

Endoscopic removal of buried lumen-apposing metal stents used for cystogastrostomy and cholecystogastrostomy

The Hot AXIOS system is a new device for transgastric or transduodenal endoscopic drainage of a pancreatic pseudocyst or the gallbladder [1,2] using a lumen-apposing metal stent (LAMS) mounted on an electrocautery-enhanced introduction system. The device seems to be relatively safe in expert hands; however, the literature on management of its complications is limited [1–4]. Hereby, we report on two patients with embedded LAMSs, which were endoscopically removed.

Patient 1 was a 68-year-old man with a pseudocyst after acute pancreatitis who underwent successful endoscopic ultrasound (EUS)-guided cystogastrostomy with placement of an AXIOS stent (10 × 10 mm). Endoscopic removal of the LAMS was planned 3 months later; however, gastroscopy showed tissue overgrowth at the gastric flange of the LAMS making direct removal of the stent with a rat-tooth forceps or snare impossible. To avoid the patient having to undergo surgery, we opted for endoscopic treatment consisting of forced argon plasma coagulation (APC), needle-knife incision, and dilation of the stent up to 12 mm (▶ **Video 1**). After the tissue overgrowth had been sufficiently removed from the gastric flange, it was possible to remove the LAMS with a rat-tooth forceps. No complications subsequently occurred.

Patient 2 was a 59-year-old man with acute acalculous cholecystitis who underwent successful endoscopic gallbladder drainage by EUS-guided cholecystogastrostomy using a 15 × 10-mm AXIOS stent. LAMS removal was performed after 4 months. At gastroscopy, we found a buried gastric flange of the LAMS (▶ **Fig. 1**) in the antrum. Because standard stent removal with forceps was impossible, we dilated the LAMS up to 15 mm with a balloon, entered it with the endoscope, and removed the stent inside-out with a rat-tooth forceps. No complications subsequently occurred.



Endoscopic view of a lumen-apposing metal stent (LAMS) placed for cystogastrostomy with its gastric flange buried by tissue overgrowth being removed endoscopically using argon plasma coagulation (APC), needle-knife incision, dilation of the stent, and extraction with a rat-tooth forceps.

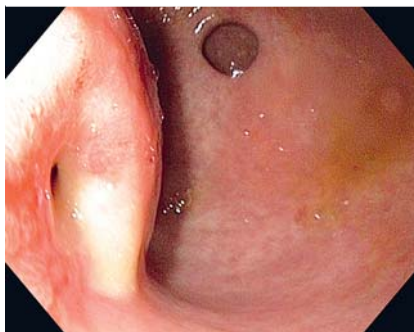


Fig. 1 Significant tissue overgrowth by gastric mucosa affecting a lumen-apposing metal stent (LAMS) after a stent dwell time of 4 months in a patient who had undergone cholecystogastrostomy.

Both these clinical cases show that tissue overgrowth at the gastric side of a LAMS can be a complication after cystogastrostomy and cholecystogastrostomy, making regular stent removal with a forceps impossible [1,3]. In such circumstances, endoscopic techniques as described above can be considered as rescue therapy.

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Competing interests: Frank P. Vleggaar is a consultant for Boston Scientific.

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