Intraperitoneal endoscopic salvage using an enteral stent for a misdeployed lumen-apposing metal stent during endoscopic ultrasound-guided gastroenterostomy

A 57-year-old man with duodenal carcinoma and a biliary self-expandable metal stent (SEMS) presented with gastric outlet obstruction and an endoscopic ultrasound (EUS)-guided gastroenterostomy was proposed.

After the bowel had been dilated up to 15 mm to allow the gastroscope to be passed across the duodenum, loops of the small bowel were distended with 1 L of saline mixed with methylene blue, using the water-jet channel. A small-bowel loop was then accessed using the freehand technique with the delivery system of an electrocautery-enhanced lumen-apposing metal stent (LAMS; Hot AXIOS; 20×10 mm). During advancement of the preloaded guidewire, the bowel loop became tented away and the EUS window was lost, so the distal flange was deployed with concerns of possible misplacement. After deployment of the proximal flange, no flow of blue fluid was noted.

The peritoneal cavity was identified endoscopically through the LAMS and the echoendoscope was exchanged for a therapeutic gastroscope. The guidewire tip, located in the duodenum, was stretched to the outside with the purpose of stabilizing the bowel. Balloon expansion of the LAMS up to 15 mm allowed the gastroscope to be passed into the peritoneal cavity using the LAMS as a trocar. Peritonoscopy was performed under fluoroscopy guidance and the entry point of the guidewire into the bowel was identified (Fig. 1). Dilation of the enteral wall up to 8 mm facilitated the advancement of a fully covered SEMS (Niti-S EnteralColonic; 20×80 mm; Taewoong Medical) through the LAMS. These technical aspects prevented the risk of tenting away of the bowel loop and loss of the guidewire. Enterography confirmed that the enteral stent was well positioned though the misplaced LAMS, allowing a correct deployment of the rescue stent under fluoroscopy and endoscopy guidance (Fig. 2). Lastly, the distal end within the duodenum was checked, and an antimigratory clip was fixed (Fig. 3; Video 1).
Several rescue options have been previously presented for gastroenterostomy [1–5]. If the wire access to the target loop is not preserved, LAMS misdeployment can require natural orifice transluminal endoscopic surgery (NOTES) or conventional surgery. If the guidewire is secure, a second enteral SEMS can be deployed safely under peritonoscopy and fluoroscopy guidance.

Endoscopy_UCTN_Code_CPL_1AL_2AG

Competing interests

J. B. Gornals is a consultant for Boston Scientific. The remaining authors declare that they have no conflict of interest.

The authors

Sergio Bazaga1, Albert Garcia-Sumalla1✉, Berta Laquente2, Joan B. Gornals1,3✉
1 Endoscopy Unit, Department of Digestive Diseases, Hospital Universitari de Bellvitge, Bellvitge Biomedical Research Institute (IDIBELL), University of Barcelona, Spain
2 Medical Oncology Department, Institut Català d’Oncologia DIR, Bellvitge Biomedical Research Institute (IDIBELL), L’Hospitalet, Barcelona, Spain
3 Faculty of Health Sciences, Universitat Oberta de Catalunya, Barcelona, Spain

Corresponding author

Joan B. Gornals, MD, PhD
Endoscopy Unit, Dept. of Digestive Diseases, Hospital Universitari de Bellvitge – IDIBELL (Bellvitge Biomedical Research Institute), Feixa Llarga s/n, 08907 L’Hospitalet de Llobregat, Barcelona, Catalonia, Spain
jgornals@bellvitgehospital.cat

References


Bibliography

Endoscopy
DOI 10.1055/a-1494-3055
ISSN 0013-726X
published online 2021
© 2021. Thieme. All rights reserved.
Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany

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

Fig. 3 Fluoroscopic image showing the distal end of the enteral stent being checked from the duodenum.

Video 1 Intraperitoneal endoscopic salvage using an enteral stent for a lumen-apposing metal stent that was misdeployed during the creation of an endoscopic ultrasound-guided gastroenterostomy.