

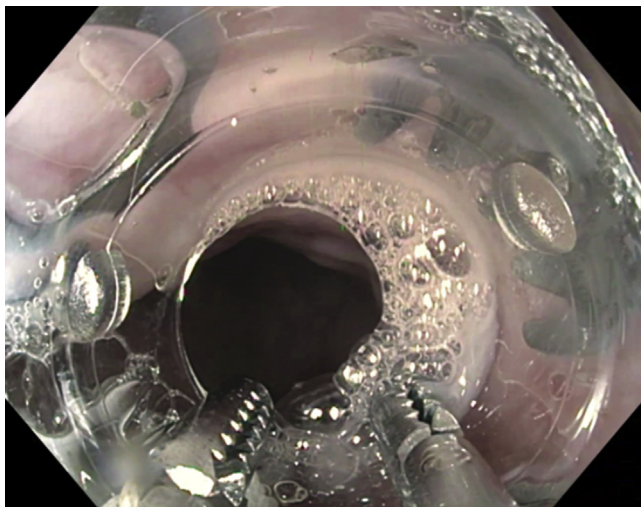


## Double-channel double-grasper technique in over-the-scope clip deployment

Shou-jiang Tang, MD,<sup>1</sup> Yehia M. Naga, MD,<sup>2</sup> Shengyu Zhang, MD<sup>2</sup>

Endoscopic management of GI fistula and leak is increasingly used. One option is to apply over-the-scope clip (OTSC) devices to close defects.<sup>1-4</sup> However, securing 2 opposing walls of a fistula and pulling them into the plastic hood can be challenging. A twin grasper and a tissue anchor are commonly used endoscopic devices to grasp tissue around the defect and pull them into the plastic hood of the OTSC before clip deployment.<sup>5</sup> The twin grasper and the tissue anchor both have limitations, especially when the defect is large. For example, it is often difficult and very challenging to secure the opposing walls of the defect by the twin grasper and tissue anchor because they tend to slip. While pulling the grasped walls into the plastic hood, we need to obtain an optimal amount of wall tissue.

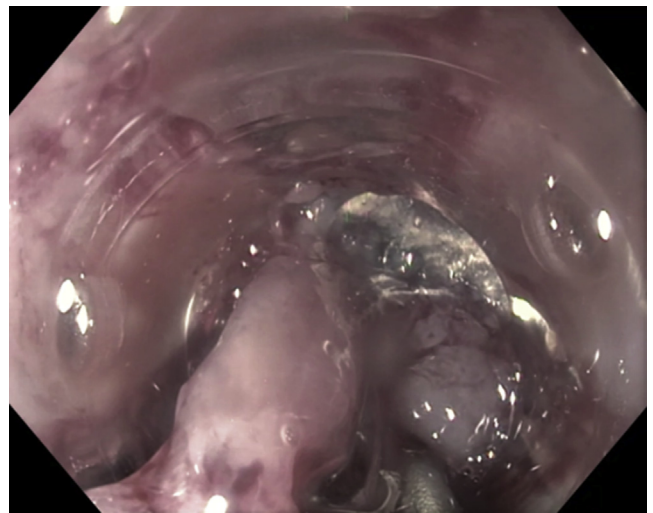
The amount of tissue secured by the twin grasper and tissue anchor is often limited, compared with that secured by a tissue grasper. The use of 2 tissue graspers further increases the tissue volume on either side of the fistula opening obtained during OTSC deployment. The authors present 3 consecutive cases of gastric fistula that were managed with clipping by OTSCs after using a novel double-channel and double-grasper technique (Fig. 1) (Video 1, available online at [www.VideoGIE.org](http://www.VideoGIE.org)).



