The lumen-apposing metal stent (LAMS)-in-LAMS technique as an intraprocedural rescue treatment during endoscopic ultrasound-guided gastroenterostomy

Endoscopic ultrasound-guided gastroenterostomy (EUS-GE) is a new effective mini-invasive treatment for gastric outlet obstruction (GOO) [1 – 3]. An anastomosis is created between the stomach and a duodenal (or jejunal) loop by placement of a lumen-apposing metal stent (LAMS). Stent displacement can be a serious complication, often requiring surgery.

We present the case of a 78-year-old man with GOO due to a metastatic adenocarcinoma of the duodenal bulb. Following obstruction of a previously placed duodenal metal stent, the patient was scheduled for an EUS-GE. With the patient under general anesthesia, a 20-mm dilation balloon (CRE; Boston Scientific) was passed over the wire through the stenosis into the jejunum under fluoroscopic guidance. Contrast medium with saline was injected through the balloon catheter to identify the target loop (▶ Fig. 1), which was then accessed with the electrocautery-enhanced delivery system of a 20-mm LAMS (AXIOS-EC; Boston Scientific) (▶ Video 1). A 0.035-inch guidewire was inserted through the LAMS delivery system to secure access to the jejunal loop, and the stent was released. On release, the distal flange dislodged from the jejunal loop into the peritoneum; however, the guidewire was still in place (▶ Fig. 2). Suction was applied to maintain apposition of the target loop with the stomach while a second 20-mm LAMS was successfully placed over the guidewire through the first LAMS (▶ Fig. 3). The LAMS-in-LAMS system was then dilated with a balloon up to 20 mm. Screening with contrast medium passed through the stents revealed no evidence of leakage.

If a wire access to the target loop is not preserved, LAMS misdeployment can require a natural orifice transluminal endoscopic surgery (NOTES)-based approach [4] or surgery. Wire access should therefore always be preserved to allow a minimally invasive rescue approach [5]. The LAMS-in-LAMS technique is an effective procedure for salvaging a misdeployed LAMS during EUS-GE, assuring correct lumen apposition between the stomach and jejunum without need for any further device.

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Competing interests

None
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