



Traction method for endoscopic subserosal dissection

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GI subepithelial tumors (SETs) are frequently found during screening EGD. The vast majority of SETs are generally asymptomatic and clinically insignificant. However, certain types may be malignant or have the potential to progress to malignancy, such as carcinoids, lymphomas, glomus tumors, and GI stromal tumors. Noninvasive diagnostic methods, such as EUS, still provide challenges in making an accurate diagnosis and definition of lesion characteristics. Histopathologic examination of the tumor still remains the criterion standard in achieving a correct assessment and diagnosis of the lesion.¹ To obtain a sample of the lesion, bite-on-bite biopsy² or EUS-guided fine-needle aspiration (EUS-FNA) may be effective but is not always feasible.³ Otherwise, a complete resection can be achieved with peroral endoscopic tumor excision,⁴ full-thickness dissection,⁵ or endoscopic subserosal dissection (ESSD).⁶ The first ESSD series performed for the removal of SETs originating from the muscularis propria was successfully reported by Liu et al.⁶ Here, we present a case demonstrating ESSD of a gastric SET on the posterior wall of the gastric fundus (Video 1, available online at www.VideoGIE.org).

A 56-year-old woman with no significant medical history underwent screening EGD, during which a 2-mm SET was observed in the gastric fundus (Fig. 1). The overlying

mucosa appeared normal. EUS assessment showed a probable muscular layer origin of the lesion. However, the lesion was thought to be too small for FNA; hence, FNA was not carried out. The case was discussed with the patient, and we then decided to perform ESSD.

ESSD was carried out with the patient under general anesthesia, with endoscopic insufflation of carbon dioxide. The procedure was performed with a single-channel gastroscope (GIF-Q260J; Olympus Medical System Co, Tokyo, Japan), and a super-soft transparent hood was attached on the tip of the scope (Space Adjuster; TOP, Tokyo, Japan). A triangle-tip knife with jet function (TTJ KD-645L; Olympus) was used for incision and dissection. The Erbe VIO300D System (Erbe Elektromedizin GmbH, Tübingen, Germany) was set on program Endo cut Q effect 2 and Spray coag effect 2, with maximum power 50 W.

After creating a circumferential marking around the lesion, a solution containing saline and indigo carmine was injected into the submucosal layer. A C-shaped mucosal incision was made on the anal side of the lesion with the triangle-tip knife with jet function. Stepwise submucosal dissection was performed to create a small flap. After this, the endoscope was withdrawn. One open-close clip was placed into the working channel and grasped a snare. Then, it was reinserted into the stomach. In this

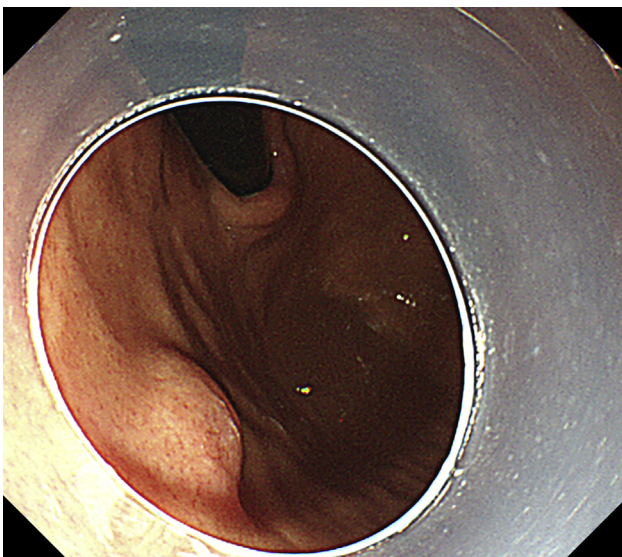


Figure 1. Endoscopic view showing submucosal lesion of gastric fundus.

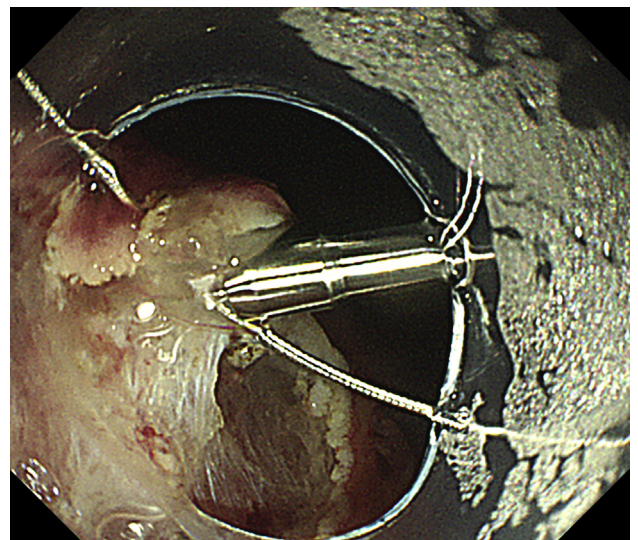


Figure 2. Endoscopic view showing snare-and-clips multipoint traction method.

