultrasonography-assisted rendezvous procedure: a new strategy for bridging disconnected pancreatic duct syndrome

OPEN  
ACCESS



► **Fig. 1** Fluoroscopic image during endoscopic retrograde cholangiopancreatography and accompanying schematic showing the pseudocyst with no opacification of the upstream main pancreatic duct, confirming disconnected pancreatic duct syndrome.



► **Fig. 2** Fluoroscopic image showing endoscopic ultrasonography-guided puncture of the upstream main pancreatic duct, with the guidewire passing into the pseudocyst.



► **Fig. 3** Peroral pancreatoscopy showing the endoscopic ultrasonography guidewire in the pseudocyst.



► **Fig. 4** Fluoroscopic image showing a single-pigtail plastic stent that was placed via the papilla across the disconnection of the main pancreatic duct.

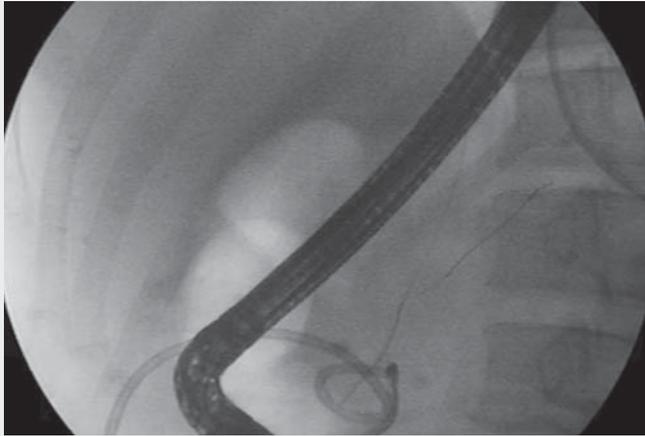
A 48-year-old man with a history of acute necrotizing pancreatitis presented to our institution for management of a persistent external pancreatic fistula. He had required percutaneous catheter drainage for a pseudocyst in the pancreatic neck before this complication. A pancreatogram showed that the pseudocyst was in communication with the main pancreatic duct (MPD) in the head; however, there was no opacification of the upstream MPD, confirming complete MPD disconnection (► **Fig. 1**). It had not been possible to traverse the MPD dis-

connection with a guidewire during prior attempts.

We attempted to advance a novel peroral cholangiopancreatoscope (“eyeMax”, 9Fr; Micro-Tech Co., Ltd., Nanjing, China) across the papilla into the pseudocyst but were unable to find the opening of the upstream MPD. Therefore, we decided to use the endoscopic ultrasonography-assisted rendezvous technique (EUS-RV) to help locate the opening with the cholangiopancreatoscope. Using a linear echoendoscope, the upstream MPD was recognized and punc-

tured with a 19G fine-needle aspiration (FNA) needle in the stomach. A second guidewire was inserted through the needle into the MPD and further down into the pseudocyst (► **Fig. 2**). Under pancreatoscopic guidance again, we were able to see the EUS guidewire coming out of the disrupted orifice of the upstream MPD (► **Fig. 3**). Following the EUS guidewire, the cholangiopancreatoscope guidewire was smoothly inserted into the upstream MPD (► **Video 1**). An endoscopic retrograde cholangiopancreatography (ERCP) catheter was used to adjust the direction of the guidewire to gain deep access to the MPD and a 7-Fr × 9-cm single-pigtail plastic stent was placed via the papilla across the disconnection (► **Fig. 4**; ► **Video 1**). The percutaneous drainage catheter was removed, with successful closure of the cutaneous opening of the fistula noted 2 months later.

In conclusion, the combination of ERCP, EUS, and peroral pancreatoscopy offers a novel, accurate, and microinvasive treatment method for pancreatic duct related disorders [1–3].



**Video 1** A completely disrupted pancreatic duct is bridged using a novel peroral choangiopancreatostomy combined with an endoscopic ultrasonography-assisted rendezvous technique.

Endoscopy\_UCTN\_Code\_TTT\_1AS\_2AD

### Competing interests

The authors declare that they have no conflict of interest.

### The authors

**Peng Wang, Tao Yu, Hongbo Ren, Rui Ji, Zhen Li, Guangchao Li, Ning Zhong**  
Department of Gastroenterology, Qilu Hospital of Shandong University, Jinan, Shandong, China

### Corresponding author

**Ning Zhong, MD**  
No. 107, Wenhuxi Road, Jinan, 250012, China  
nathan.zhongning@foxmail.com

### References

- [1] Baron TH, DiMaio CJ, Wang AY et al. American Gastroenterological Association Clinical Practice Update: Management of pancreatic necrosis. *Gastroenterology* 2020; 158: 67–75
- [2] Verma S, Rana SS. Disconnected pancreatic duct syndrome: Updated review on clinical implications and management. *Pancreatology* 2020; 20: 1035–1044
- [3] Varadarajulu S, Noone TC, Tutuian R et al. Predictors of outcome in pancreatic duct disruption managed by endoscopic transpapillary stent placement. *Gastrointest Endosc* 2005; 61: 568–575

### Bibliography

Endoscopy 2023; 55: E366–E367  
DOI 10.1055/a-1996-0279  
ISSN 0013-726X  
© 2023. The Author(s).

This is an open access article published by Thieme under the terms of the Creative Commons Attribution-NonDerivative-NonCommercial License, permitting copying and reproduction so long as the original work is given appropriate credit. Contents may not be used for commercial purposes, or adapted, remixed, transformed or built upon. (<https://creativecommons.org/licenses/by-nc-nd/4.0/>)

Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany



### ENDOSCOPY E-VIDEOS

<https://eref.thieme.de/e-videos>



*Endoscopy E-Videos* is an open access online section, reporting on interesting cases and new techniques in gastroenterological endoscopy. All papers include a high quality video and all contributions are freely accessible online. Processing charges apply (currently EUR 375), discounts and waivers acc. to HINARI are available.

This section has its own submission website at <https://mc.manuscriptcentral.com/e-videos>