Uneven double-lumen cannula for rescue guidewire technique in endoscopic ultrasonography-guided hepaticogastrostomy

Endoscopic ultrasonography-guided hepaticogastrostomy (EUS-HGS) is used after failed endoscopic retrograde cholangiopancreatography (ERCP) [1]. Manipulation of the guidewire is one of the most challenging techniques in EUS-HGS. We present a successful case of rescue guidewire technique using a multi-lumen catheter [2], namely an uneven double-lumen cannula (Piolax Medical Devices, Yokohama, Kanagawa, Japan) (▶Fig. 1), for EUS-HGS.

A 75-year-old man was admitted with obstructive jaundice due to advanced colon cancer, after right hepatectomy for liver metastasis. We attempted EUS-HGS after failed ERCP. After the left intrahepatic bile duct had been punctured using a 19-gauge needle (▶Fig. 2), a 0.025-inch hard-type guidewire (VisiGlide 2; Olympus, Tokyo, Japan) was placed. The guidewire was accidentally introduced into the peripheral bile duct (▶Fig. 3). We then inserted the ERCP catheter along the guidewire into the left intrahepatic bile duct. However, the guidewire could not be advanced to the perihilar bile duct, even after we changed to a 0.032-inch hydrophilic guidewire (Radifocus; Terumo, Tokyo, Japan). Therefore, we coiled the 0.025-inch hard-type guidewire again within the left intrahepatic bile duct, and changed the ERCP catheter to the uneven double-lumen cannula (▶Video 1). This cannula was slowly withdrawn, and we were able to successfully introduce a second 0.032-inch hydrophilic guidewire to the perihilar bile duct via the 0.035-inch lumen (▶Fig. 4, ▶Video 1). After changing to the hard-type guidewire (▶Fig. 5, ▶Video 1), a 7-Fr plastic stent (TYPE-IT; Gadelius Medical, Tokyo, Japan) was placed for EUS-HGS without complications (▶Fig. 6, ▶Video 1).

In EUS-HGS, the angle at which the intrahepatic bile duct is punctured is the most important factor in successful advancement of the guidewire toward the perihilar bile duct [3]. This depends on individual anatomy, and therefore it is sometimes difficult to achieve the optimal angle for advancing the guidewire to the perihilar bile duct. The uneven double-lumen cannula facilitated guidewire manipulation during EUS-HGS when it was difficult to direct the guidewire toward the perihilar bile duct.

Endoscopy_UCTN_Code_TTT_1AS_2AD

Competing interests

Dr. Kawakami is a consultant and gives lectures for Piolax Medical Devices, Yokohama, Kanagawa, Japan.
The authors declare no conflict of interests for this article.

▶Video 1 New rescue technique using the uneven double-lumen cannula in order to direct a guidewire toward the perihilar bile duct for endoscopic ultrasonography-guided hepaticogastrostomy.

▶Fig. 1 The uneven double-lumen cannula (short type; Piolax Medical Devices) has a distal port, with a radiopaque marker, for the 0.025-inch guidewire lumen and a proximal port for the 0.035-inch guidewire lumen. The catheter is tapered, with outer diameter 3.6 Fr at the distal port and the maximum 6 Fr at the proximal port and a length of 5 mm between the ports.
The Authors

Hiroshi Kawakami1,2, Yoshimasa Kubota1,2, Hiroaki Makiyama3, Shinji Sato3, Tesshin Ban1,2

1 Department of Gastroenterology and Hepatology, Faculty of Medicine, University of Miyazaki, Miyazaki, Japan
2 Center for Digestive Disease, University of Miyazaki Hospital, Miyazaki, Japan
3 Department of Gastroenterology and Endoscopy, Shin-Yurigaoka General Hospital, Kawasaki, Kanagawa, Japan

Corresponding author

Hiroshi Kawakami, MD, PhD
Department of Gastroenterology and Hepatology, Faculty of Medicine, University of Miyazaki, Center for Digestive Disease, University of Miyazaki Hospital, 5200 Kihara, Kiyotake, Miyazaki 889-1692, Japan
Fax: +81-985-859802
hiropon@med.miyazaki-u.ac.jp

References


Bibliography

DOI https://doi.org/10.1055/s-0043-116014
Published online: 31.7.2017
Endoscopy 2017; 49: E264–E265
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

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