

Troubleshooting for endoscopic ultrasound-guided hepaticogastrostomy stent migration: Additional stenting by the partial stent-in-stent method



Stent migration into the abdominal cavity, one of the most serious procedural complications of endoscopic ultrasound-guided hepaticogastrostomy (EUS-HGS) [1], usually requires emergency surgery [2, 3].

No endoscopic troubleshooting technique for stent migration into the abdominal cavity with EUS-HGS has been established to date. Herein, we describe a safe and innovative rescue method for this complication.

The patient was a 60-year-old man with duodenal stenosis and biliary obstruction, for which he had undergone bile duct and duodenal stent placement. He developed obstructive jaundice due to stent misplacement; hence, EUS-HGS was performed (▶ **Video 1**).

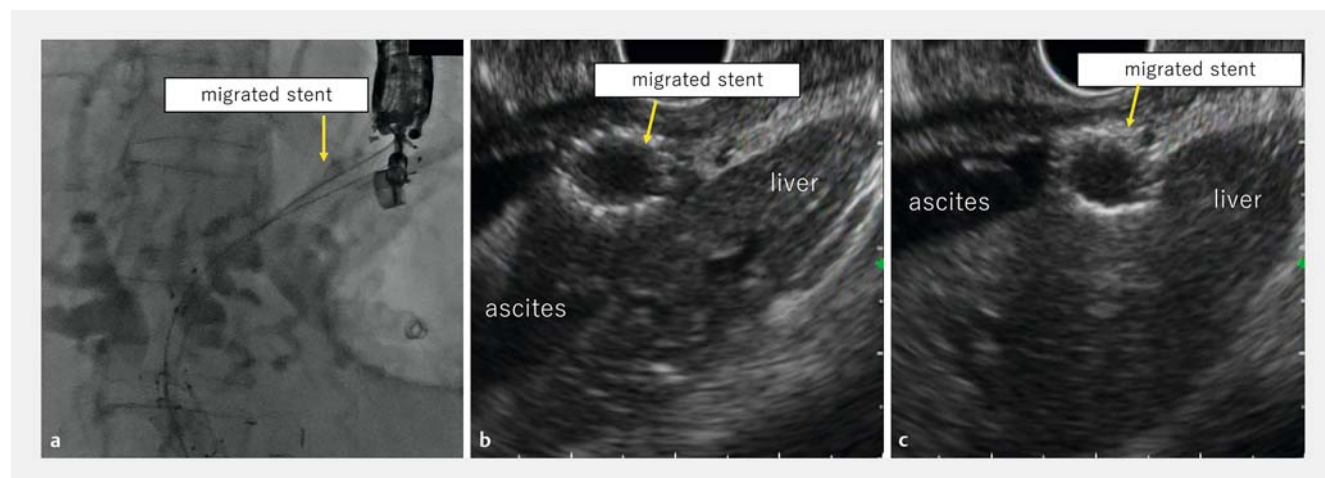
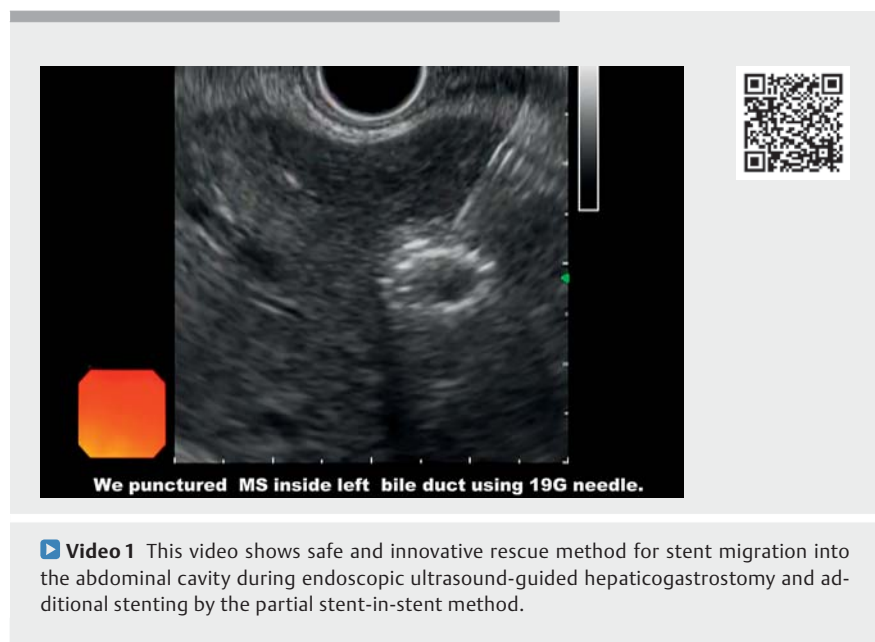
A small quantity of ascites was also present. Puncture was performed from B2 using a 19G needle, and an 8-mm × 8-cm fully covered self-expanding metallic stent (FCSEMS; NIR Stent) was placed by the double-wire method. After the stent released, it could not be found inside the stomach, and radiography and EUS showed that it had migrated into the

