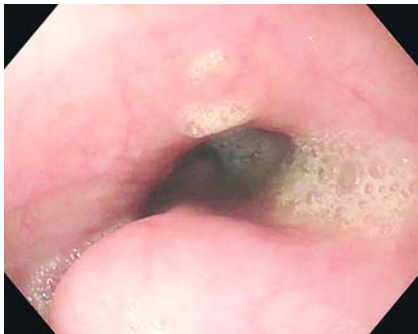


Submucosal tunneling endoscopic resection (STER) with full-thickness muscle excision for a recurrent para-aortic esophageal leiomyoma after surgery

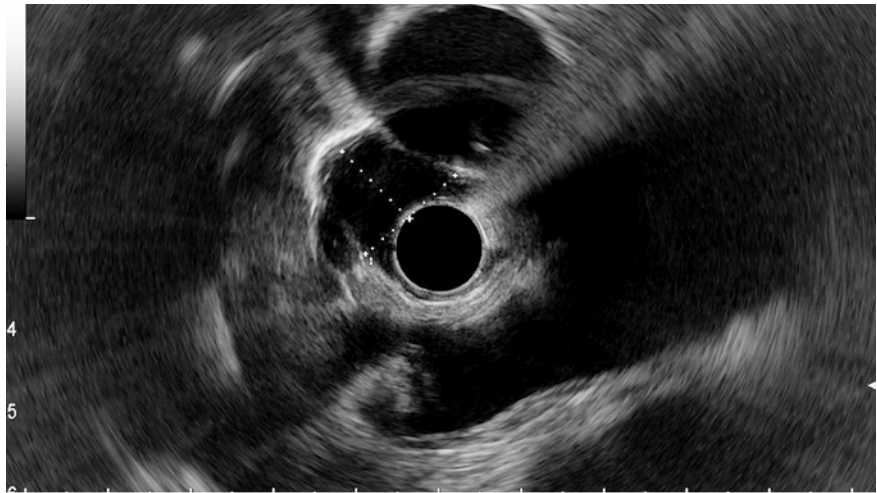


► **Fig. 1** Endoscopic view showing a recurrent leiomyoma in the mid-esophagus.

We report the case of a 49-year-old woman with a recurrent esophageal leiomyoma following two surgical resections. The surgical procedures had been performed 23 and 21 years previously. Follow-up showed lesion recurrence in the mid esophagus (► **Fig. 1** and ► **Fig. 2**).

Submucosal endoscopic tunneling resection (STER) was preferred to surgery because of the previous interventions. A single shot of 2g ceftriaxone was administered intravenously prior to the procedure. Submucosal injection, mucosal incision, and tunnel creation was started 5 cm above the lesion. Enucleation was performed using a DualKnife J (Olympus, Tokyo, Japan). The lesion was close to the aorta, so the final dissection was carried out by synchronizing with aortic movements. Full-thickness muscle resection was required to achieve en bloc resection being careful to preserve the esophageal adventitia (► **Video 1**). The leiomyoma was grasped with a 30-mm snare and was easily removed (► **Fig. 3**). Six standard clips (QuickClip Pro; Olympus) were deployed to close the mucosal incision.

A computed tomography (CT) scan with swallow study was performed on post-operative day 1; oral diet was restarted on day 2. Histological examination did not show any malignancy.



► **Fig. 2** Endoscopic ultrasound (EUS) showing a huge para-aortic leiomyoma developing from the muscularis propria layer.

Tumors originating from the muscularis propria require surgery in most cases [1]. STER is a novel approach for the treatment of subepithelial tumors of the gastrointestinal tract. The risk of perforation may reach up to 15% [2]. If the tumor develops from the muscularis propria, preservation of the serosal layer is difficult; circumferential incision of the serosa is therefore often required to

complete en bloc resection [3]. Even though a large muscular defect exists, mediastinitis does not occur if the mucosal continuity is maintained [4].

Recurrent esophageal leiomyoma has been anecdotally reported and is usually related to incomplete resection or enlargement of a previously undetected nodule [5]. Here, we report the first STER treatment for recurrent esophageal

► **VIDEO 1**

 A video frame showing the peroral endoscopic tunneling dissection of a large leiomyoma. The lesion is being manipulated within a submucosal tunnel. A QR code is visible to the right of the video frame.

► **Video 1:** Peroral endoscopic tunneling dissection of a huge recurrent para-aortic esophageal leiomyoma. Muscularis propria dissection and full-thickness resection was necessary to mobilize the lesion with preservation of the esophageal adventitia.



► **Fig. 3** Endoscopic view showing the 15×30-mm leiomyoma being grasped by a 30-mm snare.

leiomyoma with full-thickness muscle resection, which was required because of involvement of the deep muscularis propria and fibrosis deriving from previous surgery.

Endoscopy_UCTN_Code_TTT_1AO_2AG

Competing interests

None

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