

## Single-balloon-assisted endoscopy with peroral pancreatoscopy and electrohydraulic lithotripsy

OPEN  
ACCESS

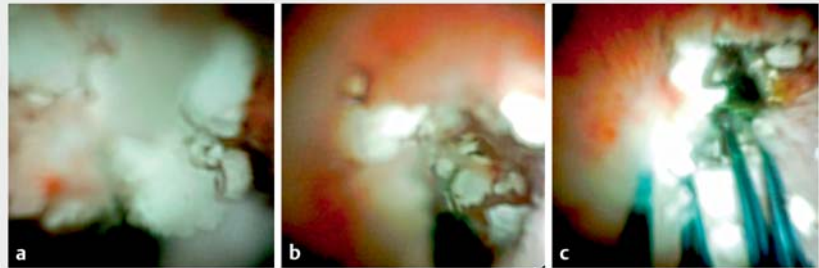


► **Fig. 1** Computed tomography scan image showing recurrent stones in the main pancreatic duct in the tail of the pancreas at the anastomotic site.

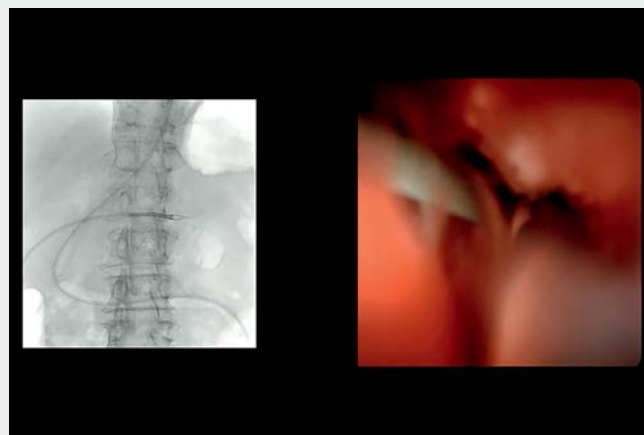


► **Fig. 2** Radiographic image showing the peroral pancreatoscope being inserted into the pancreatic duct through the overtube.

The use of peroral pancreatoscopy (POPS) and electrohydraulic lithotripsy (EHL) to treat endoscopic pancreatic stones has recently been reported as an effective treatment [1]. Here, we report a case of successful removal of pancreatic stones with POPS (SpyScopeDII; Boston Scientific, Marlborough, Massachusetts, USA) and EHL using single-balloon-assisted endoscopy (BAE) in a patient with surgically altered anatomy.



► **Fig. 3** Peroral pancreatoscopy images. **a** The pancreatic stones were confirmed under direct vision. **b** The pancreatic stones were crushed using electrohydraulic lithotripsy. **c** The crushed pancreatic stones were removed using a basket catheter.



► **Video 1** Procedure for the removal of stones in the main pancreatic duct using single-balloon-assisted endoscopy with peroral pancreatoscopy and electrohydraulic lithotripsy.

A 73-year-old man underwent the Partington procedure secondary to alcoholic chronic pancreatitis with stones in the main pancreatic duct. However, the pancreatic stones recurred in the tail of the pancreas at the anastomotic site (► **Fig. 1**). Although it was possible to reach the pancreatic jejunal anastomosis using BAE, it was difficult to remove the pancreatic stones using endoscopy alone. Extracorporeal shock wave lithotripsy was performed, but complete removal of the pancreatic stones was not

possible. We decided to crush the pancreatic stones by using BAE with POPS and EHL.

The BAE was inserted into the pancreatic jejunal anastomosis and the pancreatic duct was cannulated; pancreatography was then performed. After placing a guidewire in the pancreatic duct and dilating the anastomosis with a balloon dilation catheter (REN biliary dilation catheter; KANEKA, Osaka, Japan), the BAE was removed, leaving the guidewire and the overtube in place. The POPS

scope was smoothly inserted through the overtube into the pancreatic duct (► **Fig. 2**). After confirming the pancreatic stones under direct vision (► **Fig. 3 a**), they were crushed using EHL (► **Fig. 3 b**), and were repeatedly removed using a basket catheter (Spyglass Retrieval Basket; Boston Scientific) under POPS guidance (► **Fig. 3 c**). This novel procedure was concluded once all the pancreatic stones had been completely removed (► **Video 1**). No adverse events were observed after the procedure, and the patient was discharged a few days later. The procedure described here is a potential endoscopic treatment option for pancreatic stones in patients with surgically altered anatomy.

Endoscopy\_UCTN\_Code\_TTT\_1AR\_2AI

### Competing interests

The authors declare that they have no conflict of interest.

### The authors

**Shin Yagi, Yusuke Kurita, Takamitsu Sato, Sho Hasegawa, Kunihiro Hosono, Kensuke Kubota, Atsushi Nakajima**

Department of Gastroenterology and Hepatology, Yokohama City University School of Medicine, Yokohama, Japan

### Corresponding author

**Yusuke Kurita, MD, PhD**

Department of Gastroenterology and Hepatology, Yokohama City University Hospital, 3-9 Fukuura, Kanazawa-ku, Yokohama 236-0004, Japan  
kuritay@yokohama-cu.ac.jp

### Reference

- [1] van der Wiel SE, Stassen PMC, Poley JW et al. Pancreatotomy-guided electrohydraulic lithotripsy for the treatment of obstructive pancreatic duct stones: a prospective consecutive case series. *Gastrointest Endosc* 2022; 95: 905–914

### Bibliography

*Endoscopy* 2023; 55: E231–E232

DOI 10.1055/a-1960-3363

ISSN 0013-726X

published online 18.11.2022

© 2022. 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>