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 biliary 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.
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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