

Endoscopic ultrasound- and fluoroscopy-guided jejunojejunostomy with a lumen-apposing metal stent for malignant afferent loop obstruction



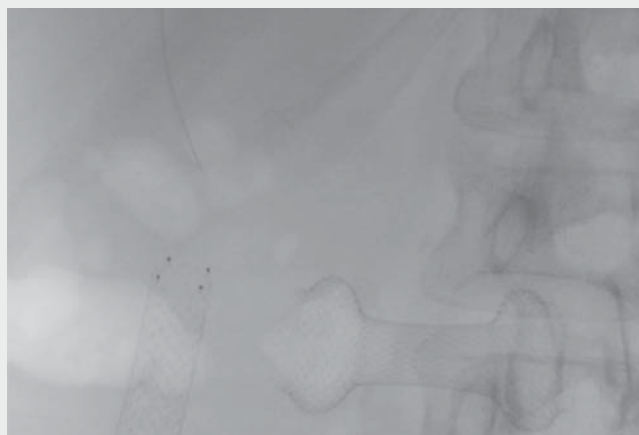
► **Fig. 1** Endoscopic image showing a self-expanding metal stent placed across an afferent loop stenosis near the hepaticojejunostomy.



► **Fig. 2** Computed tomography image showing C-loop formation after placement of the self-expanding metal stent, indicating persistent afferent loop obstruction.



► **Fig. 3** Endoscopic ultrasound image showing the dilated afferent loop prior to advancement of the needle.



► **Video 1** Endoscopic ultrasound- and fluoroscopy-guided jejunojejunostomy with a lumen-apposing metal stent to treat malignant afferent loop obstruction.

A 57-year-old white woman with history of stage IV signet ring cell adenocarcinoma of the ampulla, who had previously undergone a Whipple procedure with Billroth II reconstruction followed by adjuvant chemotherapy, was referred for afferent loop obstruction due to newly diagnosed peritoneal metastatic pancreatic cancer. Small-bowel enteroscopy found a 3-cm segment of extrinsic stenosis near the hepaticojejunostomy, with upstream dilatation. A 10×80-mm uncovered self-expanding metal stent (SEMS) was deployed across the stenosis under fluoroscopic guidance (► **Fig. 1**). Drainage of bile was immediate; however, within 72 hours, the patient developed cholangitis, with evidence of persistent afferent loop obstruction on repeat computed tomography imaging (► **Fig. 2**). After multidisciplinary team discussion, endoscopic ultrasound (EUS)-guided transmurial drainage of the dilated afferent loop was pursued (► **Video 1**). On repeat EUS, the dilated afferent loop was endosonographically visualized from about 2 cm distal to the gastrojejunal anastomosis (► **Fig. 3**). A 19-gauge nee-



► **Fig. 4** Endoscopic direct visualization of the lumen-apposing metal stent (LAMS) placed between the distal jejunum and the afferent loop.

dle was advanced into the dilated afferent loop and 200 mL of saline was injected to adhere it to the gastrojejunal anastomosis. The decision was then made to create a jejunojejunostomy. The common wall between the distal jejunum and afferent loop was imaged using color Doppler to identify any interposed vessels. A cautery-enhanced lumen-apposing metal stent (LAMS) delivery system was used to create a stoma and working


channel. A 15×15-mm Axios stent (Boston Scientific, Natick, Massachusetts, USA) was deployed and then balloon dilated to a maximum diameter of 15 mm. There was minimal bleeding after dilation and there was no evidence of free gas or a pneumoperitoneum. Direct visualization showed the LAMS to be in an appropriate position (► Fig. 4). Over the next 24 hours, the patient defervesced, and both her symptoms and liver function tests improved. EUS- and fluoroscopy-aided enteroenterostomy is a novel way to palliatively treat afferent loop obstruction as an alternative to, or in addition to, conventional methods.

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Competing interests

S. K. Amateau, M. L. Freeman and G. Trikudanathan have provided consultancy to Boston Scientific. The remaining authors declare that they have no conflict of interest.

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Bibliography

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