

## Endoscopic full-thickness resection of fistula tract with suture closure



**Video 1** Endoscopic submucosal dissection with full-thickness resection of fistula tract and suture closure.

A 59-year-old man, with a history of Roux-en-Y gastric bypass 9 years previously, presented with chronic epigastric pain thought to be due to recurrent marginal ulceration. On diagnostic endoscopy he was found to have a 3-cm gastric pouch and a 18-mm gastrojejunal anastomotic diameter. Additionally, a 1-cm cratered ulceration on the jejunal aspect of the post-bypass anastomosis and a 3-mm fistulous opening in the distal gastric pouch were noted. The presence of bubbles when the area was flooded with water suggested a fistulous communication between the gastric pouch and the remnant stomach. The area was injected with diluted 1:10000 epinephrine mixed with methy-

lene blue to lift the fistulous opening. An electrosurgical knife was used to create an incision in the mucosa, and an insulated-tip needle-knife was used to encircle the area. Standard endoscopic submucosal dissection technique was used. The tissue was brought into a snare using forceps, and the fistulous tract and the surrounding dissected mucosa was resected with snare cautery (**►Video 1**). The resected site was closed with a running stitch created using an endoscopic suturing device, and 3 additional interrupted reinforcement stitches were placed. The patient's abdominal pain resolved 2 weeks after the procedure. An upper gastrointestinal series 3 months later

confirmed closure of the fistula and evidence of recurrent marginal ulceration. Gastrogastric fistula is a recognized complication of gastric bypass. However, fistula closure rates remain low with current endoscopic treatment methods. One initial study of endoscopic fistula closure in 95 patients showed recurrent fistula in 65% [1]. Another multicenter trial using a full-thickness endoscopic suturing device alone (n=29) showed 100% immediate technical success but a closure rate of 17.1% after 12 months [2]. The novel technique described here utilizes surgical principles by combining endoscopic submucosal dissection together with fistula tract resection, which may allow for better apposition of healthier tissue and improve successful long-term closure.

Endoscopy\_UCTN\_Code\_TTT\_1AO\_2AI

### Competing interests

C.C. Thompson: Boston Scientific – Consultant (Consulting fees); USGI Medical – Consultant (Consulting Fees)/Advisory Board Member (Consulting fees)/Research Support (Research Grant); Olympus – Consultant (Consulting Fees)/Research Support (Equipment Loans); Apollo Endosurgery – Consultant/Research Support (Consulting fees/Institutional Research Grants); Aspire Bariatrics – Research Support (Institutional Research Grant). H. Aihara: Olympus – Consultant (Consulting Fees). A.L. Chiang and A.C. Storm: Nothing to disclose.

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## Bibliography

DOI <https://doi.org/10.1055/s-0043-118213>  
Published online: 25.10.2017  
*Endoscopy* 2018; 50: E15–E16  
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Stuttgart · New York  
ISSN 0013-726X

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