Endoscopic intra-abdominal rescue therapy of a dislodged EUS-guided hepaticogastrostomy stent

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EUS-guided hepaticogastrostomy (HGS) is a well-accepted alternative treatment for patients with biliary obstruction and failed ERCP. The average technical success and adverse event rates of this EUS intervention have been reported to be 90% and 17%, respectively. Adverse events include abdominal pain, hemorrhage, pneumoperitoneum, infection, biliary leakage, and dislodged stents. In cases of dislodged stents, the patients have early acute biliary peritonitis, given a significant hole in the liver and the stomach. These patients can deteriorate quickly and need urgent surgical repair. However, most of those patients have advanced malignant diseases, and with its increased morbidity risk, an endoscopic approach would definitely be warranted.

Here we report the case of an 86-year-old fragile woman who was admitted with painless jaundice and massively congested intrahepatic ducts (Fig. 1). An outside MRCP showed a suspicious-looking lesion in the tail of the pancreas, which was confirmed and biopsied in our institution by EUS (Fig. 2). Cytologic analysis revealed an adenocarcinoma, and the overall diagnosis of a locally advanced pancreatic cancer with hilar lymphadenopathy was made.

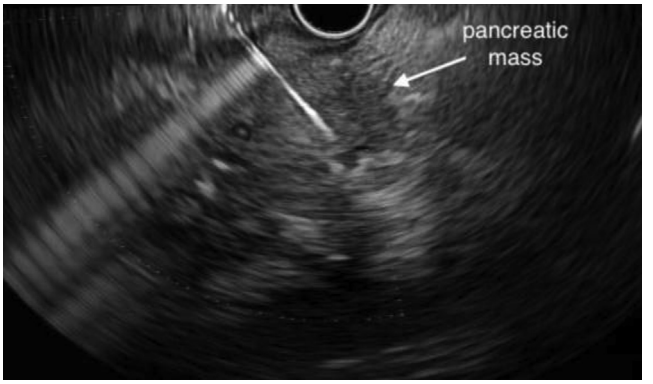

Figure 2. EUS-FNA of the lesion in the pancreatic tail.

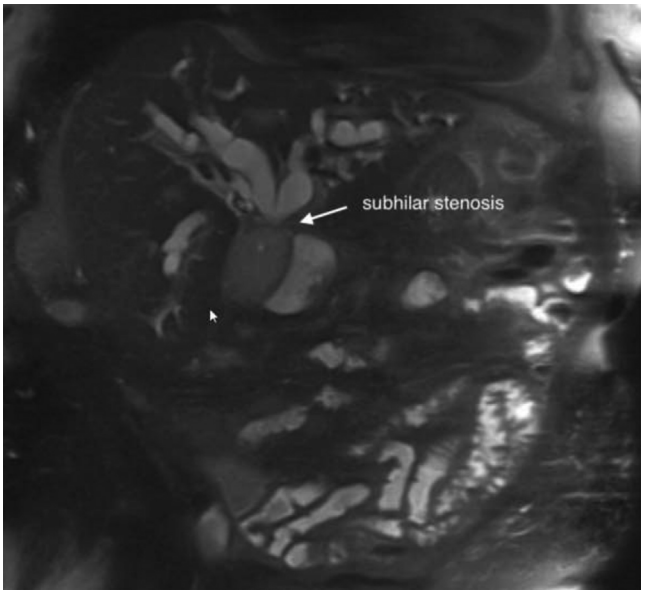

Figure 1. T2-weighted MRI image showing subhilar stenosis and dilated intrahepatic bile ducts.

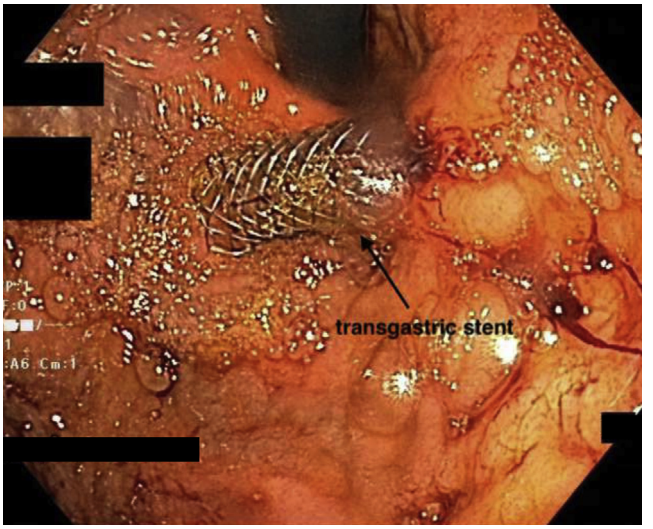

Figure 3. Correct position of the transgastric stent creating a hepaticogastrostomy.

Written transcript of the video audio is available online at www.VideoGIE.org.