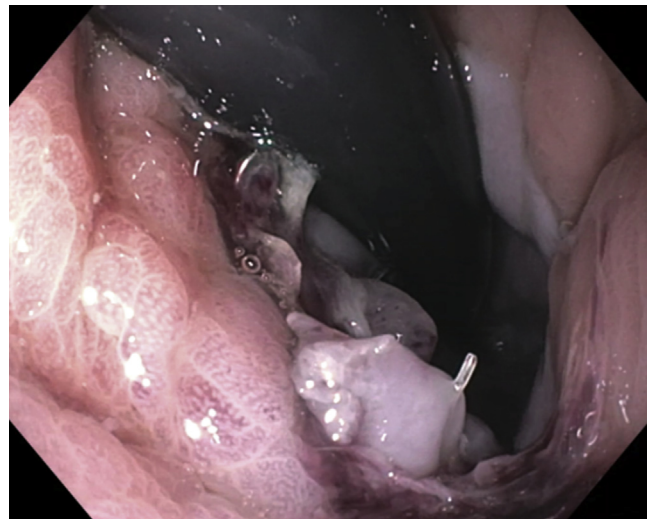
**Figure 1.** Endoscopic image demonstrating the double-channel double-grasper technique: 2 graspers at the 5 o'clock and 7 o'clock locations.

### PATIENT 1

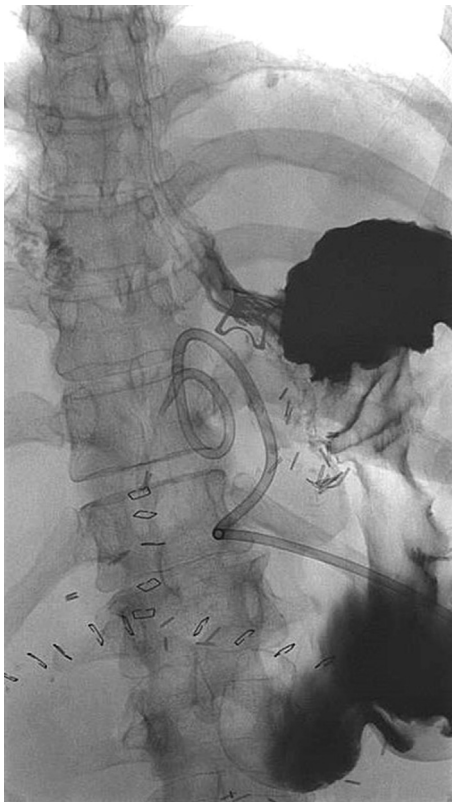
A 35-year-old woman developed an 8-mm postsurgical subacute fistula at the gastroesophageal junction, which



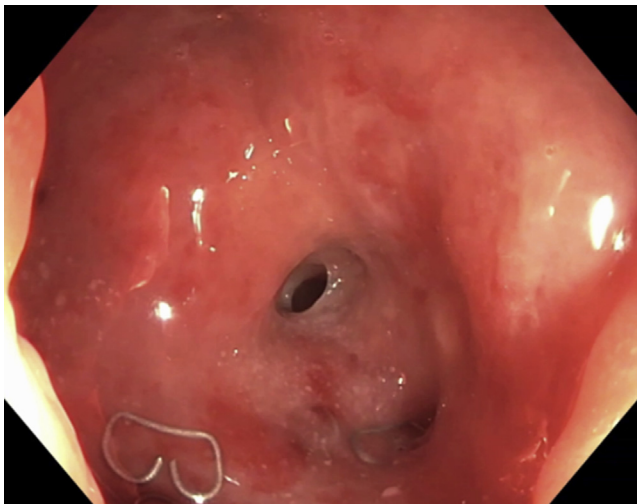
**Figure 2.** Two graspers secured at the opposing walls around the fistula and pulling them into the plastic hood of the over-the-scope clipping device before clip deployment.



