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Laparoscopic endoscopic cooperative surgery for a gastric glomus tumor previously diagnosed by endoscopic ultrasound fine-needle biopsy

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A 75-year-old woman was admitted for evaluation of an asymptomatic submucosal lesion of the gastric body. Endoscopic ultrasonography (EUS) showed a 1 cm in size hypoechoic lesion originating from the muscularis propria. Fine-needle biopsy (FNB) with a novel 22-G histology needle (Olympus EZ shot 3 plus, Tokyo, Japan) disclosed a glomus tumor (Fig. 1 and 2). Given the potential risk of malignancy, the lesion was further removed by laparoscopic endoscopic cooperative surgery (LECS), as previously described [1]. The lesion was partially enucleated with a Flush Knife BTs 1.5 mm (Fujifilm, Tokyo, Japan). A clip with dental floss was applied to the center of the lesion for countertraction, and then a full thickness excision was performed with an IT knife nano (Olympus). The lesion was then retrieved with a snare and the site of resection was sealed internally with endoscopic clips, and externally with absorbable laparoscopic sutures. The patient was discharged on postoperative day 2 and had an uneventful recovery. Histology confirmed the initial diagnosis.

Glomus tumors are rare mesenchymal tumors with a low potential for malignancy. Less than 10 cases have been diagnosed preoperatively by EUS-FNB [2]. They are usually treated by laparoscopic wedge resection. To the best of our knowledge, this is the third report of a gastric glomus tumor removed by LECS [3], a minimally invasive approach that preserves the gastric anatomy and functionality and shortens the duration of hospitalization [1].

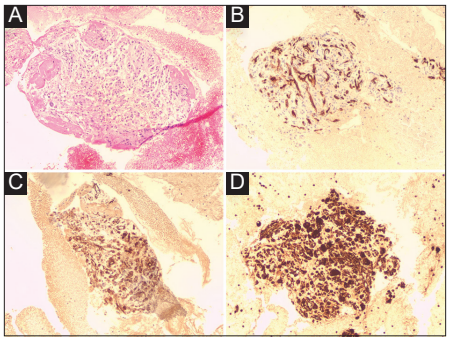

Figure 1 Endoscopic ultrasound fine-needle biopsy pathology. (A) Proliferating oval-shaped cells in a small nest formation surrounded by many capillary vessels (H/E, ×10 magnification). (B) Immunohistochemistry staining for CD 34 was positive in endothelial cells, but negative in neoplastic cells (×10). (C) Positive staining for smooth muscle actin and (D) vimentin in neoplastic cells (×10)

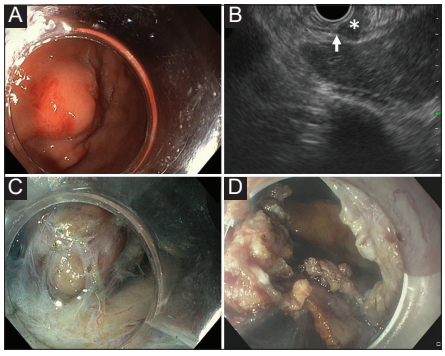

Figure 2 Endoscopic images. (A) Submucosal tumor of the anterior wall of the gastric body. (B) Endoscopic ultrasound showed that the tumor (asterisk) originated from the muscle layer (arrow). (C) Partial enucleation of the tumor confirmed the strong attachment to the muscle layer. (D) Full thickness incision with IT knife of the last bridge of tissue

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