



Successful removal of a giant esophageal lipoma with hybrid endoscopic submucosal dissection

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CASE DESCRIPTION

We report a case of a 47-year-old man who presented with dysphagia with an Eckardt score of 6 and weight loss. CT imaging of the chest visualized a 7-cm hypodense lesion occupying both the middle and lower sections of the esophagus (Fig. 1). This presentation was characteristic of an esophageal lipoma. A multidisciplinary team of thoracic surgeons and endoscopists chose endoscopic submucosal dissection (ESD) of the lesion as the optimal next step (Video 1, available online at www.giejournal.org).

A conventional forward-viewing endoscope was advanced to the middle third of the esophagus. A lifting agent (ORISE, Boston Scientific, Marlborough, Mass, USA) was proximally injected to elevate the submucosal mass (Fig. 2A). A hybrid IT knife (ERBE, Tübingen, Germany) was used to make a longitudinal mucosal incision to provide access to the submucosal layer (Fig. 2B). Submucosal dissection was performed until near total access to the lipoma was achieved (Fig. 2C).

Because the large size of the lipoma resulted in an inability to reach the base and concern for extensive hemorrhage and perforation, the decision was made to proceed with hot piecemeal resection using a braided snare (Figs. 3 and 4). After resection, closure of the large mucosal defect was initially attempted with hemoclips, but this was not sufficient. Therefore, endoscopic suturing was performed to achieve complete defect closure. Pathology confirmed the diagnosis of lipoma (Fig. 5). Follow-up EGD at 4 weeks demonstrated a healed procedure site with only minor scar formation (Fig. 6). The patient's Eckardt score improved to 0 with complete resolution of dysphagia.

Esophageal submucosal tumors account for less than 1% of all esophageal neoplasms. Esophageal lipomas are very rare and comprise 0.4% of all alimentary tract benign tumors.¹ Surgical options such as enucleation and thoracoscopic and laparoscopic techniques have been proposed for the treatment of lipomas. However, surgery is associated with adverse events such as leakage, infection, bleeding, and prolonged hospital stay.^{2,3}

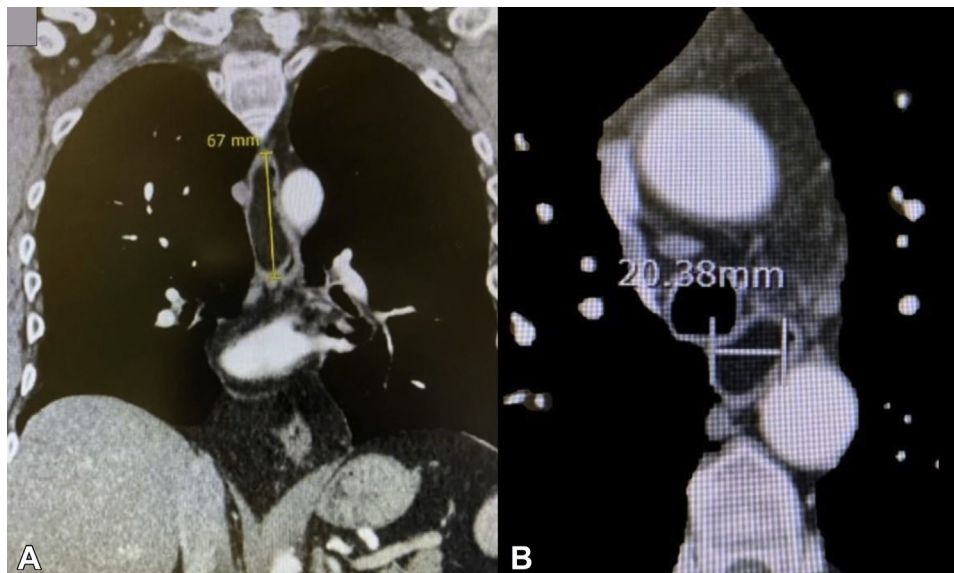


Figure 1. **A**, Chest CT scan visualizing the length of the lipoma (67 mm). **B**, Chest CT scan visualizing the width of the lipoma (20 mm).

