Transgastrostomic endoscopy-assisted endoscopic submucosal dissection

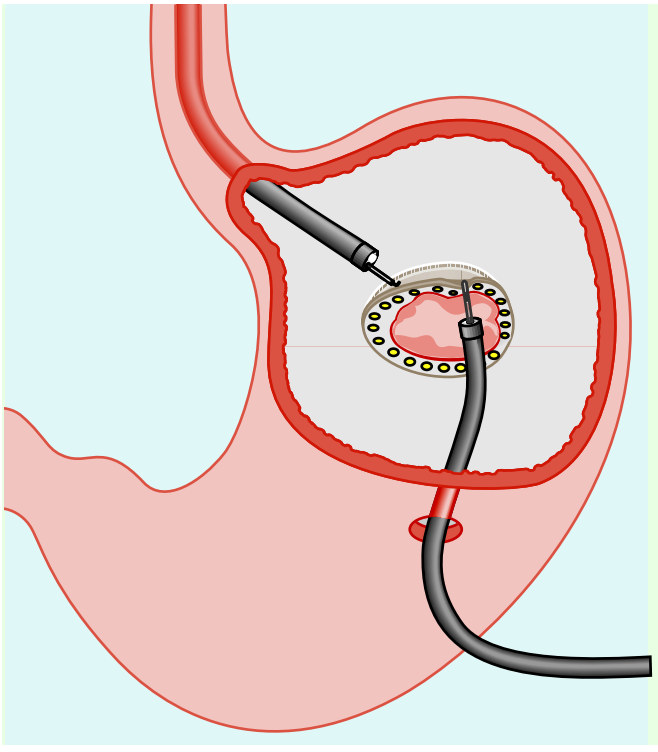

Fig. 1 Schematic illustration of transgastrostomic endoscopy (TGE)-assisted endoscopic submucosal dissection (ESD). A small-caliber endoscope is inserted through the mature gastrocutaneous tract and creates counter-traction by grasping the edge of the resection specimen. ESD was carried out under the counter-traction by TGE.

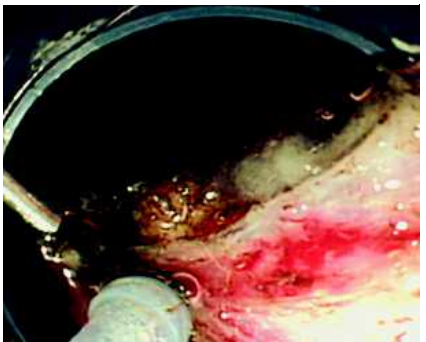

Fig. 2 TGE-assisted ESD for carcinoid tumor on the anterior wall of the upper body. The submucosal fibrosis was too severe to allow a sufficient submucosal cushion to be made by injection with hyaluronic acid. Submucosal dissection was carefully conducted under the appropriate counter-traction by TGE.

Endoscopic submucosal dissection (ESD) allows large-sized superficial gastric tumors to be obtained en-bloc [1]. One of the technical problems in ESD is the difficulty of maintaining a clear view of the submucosal layer of the gastric wall during the procedure. We report our experience of ESD assisted by transgastrostomic endoscopy (TGE) in five patients with gastric tumors (three well-differentiated adenocarcinoma, one adenoma, and one carcinoid tumor) after percutaneous endoscopic gastrostomy.

A small-caliber endoscope, GIF XP-240 (Olympus Optical Co., Ltd, Tokyo, Japan), was inserted through the mature gastrocutaneous tract, and the edge of the resecting specimen was grasped to achieve counter-traction during submucosal dissection (**Fig. 1**).

All tumors were resected successfully. The mean diameter of the resected specimens was 29.8 mm, and the mean duration of the procedures was 55.8 minutes. **Fig. 2** shows a difficult case involving a carcinoid tumor.

Although the submucosal fibrosis was too severe to allow a sufficient submucosal cushion to be made by injection with hyaluronic acid, ESD was successfully carried out by a Flex knife under the appropriate counter-traction of the resection specimen.

Percutaneous traction-assistance has been reported to be a useful method for endoscopic mucosal resection (EMR). Hard-grasping forceps are inserted through the gastrocutaneous tract, and conventional EMR is conducted [2]. A laparoscopic port with a trocar is inserted into the gastric lumen percutaneously and assists in the ESD using an insulation-tipped (IT) knife [3]. However, these methods are thought to be limited depending on the location of the tumor, as the assisting devices are not flexible. TGE can be applied throughout the stomach and the esophagus, and can create appropriate counter-traction for dissecting the lesion. Furthermore, TGE can provide not only traction control but also support for diverse procedures of ESD, such as marking, submucosal injection, and washing out or aspiration of the intragastric contents.

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References

1 *Ono H, Kondo H, Gotoda T et al.* Endoscopic mucosal resection for treatment of early gastric cancer. Gut 2001; 48: 225 – 229

2 *Tokumo H, Komatsu H, Ishida K et al.* Transgastrostomal endoscopic mucosal resection for the treatment of gastric mucosal lesions [in Japanese]. Gastroenterol Endosc 1997; 39: 1775 – 1780

3 *Kondo H, Gotoda T, Ono H et al.* Percutaneous traction-assisted EMR by using an insulation-tipped electrosurgical knife for early stage gastric cancer. Gastrointest Endosc 2004; 59: 284 – 288

Bibliography

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