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Endoscopic ultrasound-guided esophagojejunostomy of a complete anastomotic stricture

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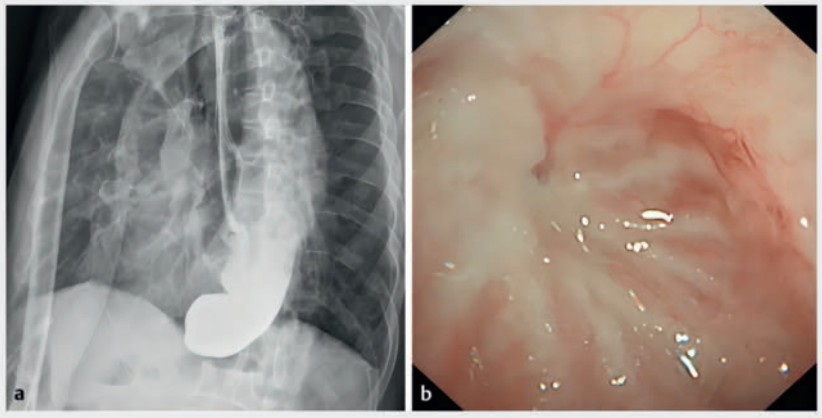
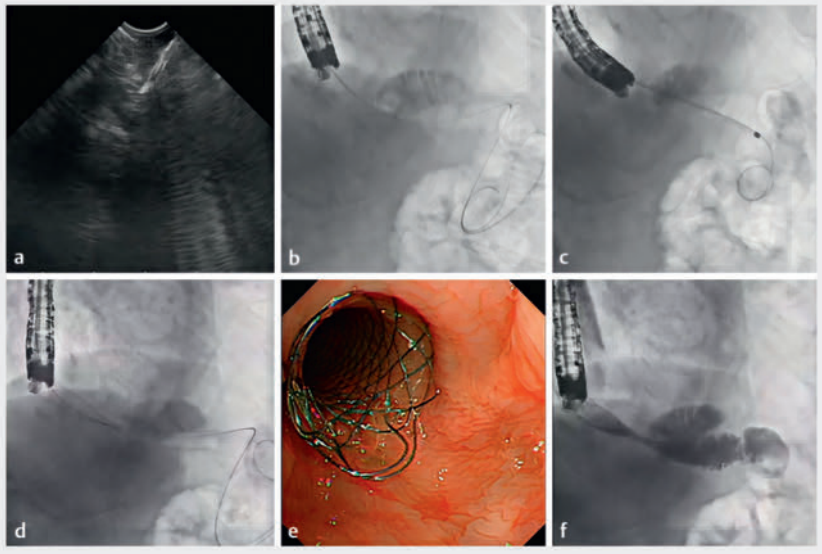
Video 1 Endoscopic ultrasound-guided recanalization to bypass complete stricture of esophagojejunal anastomosis.



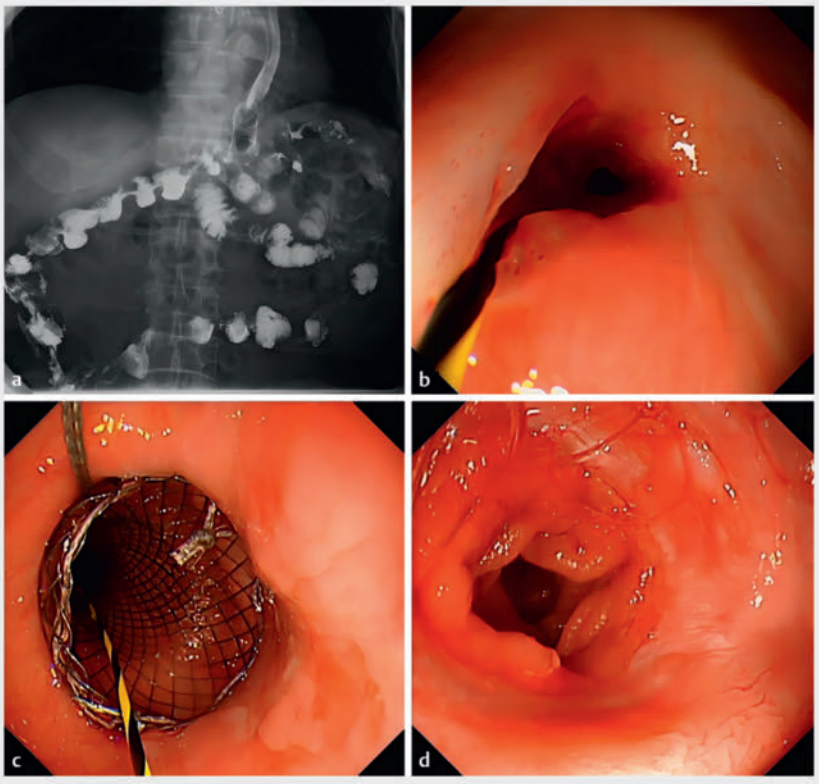
▶ **Fig. 1** Complete esophagojejunal anastomotic stricture. **a** Esophagogram shows obvious dilation of the esophageal lumen and complete obliteration at the lower esophagus. **b** Gastroscopic view of scar tissue.