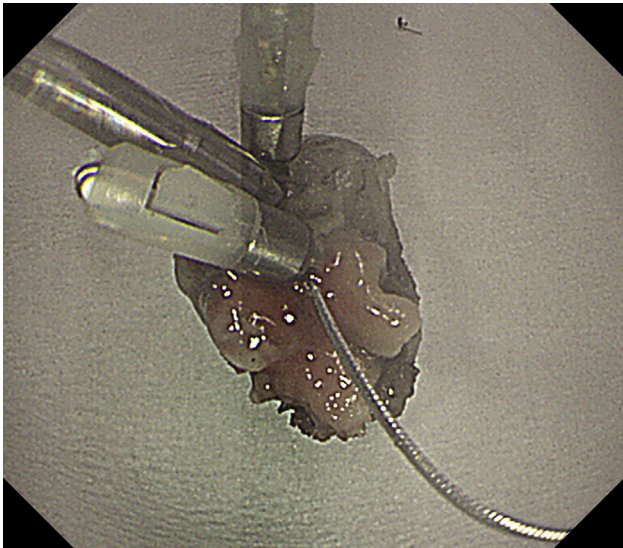


Figure 3. Submucosal lesion grasped with clips and snare.

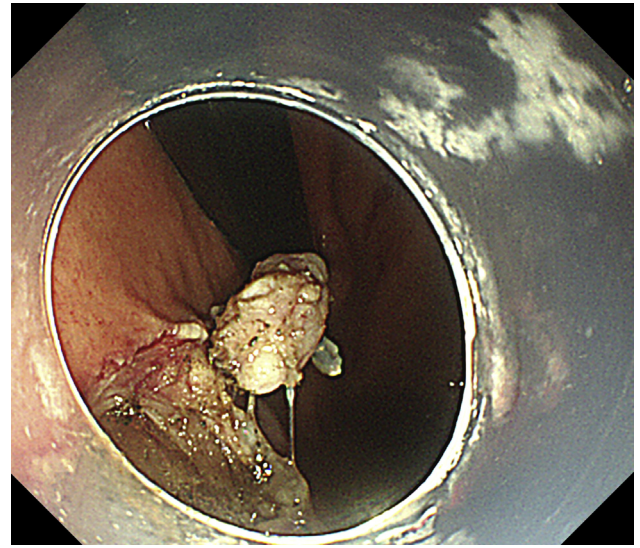


Figure 5. Endoscopic view showing dissected gastric subepithelial tumor.

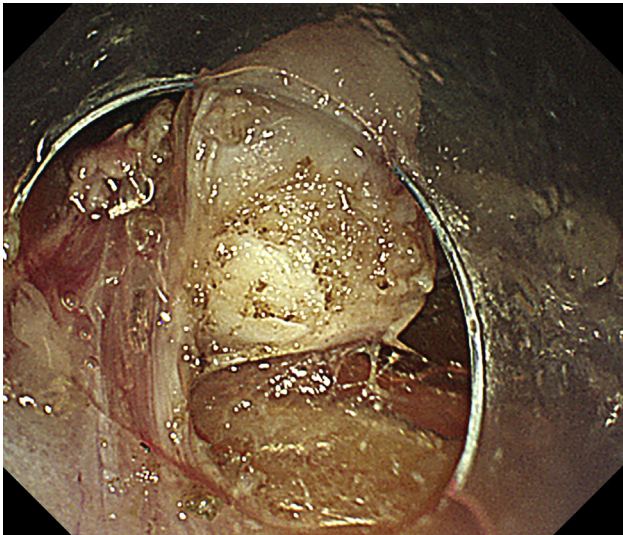


Figure 4. Endoscopic view showing dissection plane between muscular and serosal layers.

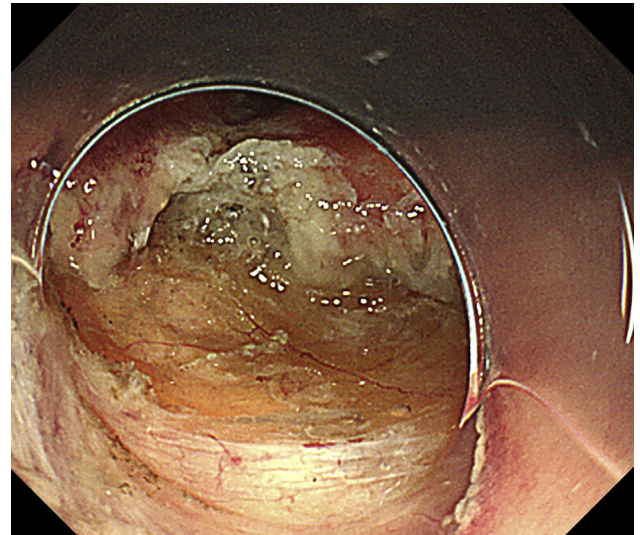


Figure 6. Endoscopic view showing exposure of the serosal layer.

way, the clip could grasp both lesion and snare together. Two additional clips were placed to secure the snare and to achieve an appropriate multipoint countertraction on the lesion (Figs. 2 and 3). At this point, dissection could be performed easily, with good visualization and without the need for subserosal injections (Figs. 4 and 5).⁶ After completion of the dissection, it was possible to appreciate the remaining serosal tissue and pancreas surface beyond it (Fig. 6). En bloc resection was completed without any adverse events, and the incision site was completely closed with clips. Histopathologic assessment confirmed a leiomyoma. The patient started eating 3 days after the ESSD. Postprocedural medications included hydration and intravenous proton pump

inhibitors for 3 days, followed by proton pump inhibitors by mouth for 4 weeks.

In summary, the ESSD with traction method is a feasible and safe procedure for patients with GI subepithelial tumors.

DISCLOSURE

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Abbreviations: ESSD, endoscopic subserosal dissection; EUS-FNA, EUS-guided fine-needle aspiration; SET, subepithelial tumor.

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