Endoscopic ultrasound-guided gastrojejunostomy: a novel technique

Endoscopic ultrasound (EUS)-guided gastroenterostomy with placement of a lumen-apposing metal stent has emerged as a novel, minimally invasive therapeutic option for patients with gastric outlet obstruction (GOO) [1–3]. The most challenging aspect of the procedure is immobilizing the jejunal loop in order to create the fistulous tract and deploy the stent. Several different techniques have been described [1–3]. We present a novel approach involving the use of a second endoscope that is advanced through a previously placed percutaneous gastrostomy (PEG) site to within the target jejunal lumen in order to provide traction on the wire, and to facilitate fistula creation and stent placement.

A 68-year-old man presented with GOO following surgical resection for pancreatic cancer. Enteral stenting and PEG-jejunostomy tube placement were unsuccessful for palliation. Therefore, EUS-guided gastroenterostomy was performed using a novel rendezvous technique (Video 1). The echoendoscope was used to identify and access the jejunum from within the gastric lumen, and a wire was advanced into the targeted jejunal loop. A concurrent small-diameter endoscope was advanced percutaneously through the PEG site and across the malignant obstruction into the jejunum, where the coiled guidewire was visualized and grasped by a pediatric biopsy forceps. This provided traction on the wire, which facilitated transgastric cautery-assisted fistula creation and stent placement with a lumen-apposing metal stent (Fig. 1). After stent placement, both endoscopes were removed and the PEG site was closed intragastrically with an over-the-scope clip. At 3-month follow-up, the patient was still able to tolerate a soft diet.

In conclusion, EUS-guided gastroenterostomy using this rendezvous technique was safe and efficacious, and should be considered in patients with GOO who have a previously placed PEG tube.

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Competing interests

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Video 1 Endoscopic ultrasound-guided gastroenterostomy using a novel rendezvous technique.