

Transverse stent placement for hilar malignant biliary obstruction through an endoscopic ultrasound-guided hepaticogastrostomy route

A 70-year-old woman who had undergone endoscopic placement of multiple stents for hilar biliary obstruction due to gallbladder cancer was admitted with cholangitis. In her previous hospitalization, endoscopic ultrasound-guided hepaticogastrostomy (EUS-HGS) had been performed for the bile duct at segment

III (B3) using a partially covered self-expandable metal stent (SEMS; modified Giobor, 10×80 mm; Taewoong Medical Inc., Gimpo, Korea [1]). To manage subsequent episodes of cholangitis, two uncovered SEMSs were placed via the transpapillary route for B7 and B8 in a partial stent-in-stent fashion (► **Fig. 1**). On this

admission, endoscopic drainage was scheduled to manage segmental cholangitis in B8.

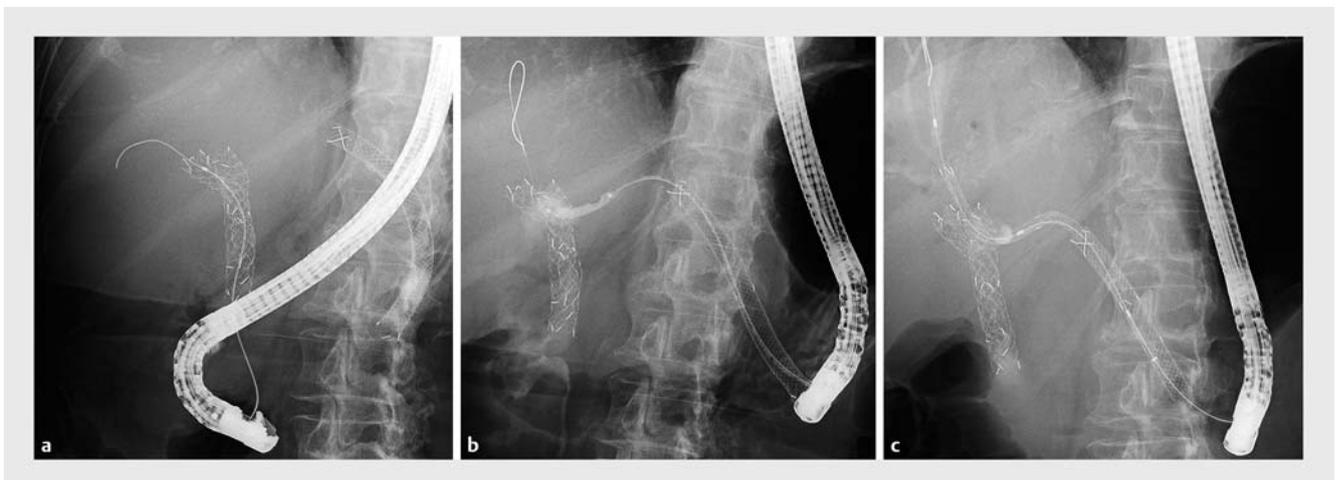
In the first session, transpapillary biliary drainage of B8 failed as a cannula could not be passed through the mesh wall of the indwelling SEMS (► **Fig. 2 a**). Therefore, we attempted to access B8 through



► **Fig. 1** Radiographic view showing placement of uncovered metal stents in a partial stent-in-stent fashion following endoscopic ultrasound-guided hepaticogastrostomy.



► **Video 1** Placement of a metal stent bridging a hilar malignant biliary stricture through an indwelling hepaticogastrostomy stent.



► **Fig. 2** Placement of a metal stent bridging a hilar malignant biliary stricture through an indwelling hepaticogastrostomy (HGS) stent after an unsuccessful transpapillary re-intervention. **a** During the transpapillary approach to B8, a cannula cannot be passed through the mesh wall of the indwelling SEMS. **b** Balloon dilation of a mesh interstice of the self-expandable metal stent (SEMS) is performed. **c** An uncovered SEMS is placed between B8 and B3 via the EUS-HGS route.

the EUS-HGS stent. Using a side-viewing duodenoscope, we passed a guidewire into the ventral branch of B8 and dilated the mesh of the SEMS using a balloon catheter (► **Fig. 2b**). We then placed a nasobiliary catheter to manage the cholangitis. In the following session, we trimmed the gastric end of the EUS-HGS stent using argon plasma coagulation (ESG-100; Olympus, Tokyo, Japan) to facilitate insertion of the stent [2] and deployed an uncovered SEMS (Niti-S, 10×80 mm; Taewoong Medical Inc.) (► **Fig. 2c**; ► **Video 1**). There were no procedure-related adverse events. Endoscopists occasionally face technical difficulties in managing occlusion of SEMSs placed for hilar biliary obstruction. The transpapillary approach is often used for re-intervention for the right-sided biliary system and, recently, the feasibility of EUS-guided hepaticoduodenostomy has been reported [3, 4]; however, both procedures are technically demanding. Furthermore, EUS-guided access to B8 is often anatomically impossible. Access to the right intrahepatic bile duct via the EUS-HGS route can offer an alternative strategy in this setting [5].

Endoscopy_UCTN_Code_TTT_1AR_2AG

Competing interests

None

The authors

Sachiko Kanai^{*}, Tomotaka Saito^{*}, Ryunosuke Hakuta, Yousuke Nakai, Kazuhiko Koike

Department of Gastroenterology, Graduate School of Medicine, The University of Tokyo, Tokyo, Japan

Corresponding author

Yousuke Nakai, MD, PhD

Department of Gastroenterology, 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

- [1] Nakai Y, Isayama H, Yamamoto N et al. Safety and effectiveness of a long, partially covered metal stent for endoscopic ultrasound-guided hepaticogastrostomy in patients with malignant biliary obstruction. *Endoscopy* 2016; 48: 1125–1128
- [2] Hamada T, Nakai Y, Isayama H et al. Trimming a covered metal stent during hepaticogastrostomy by using argon plasma coagulation. *Gastrointest Endosc* 2013; 78: 817
- [3] Ogura T, Sano T, Onda S et al. Endoscopic ultrasound-guided biliary drainage for right hepatic bile duct obstruction: novel technical tips. *Endoscopy* 2015; 47: 72–75
- [4] Park SJ, Choi JH, Park DH et al. Expanding indication: EUS-guided hepaticoduodenostomy for isolated right intrahepatic duct obstruction (with video). *Gastrointest Endosc* 2013; 78: 374–380
- [5] Prachayakul V, Aswakul P. Endoscopic ultrasound-guided biliary drainage: Bilateral systems drainage via left duct approach. *World J Gastroenterol* 2015; 21: 10045–10048

Bibliography

DOI <https://doi.org/10.1055/a-0889-7329>

Published online: 9.5.2019

Endoscopy 2019; 51: E245–E246

© 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>

* equal first authors