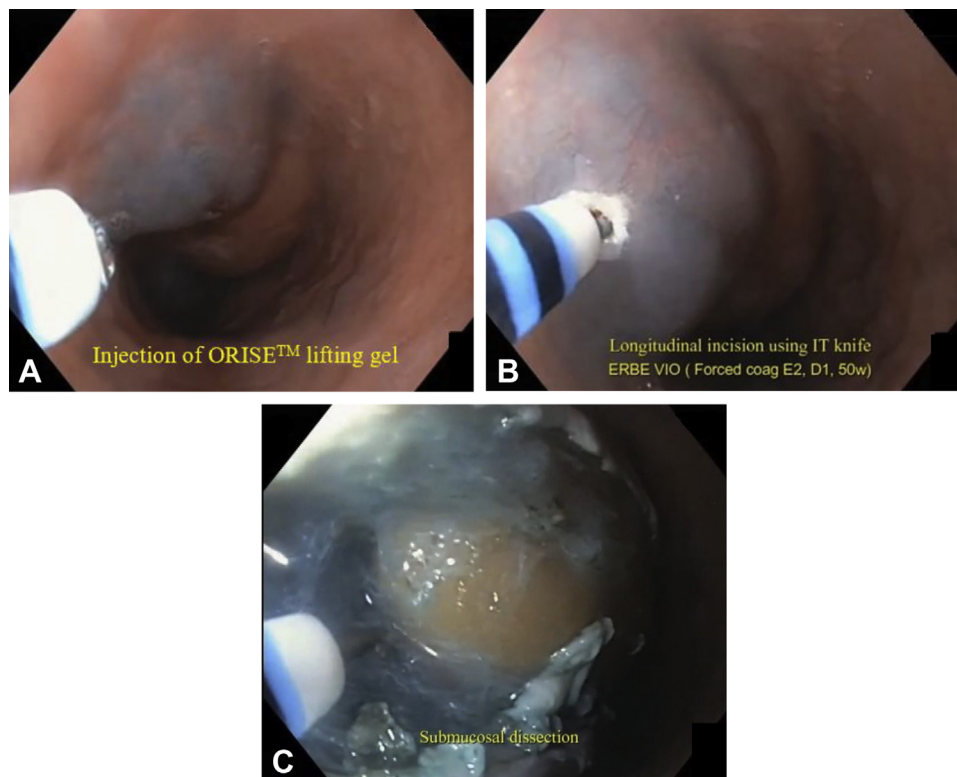


Figure 2. **A**, Submucosal injection of O-Rise lifting gel proximal to the lesion. **B**, Initial longitudinal incision using a hybrid IT knife. **C**, Endoscopic submucosal dissection of the lipoma.

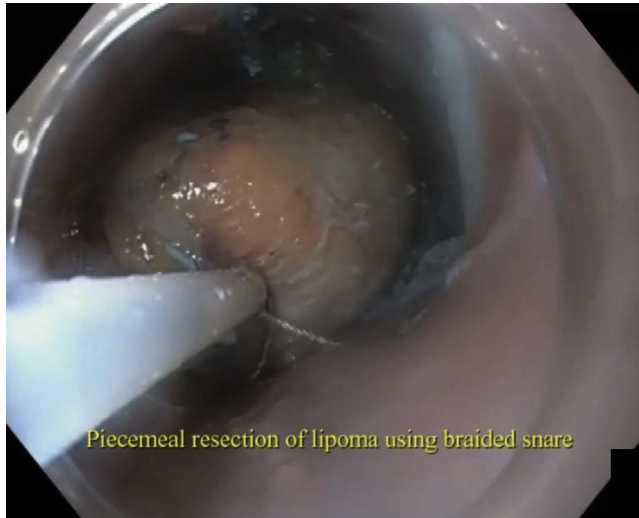


Figure 3. Piecemeal resection of the lipoma using a braided snare.



Figure 4. Gross overview of the resected lipoma.

Prior studies have reported effective results for endoscopic removal of GI lipomas, with very low rates of recurrence. Yu et al⁴ demonstrated no recurrence in 15 endoscopically removed large lipomas with 1 to 8 years of follow-up. Several other case reports evaluated the unroofing technique in resection of lipomas, which requires

snare resection of the superior half of the lipoma to allow the contents to drain into the GI lumen.⁵⁻⁷ Lee et al⁵ evaluated the recurrence rate using the unroofing technique and reported it to be approximately 7% (2 of 28 patients) after a mean follow-up of 19 months. This procedure is known to have a higher risk of lipoma

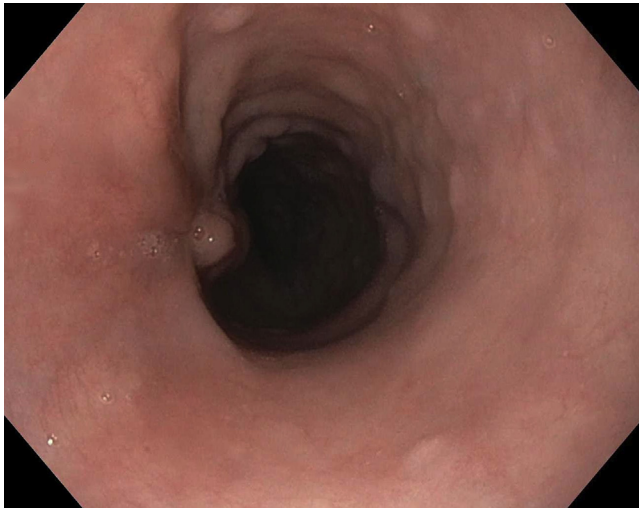


Figure 5. Follow-up EGD displaying complete resolution of the lipoma with minor scar formation.

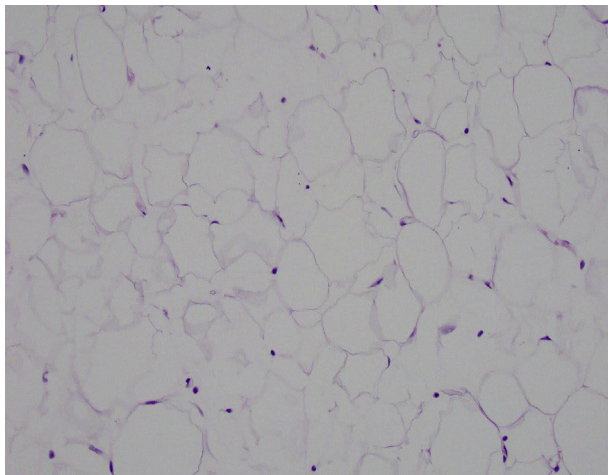


Figure 6. Histological image of the resected tumor displaying both mature adipose tissue and minimal connective tissue, characteristic of a lipoma.

recurrence, likely because of the spontaneous closure of the artificial lumen created in the mucosa to drain the lipoma. More recent case reports also describe no lipoma regrowth or symptom recurrence after incomplete resection.⁸

Hybrid ESD is a minimally invasive endoscopic technique that can be done as an alternative to traditional surgery for the removal of esophageal lipomas.

DISCLOSURE

Dr Nieto is a consultant for Boston Scientific. All other authors disclosed no financial relationships.

Abbreviation: ESD, endoscopic submucosal dissection.

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