abdominal cavity (▶ **Fig. 1**). An unsuccessful attempt at additional stent placement was made, and the guidewire also slipped out.

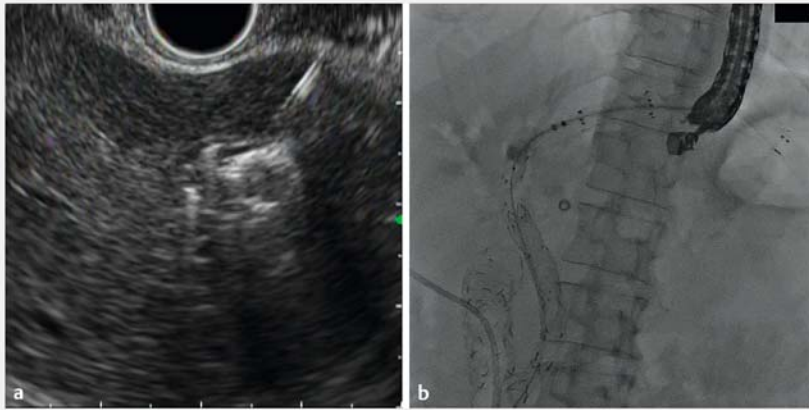
To recover from the migration, a puncture was made aiming at the metal stent inside

the intrahepatic bile duct, and a guidewire was inserted from the stent side into the stent lumen and bile duct (▶ **Fig. 2**).

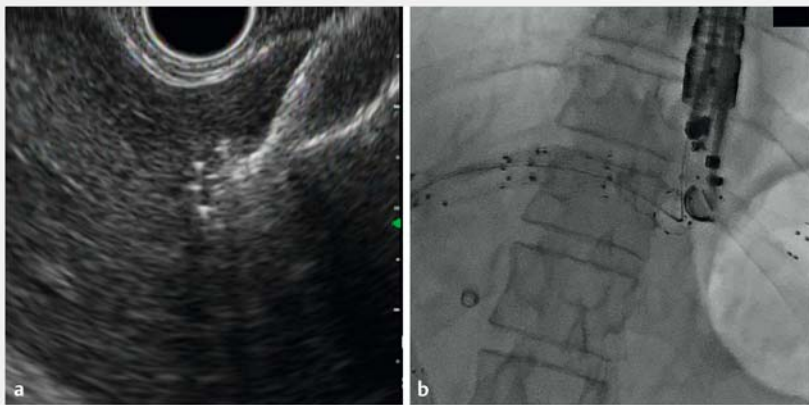
After blunt dilatation of the cell part of the metal stent with a catheter, an 8-mm × 8-cm FCSEMS was additionally inserted



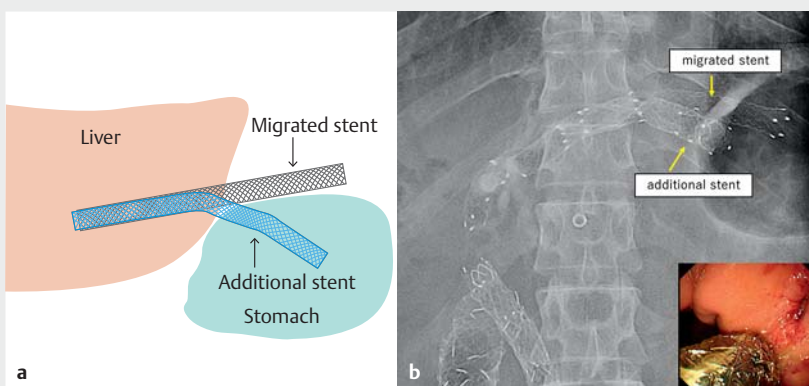
▶ **Fig. 1** **a** Endoscopic ultrasound-guided hepaticogastrostomy: 8-mm × 8-cm fully covered self-expanding metal stents (FCSEMSs) were placed, but the stent on the gastric side migrated into the abdominal cavity. **b, c** Endoscopic ultrasound (EUS) showed complete migration into the abdominal cavity.



