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.
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.

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**Competing Interest**

The authors declare that they have no conflict of interest.

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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.