**Figure 3.** After clip deployment, the 8-mm fistula is closed at the gastroesophageal junction.

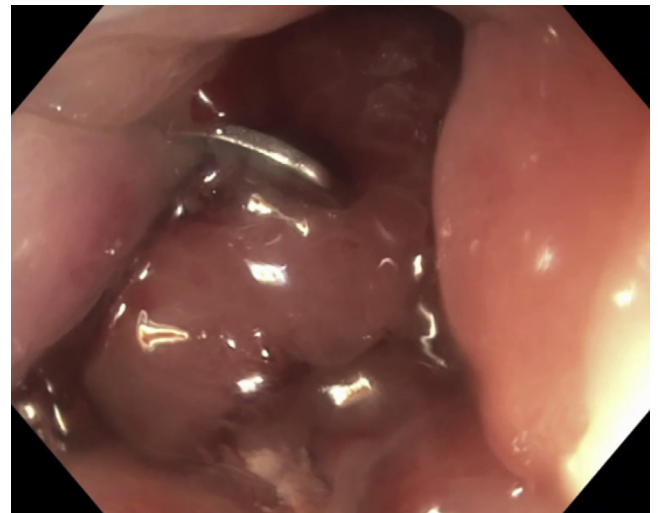


**Figure 4.** Contrast swallow study showing no leak at the gastroesophageal junction.

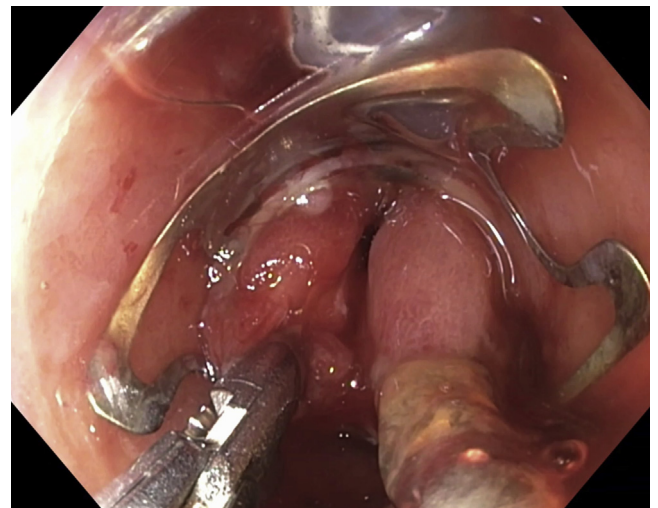


**Figure 5.** A 12-mm gastric fistula at the staple line after sleeve gastrectomy.

was successfully closed by an OTSC after the double-channel double-grasper technique was used (Figs. 2-4). The 2 opposing walls of the fistula were sequentially grasped by 2 tissue graspers and then pulled into the plastic hood before OTSC deployment to close the fistula. A contrast swallow study performed the next day



**Figure 6.** The gastric fistula is closed with an over-the-scope clip.



**Figure 7.** Two graspers secured at the opposing walls around the fistula and pulling them into the plastic hood of the over-the-scope clipping device before clip deployment.

demonstrated no leak. The patient was discharged home after tolerating an oral diet and enjoyed an uneventful post-procedural course.

## PATIENT 2

A 30-year-old woman developed a 12-mm subacute gastric fistula at the staple line after sleeve gastrectomy. The fistula failed to be closed by stent placement at an outside hospital. The fistula was closed with clipping (Figs. 5 and 6) and stent placement after use of the double-channel double-grasper technique. A contrast swallow study performed the next day demonstrated no leak. The patient was discharged home after tolerating an oral diet.

### PATIENT 3

A 70-year-old man developed a 20-mm chronic gastric fistula from buried bumper syndrome. The gastric side of the fistula was closed by 2 OTSCs around a newly placed gastrostomy tube (Fig. 7) after the double-channel double-grasper technique was used. The gastric juice leakage around the PEG stoma significantly decreased to a very minimal level after endoscopic closure.

The authors propose that the double-channel double-grasper technique can be used to assist optimal OTSC deployment. The limitations of this technique are these: (1) not every endoscopy unit has a double-channel endoscope, and (2) endoscope maneuverability is slightly decreased because of the increased scope diameter and flexibility. Future developments can include an added over-the-scope channel and a tissue grasper device to assist clip deployment if a single-channel endoscope is used.

### DISCLOSURE

*All authors disclosed no financial relationships relevant to this publication.*

*Abbreviation: OTSC, over-the-scope clip.*

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Division of Digestive Diseases, Department of Medicine, University of Mississippi Medical Center, Jackson, Mississippi, USA (1); Department of Gastroenterology, Peking Union Medical College Hospital Beijing, China (2).

If you would like to chat with an author of this article, you may contact Dr Tang at [sjtang2000@yahoo.com](mailto:sjtang2000@yahoo.com).

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