Salvage antegrade endoscopic ultrasound-guided pancreatic guidewire placement allowing subsequent double-balloon ERCP

During endoscopic retrograde cholangiopancreatography (ERCP), biliary cannulation is still challenging in patients with anatomical variations, such as an intradiverticular ampulla or surgically altered anatomy [1, 2]. While the double-guidewire (DGW) technique is one of the possible rescue techniques [3, 4], pancreatic duct (PD) guidewire placement for DGW is sometimes impossible. Endoscopic ultrasound (EUS)-guided biliary access, such as the rendezvous technique, is increasingly used when cannulation has failed but this technique also needs a dilated biliary duct for EUS-guided puncture. We present a successful DGW biliary cannulation using PD guidewire placement under EUS guidance [5] in a patient with failed biliary access by ERCP and EUS (Video 1).

A 74-year-old man with a history of distal gastrectomy and Roux-en-Y reconstruction was admitted with cholangitis due to choledocholithiasis. Double-balloon endoscopy-assisted ERCP (DBE-ERCP) was attempted, but biliary cannulation failed owing to poor visualization of the ampulla. EUS-guided biliary access was then attempted but was unsuccessful because the intrahepatic bile ducts were not at all dilated.

We therefore proceeded to EUS-guided placement of a PD guidewire for subsequent DGW cannulation. Under EUS guidance, a 3-mm PD was punctured using a 19-gauge needle, which was followed by placement of a guidewire through the ampulla into the duodenum (Fig. 1a). Leaving the guidewire in place, we changed the echoendoscope to a double-balloon endoscope. With the PD guidewire caught through the channel of double-balloon endoscope, the ampulla was facing the endoscope and well visualized (Fig. 1b).

Biliary cannulation was successfully achieved by the DGW technique using a double-lumen cannula with uneven outlets (Uneven Double Lumen Cannula; Piolax Medical Devices, Kanagawa, Japan) [4] (Fig. 2a). Subsequently, biliary stones were removed after large-balloon papillary dilation and the procedure was completed (Fig. 2b). A pancreatic drain was not placed, but no pancreatitis or pancreatic fistula was observed.

This case illustrates that EUS-guided PD access can be used for biliary cannulation when ERCP or EUS-guided biliary access has failed.
Competing interests

Dr. Nakai received research grants from Fuji-film and Piolax. The remaining authors declare that they have no conflict of interest.

The authors

Rintaro Fukuda1, Tomotaka Saito1, Yousuke Nakai1,2, Atsuo Yamada1, Hirofumi Kogure1, Kazuhiko Koike1
1 Department of Gastroenterology, Graduate School of Medicine, The University of Tokyo, Tokyo, Japan
2 Department of Endoscopy and Endoscopic Surgery, Graduate School of Medicine, The University of Tokyo, Tokyo, Japan

Corresponding author

Yousuke Nakai, MD, PhD
Department of Endoscopy and Endoscopic Surgery, Graduate School of Medicine, The University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-8655, Japan
Fax: +81-3-38140021
ynakai-tky@umin.ac.jp

References


Fig. 2 Biliary cannulation using the double-guidewire technique showing: a selective biliary cannulation using the double-guidewire technique by inserting a double-lumen cannula over the pancreatic guidewire; b removal of biliary stones via double-balloon endoscopy-assisted endoscopic retrograde cholangiopancreatography using a basket catheter after large-balloon papillary dilation.

Bibliography

Endoscopy 2021; 53: E320–E321
DOI 10.1055/a-1275-9805
ISSN 0013-726X
published online 23.10.2020
© 2020. 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 a free 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.

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

Endoscopy 2021; 53: E320–E321 | © 2020. Thieme. All rights reserved.