Successful endoscopic three-branch self-expandable metallic stent placement using a novel device delivery system for malignant hilar biliary stricture

Endoscopic bilateral drainage of high-grade hilar malignant biliary obstruction (HMBO) is technically challenging, even for experienced endoscopists [1]. A novel device delivery system was recently developed, originally intended for placement of a plastic stent in the bile duct. It comprises a slim-tip guide catheter (diameter 1.13 mm) and pusher tube, which facilitate the insertion of devices up to 1.9 mm in diameter [2–5]. We successfully placed an endoscopic three-branch self-expandable metallic stent (SEMS) using this novel device delivery system with partial stent-in-stent (SIS) for a patient with HMBO.

A 74-year-old man presented to our hospital with jaundice. Contrast-enhanced computed tomography showed that the hilar part of the tumor had spread to the umbilical portion of the portal vein with right hepatic artery involvement (▶Fig. 1). A cholangiogram showed hilar biliary stricture (Bismuth type IIIa) (▶Fig. 2). The pathological diagnosis with brush cytology was adenocarcinoma, so we planned multiple stenting using SEMSs with the SIS method.

We placed the initial uncovered SEMS (10×80 mm, BileRush Selective; Piolax, Kanagawa, Japan) at the left bile duct and then inserted the second SEMS into the right posterior branch through the mesh. We sought the right anterior branch with a 0.025-inch hydrophilic guidewire (Radifocus; Terumo, Tokyo, Japan) and followed the tapered tip catheter (PR-220Q; Olympus Medical, Tokyo, Japan) after the guidewire, switching the hydrophilic guidewire to a 0.025-inch versatile guidewire (Endoselector; Boston Scientific, Tokyo, Japan). We inserted a third SEMS over the guidewire, but it could not be passed through the mesh (▶Fig. 3). We thus inserted the novel delivery system (EndoSheather; Piolax) over the guidewire, allowing smooth passage through the mesh (▶Fig. 4). After removing the inner catheter, we delivered the third SEMS (10×60 mm; BileRush Selective) through the outer sheath (arrow, tip of the stent; arrowhead, proximal side of the stent) (▶Fig. 5, ▶Video 1).
Competing interests

The authors declare that they have no conflict of interest.

The authors

Kazuyuki Matsumoto, Hironari Kato, Yuki Fujii, Tatsuhiro Yamazaki, Koichiro Tsutsumi, Shigeru Horiguchi, Hiroyuki Okada
Department of Gastroenterology and Hepatology, Okayama University Hospital, 2-5-1 Shikata-cho, Okayama 700-8558, Japan

Corresponding author

Kazuyuki Matsumoto, MD, PhD
Department of Gastroenterology and Hepatology, Okayama University Hospital, 2-5-1 Shikata-cho, Okayama 700-8558, Japan
matsumoto.k@okayama-u.ac.jp

References


Bibliography

Endoscopy
DOI 10.1055/a-1694-3794
ISSN 0013-726X
published online 2021 © 2021, 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

Video1 Successful endoscopic three-branch metallic stent placement using a novel device delivery system for malignant hilar biliary stricture.