Self-expandable metal stent in lumen-apposing metal stent (the SEMS-in-LAMS procedure): a simple salvage procedure after LAMS misplacement

Lumen-apposing metal stents (LAMSs) have been widely used for drainage of pancreatic fluid collections (PFCs) [1]. However, misplacement of stents is not rare and demands immediate intervention. We describe the use of a biliary self-expandable metal stent (SEMS) placed through the LAMS to address misplacement during an endoscopic ultrasound (EUS)-guided drainage procedure.

In the first case, a 24-year-old woman presenting with a symptomatic PFC (▶Fig.1) after an episode of moderate acute pancreatitis was referred for EUS-guided drainage. During deployment of the LAMS (3 cm × 12–15 mm; Hanarostent; Mitech), we accidentally released the proximal flange into the gastric wall. We pulled the stent towards the gastric lumen using a foreign body forceps, but the distal flange detached from the collection, dissecting the retroperitoneum (▶Fig.2). We therefore placed a guidewire into the PFC through the LAMS using a pediatric endoscope. Finally, we deployed a biliary fully-covered SEMS (10 mm × 6 cm; Hanarostent; Mitech) to connect the PFC to the stomach (▶Video1). Both stents were removed a month later without complications.

In the second case, a 50-year-old man presenting with a symptomatic walled-off necrosis (▶Fig.3) after a severe episode of pancreatitis was referred for EUS-guided drainage. During the procedure, the proximal flange was accidentally deployed into the gastric wall (▶Fig.4). Under EUS guidance, we introduced the sheath of the needle and a guidewire through the LAMS into the PFC. We deployed a fully-covered biliary SEMS inside the LAMS after LAMS misplacement during endoscopic ultrasound-guided drainage of a pancreatic fluid collection; the SEMS-in-LAMS procedure.

▶Video1 Deployment of a self-expandable metal stent (SEMS) through a lumen-apposing metal stent (LAMS) after LAMS misplacement during endoscopic ultrasound-guided drainage of a pancreatic fluid collection; the SEMS-in-LAMS procedure.

▶Fig.1 Computed tomography scan showing a large pancreatic pseudocyst (20.3 × 16.8 × 15.0 cm; total volume 2660 mL).

▶Fig.2 Endoscopic view of the lumen-apposing metal stent (LAMS) after traction with forceps showing: a the proximal flange of the LAMS in the gastric lumen; b the retroperitoneum and the orifice in the pseudocyst wall.

▶Fig.3 Computed tomography scan showing a large pancreatic walled-off necrosis.

▶Fig.4 Endoscopic view of the pancreatic walled-off necrosis after traction with forceps showing: a the proximal flange of the LAMS in the gastric lumen; b the retroperitoneum.

▶Fig.5 Endoscopic view of the pancreatic walled-off necrosis after traction with forceps showing: a the proximal flange of the LAMS in the gastric lumen; b the retroperitoneum.
The short dumbbell shape of the LAMS draws together the wall of the collection and the lumen, thereby stabilizing the stent [2]; however, this short length may favor misdeployment. Ligresti et al. [3] recently reported a LAMS-in-LAMS procedure to address a buried stent. However, a standard biliary SEMS seems more appropriate to use as it is cheaper, widely available, and longer. This is the first description of the SEMS-in-LAMS procedure as salvage therapy after LAMS misplacement.

Endoscopy_UCTN_Code_CPL_1AL_2AD

Competing interests
None

The authors
Marcos E. Lera, Sérgio E. Matuguma, Antonio C. Madruga-Neto, Vitor O. Brunaldi, Maurício K. Minata, Hugo G. Guedes, Eduardo G. H. de Moura
Gastrointestinal Endoscopy Unit, Hospital das Clínicas, University of São Paulo Medical School, São Paulo, Brazil

Corresponding author
Antonio Coutinho Madruga-Neto, MD
Hospital das Clínicas – University of São Paulo Medical School, Dr. Arnaldo Av, 455, 01246-903, São Paulo, Brazil
antonio_coutinho_net@hotmail.com
antonio.cmneto@hc.fm.usp.br

References

Bibliography
DOI https://doi.org/10.1055/a-0820-1456
Published online: 2019
Endoscopy
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

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