A 76-year-old man, diagnosed with anastomotic fistula after radical total gastrectomy and esophagojejunostomy (Roux-en-Y) due to gastric adenocarcinoma, was managed with thoracotomy and fistula repair. At 8 weeks after surgery, the patient was referred to our hospital because of progressive aphagia and persistent vomiting. Esophagography and gastroscopy revealed complete obstruction at the esophagojejunal anastomosis (▶ **Fig. 1**). The first attempt at endoscopic ultrasound (EUS)-guided rendezvous directly through the stricture was unsuccessful.

Therefore, we attempted bypass recanalization to create a new esophagojejunostomy under EUS guidance (▶ **Video 1**). A forward-viewing echoendoscope was placed near the stricture and jejunal peristalsis was demonstrated on the EUS image. A 19G needle was used to puncture the esophageal wall and enter the jejunal lumen (▶ **Fig. 2a**). Contrast was instilled and fluoroscopy of the distal jejunum confirmed successful puncture. A guidewire was then passed through the needle into the efferent loop (▶ **Fig. 2b**). To avoid elec-



▶ **Fig. 2** Recanalization to bypass the stricture using a biliary fully covered self-expanding metallic stent (FCSEMS) to create a new esophagojejunostomy. **a** A 19G needle was used to puncture the esophagus and enter the jejunal lumen. **b** A guidewire was passed into the efferent jejunal lumen under esophagography. **c** Bougies were used to dilate the passage. **d** A biliary FCSEMS was deployed along the guidewire through the passage. **e** Final gastroscopic view of the stent. **f** Contrast instilled into the stent flowed into the distal jejunal lumen without leakage.



▶ **Fig. 3** Stricture after EUS-guided bypass recanalization: **a–c** after 1 month, **d** after 4 months. **a** Fluoroscopy shows smooth flow through the new anastomosis. **b** Gastroscopic view of a clear and open passage after removal of the biliary FCSEMS. **c** Placement of the esophageal FCSEMS. **d** Ideal passage between the esophagus and jejunum after stent removal.

trocautery risk to the thoracic aorta, a 6Fr and an 8.5Fr bougie were used separately to dilate a passage between the esophagus and jejunum (▶ **Fig. 2c**). Considering the diameter and maneuverability of the passage, we chose a biliary fully covered self-expanding metallic stent (FCSEMS, 10 × 80 mm) to deploy through the passage (▶ **Fig. 2d, e**). Instilled contrast was seen flowing into the distal jejunum without leakage (▶ **Fig. 2f**).

After 2 days, the patient was able to eat soft food without vomiting or pain. After 3 months, fluoroscopy showed smooth flow through the anastomosis, and the biliary FCSEMS was then replaced by an esophageal FCSEMS (20 × 80 mm). After 4 months, the esophageal stent was finally removed, leaving an ideal passage between esophagus and jejunum (▶ **Fig. 3**). No complications were seen during the follow-up.

To the best of our knowledge, this is the first case report of EUS-guided recanalization bypassing the stricture of a complete esophageal stenosis. It may be a promising recanalization method to treat esophageal stenosis when conventional approaches fail.

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Conflict of Interest

The authors declare that they have no conflict of interest.

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Bibliography

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