► **Fig. 2** **a** Aiming at the metal stent in the intrahepatic bile duct region, a puncture was made with a 19G needle. **b** The stent delivery device was inserted.



► **Fig. 3** **a, b** An additional 8-mm x 8-cm FCSEMS was inserted by the partial stent-in-stent method.



► **Fig. 4** **a** Schematic diagram of additional stenting by the partial stent-in-stent method. **b** Radiography of additional stenting by the partial stent-in-stent method.

by the partial stent-in-stent method (► **Fig. 3**). The procedure was completed by confirming the presence of the stent in the stomach (► **Fig. 4**) and computed tomography (CT) (► **Fig. 5**). After the procedure, the patient developed mild peritonitis, but this was alleviated with conservative treatment, and chemotherapy could be continued. This technique should be borne in mind when troubleshooting EUS-HGS stent migration.

Endoscopy_UCTN_Code_CPL_1AL_2AD

Acknowledgments

This work was supported in part by The National Cancer Center Research and Development Fund (2022-A-16).


Funding

The National Cancer Center Research and Development Fund
2022-A-16

Competing Interest

The authors declare that they have no conflict of interest.

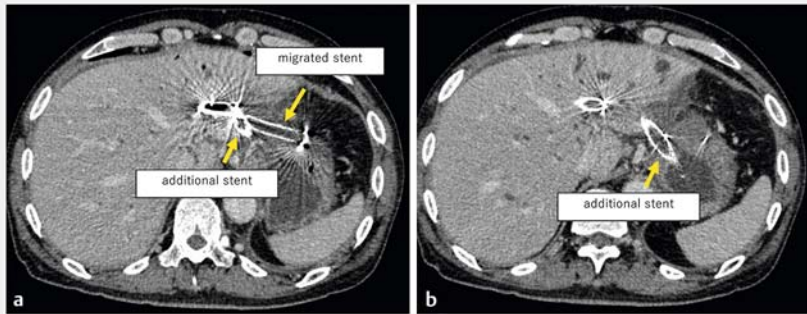
The authors

Susumu Hijioka¹  **Yasunari Sakamoto**^{1,2}, **Yoshikuni Nagashio**¹, **Yuta Maruki**¹, **Takuji Okusaka**¹, **Yutaka Saito**³

- 1 Department of Hepatobiliary and Pancreatic Oncology, National Cancer Center Hospital, Tokyo, Japan
- 2 Department of Gastroenterology and Hepatology, International University of Health and Welfare Atami Hospital, Atami-City, Shizuoka, Japan
- 3 Endoscopy Division, National Cancer Center Hospital, Tokyo, Japan

Corresponding author

Susumu Hijioka, MD
Department of Hepatobiliary and Pancreatic Oncology, National Cancer Center Hospital, 5-1-1 Tsukiji, Chuo-ku, Tokyo, 104-0045, Japan
Fax: +81-3-3542-3815
shijioka@ncc.go.jp



► **Fig. 5** Computed tomography of additional stenting by the partial stent-in-stent method. The migrated stent is seen in the abdominal cavity and the additional stent in the stomach.

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>

References

- [1] Martins FP, Rossini LG, Ferrari AP. Migration of a covered metallic stent following endoscopic ultrasound-guided hepaticogastrostomy: fatal complication. *Endoscopy* 2010; 42: E126–127
- [2] Okuno N, Hara K, Mizuno N et al. Stent migration into the peritoneal cavity following endoscopic ultrasound-guided hepaticogastrostomy. *Endoscopy* 2015; 47: E311
- [3] Minaga K, Kitano M, Yamashita Y et al. Stent migration into the abdominal cavity after EUS-guided hepaticogastrostomy. *Gastrointest Endosc* 2017; 85: 263–264

Bibliography

Endoscopy 2023; 55: E122–E124
 DOI 10.1055/a-1941-8357
 ISSN 0013-726X
 published online 14.10.2022
 © 2022. The Author(s).

This is an open access article published by Thieme under the terms of the Creative Commons Attribution-NonDerivative-NonCommercial License, permitting copying and reproduction so long as the original work is given appropriate credit. Contents may not be used for commercial purposes, or adapted, remixed, transformed or built upon. (<https://creativecommons.org/licenses/by-nc-nd/4.0/>)
 Georg Thieme Verlag KG, Rüdigerstraße 14,
 70469 Stuttgart, Germany

