Novel method to remove deeply migrated pancreatic duct stent

Many techniques have been described for the removal of proximally migrated pancreatic duct (PD) stents, with a reported success rate of 80% [1]. Success depends on the location of the stent and caliber of PD. In general, it is more difficult if the PD is narrow or not dilated and the stent in located in the pancreatic tail.

A 64-year-old woman underwent a routine endoscopic retrograde cholangiopancreatography (ERCP) for choledocholithiasis and received a straight 5-Fr plastic PD stent placement owing to difficult biliary cannulation. Unfortunately, the PD stent migrated to the pancreatic genu and attempts at removal using a Dormia basket and rat tooth forceps pushed the stent deeper beyond the genu. Owing to the COVID-19 situation, a conventional wire-guided Soehendra stent retriever was not available in our country and would have needed a few months for delivery. Balloon and grasping devices were again unsuccessfully used in an attempt to remove the PD stent. A third ERCP was performed 2 days later. The plan to snare the distal end of the PD stent using a “lasso-over-the-guidewire” technique [2] was unsuccessful because the distal stent edge abutted the PD wall, preventing the snare wire from looping around the migrated PD stent.

With the use of Hi-Torque Command 0.018-inch guidewire (Abbott Laboratories, Chicago, Illinois, USA), a VisiGlide 2 0.025-inch straight-tip guidewire (Olympus Medical, Tokyo, Japan), and a 4-mm microsnare and microcatheter, we report this novel “closed-loop” method of removing a migrated PD stent in the tail of the pancreas, where conventional techniques failed and the wire-guided stent retriever was not available (Fig.1, Video 1). This method securely removes the impacted stent with minimal trauma to the pancreatic duct.

**Endoscopy_UCTN_Code_TTT_1AR_2AZ**

![Fig.1](image-url) The novel “closed-loop” method is demonstrated in six steps. 

- **a** The 0.018-in guidewire (purple) was passed into the pancreatic duct (PD) through the migrated PD stent (green).
- **b** The microcatheter (grey) was then railroaded through an 0.018-in guidewire into the PD stent.
- **c** The 0.018-in guidewire was then exchanged for a microsnare (brown).
- **d** A 0.025-inch guidewire (red) was then passed externally alongside the PD stent and maneuvered through the microsnare loop at the proximal end of the PD stent.
- **e** The microsnare was used to snare the non-hydrophilic portion of the guidewire to minimize slipping and the microcatheter was pulled back to the proximal end of the PD stent to form a closed loop.
- **f** With this closed loop system, the PD stent was removed successfully.

**Competing interests**

The authors declare that they have no conflict of interest.

**The authors**

Wee Khoon Ng1, Quan Rui Tan2, Sundeep Jaywanraj Punamiya3, Paul Jau Lueng Ong4, Charles Kien Fong Vu1

1 Department of Gastroenterology and Hepatology, Tan Tock Seng Hospital, Singapore
2 Lee Kong Chian School of Medicine, Singapore
Video 1 Novel "closed-loop" method to retrieve proximally migrated pancreatic duct stent.

References


Corresponding author

Wee Khoon Ng, MBBS, MRCP
Department of Gastroenterology and Hepatology, Tan Tock Seng Hospital, 11 Jalan Tan Tock Seng, Singapore 308433
wee_khoon_ng@ttsh.com.sg

Bibliography

Endoscopy
DOI 10.1055/a-1792-2469
ISSN 0013-726X
published online 2022
© 2022. Thieme. All rights reserved.
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