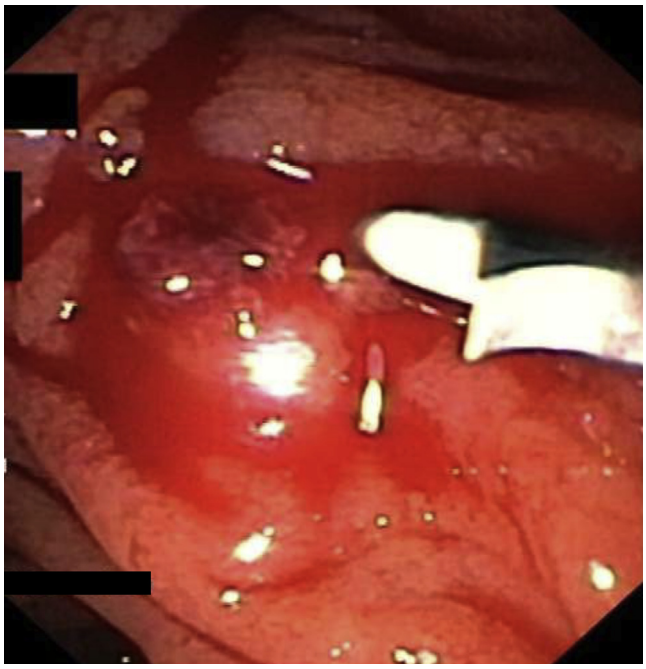

Figure 4. Pancreatic stent in situ and active papillary bleeding.

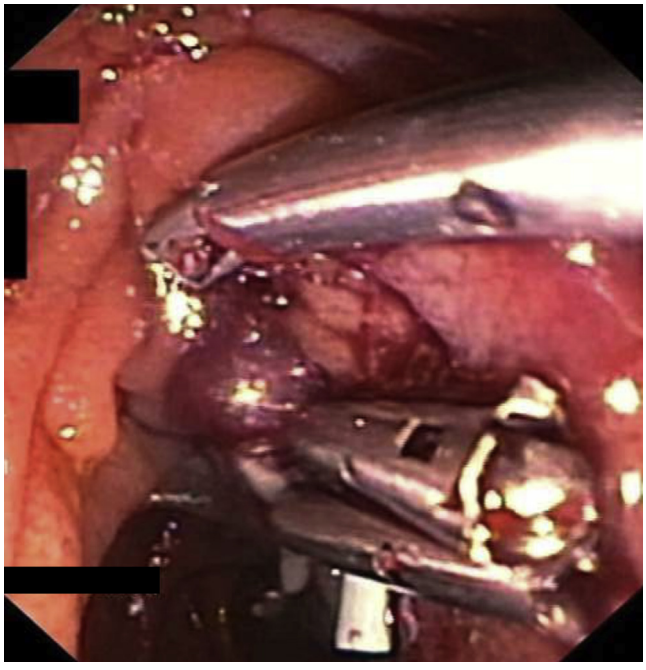

Figure 5. Cessation of bleeding after application of 3 clips.

An ERCP was attempted, but only pancreatic access could be gained, and a protective 5F stent was placed. Small papillary bleeding was successfully treated by adrenaline injection at the end of the procedure. To relieve cholestasis, EUS-guided HGS was performed by the insertion of an almost fully covered Boston WallFlex self-expandable metal stent (SEMS) (Boston Scientific, Natick, MA, USA) (Fig. 3; Video 1, available online at www.VideoGIE.org). Overnight, the patient became hemodynamically unstable, and angiography confirmed the presumed papillary bleed, but angiographic treatment failed (Fig. 4). Therefore, repeated endoscopy was performed, and the bleeding was successfully stopped by the application of 3 clips (Fig. 5).

Figure 6. Dislodged hepaticogastrostomy with 4-quadrant ascites.

During retrieval of the endoscope, the HGS stent remained in place. Several hours later, the patient vomited heavily, and the next morning she experienced acute abdominal symptoms. The CT scan showed a dislodged HGS stent (Fig. 6), and urgent endoscopy confirmed a large gastric defect at the former stent entry point. The defect was easily accessed by a slim gastroscope (GIF-XP190N; Olympus, Hamburg, Germany), and the abdominal cavity was examined and extensively aspirated for biliary fluid.

The SEMS was still inserted in the liver, and we tried to relocate it into the stomach with grasping forceps. However, during this attempt, the stent totally dislodged. Therefore, the liver entry site was intubated with the gastroscope, and a 0.035-inch Jagwire (Boston Scientific) was advanced through the tumor into the duodenum.

After changing to a therapeutic endoscope (GIF-1TH190, Olympus), another Jagwire was inserted alongside the first one, and finally an 80-mm long TaeWoong Gioborstent was placed (Taewoong Medical, Seoul, South Korea). A second SEMS was inserted into the Gioborstent, extending far into the stomach to prevent repeated dislocation.

During the whole procedure, a water lock in the right flank was used for decompression of the abdominal air. Over the following week, the patient's condition improved continuously, and she was discharged home for best supportive care.

Dislocation of an HGS stent is a rare but important adverse event. If the patient is weak, as is often the case, rescue therapy apart from surgery would be beneficial. In our case, the stent had been in place correctly for 2 days, and therefore it was possible to access the abdominal cavity through the already-large gastric defect.

Stents with a longer uncovered part inside the liver should anchor better, and normally it should be easier to reposition them without complete dislocation. Using fully or almost fully covered stents, we found that the described technique might be preferable because it provides better control of exact stent replacement. Overall, focused development of a standard approach and dedicated materials are needed because interventional EUS will be a main pillar of future endoscopy.

DISCLOSURE

All authors disclosed no financial relationships relevant to this publication.

Abbreviations: HGS, hepaticogastrostomy; SEMS, self-expandable metal stent.

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