Thoracoscopic Excision of an Esophageal Leiomyoma in a 63-Year-Old Woman Presenting with Dysphagia: A Case Report

Asgary M. R. MD[1], Asgary M. M. MD[2*]

Abstract:

We present the case of a 63-year-old woman with progressive dysphagia. Endoscopy and endoscopic ultrasonography (EUS) revealed a submucosal esophageal mass located 29 cm from the dental arcade, measuring 4.5 × 3.5 × 2.5 cm. Thoracoscopic excision was successfully performed, and histopathological analysis confirmed the diagnosis of leiomyoma. This case highlights the role of minimally invasive thoracoscopic surgery in managing symptomatic esophageal leiomyomas.

Keywords: Endosonography, Leiomyoma, Thoracoscopy, Deglutition Disorders

Background and Objective

Esophageal leiomyomas are the most common benign tumors of the esophagus, accounting for approximately 70% of benign esophageal neoplasms. These tumors typically originate from the muscularis propria and are usually asymptomatic; however, larger lesions may cause dysphagia or chest discomfort. Video-assisted thoracoscopic surgery (VATS) provides a less invasive alternative to thoracotomy, resulting in reduced morbidity and faster recovery.

Case Presentation

A 63-year-old woman presented with a six-month history of progressive dysphagia to solids. She denied experiencing weight loss, chest pain, or regurgitation. Physical examination and routine blood tests were unremarkable.

[*]Thoracic Surgeon, Associate Professor, Department of Surgery, Faculty of Medicine, Guilan University of Sciences, Rasht, Iran
[**]Medical Intern, Faculty of Medicine, Guilan University of Sciences, Rasht, Iran
Received: 04/05/2025
Accepted: 13/10/2025

Corresponding Author: Dr. Mohammad Reza Asgary

Tel: 013-33753141

E-mail: tsasgary85@yahoo.com
doi: 10.22034/ijs.2025.738051

Paraclinical Investigations

Upper gastrointestinal endoscopy revealed a subepithelial lesion in the mid-esophagus, located 29 cm from the upper incisors. Endoscopic ultrasound demonstrated a hypoechoic, well-circumscribed lesion measuring 4.5 × 3.5 × 2.5 cm, arising from the muscularis propria, consistent with a leiomyoma.

Surgical Procedure and Management

The patient underwent thoracoscopic enucleation via a right VATS approach under general anesthesia. She was positioned in the left lateral decubitus position, and four trocars were inserted. The tumor was accessed through a longitudinal myotomy and excised without mucosal perforation. Intraoperative endoscopy confirmed mucosal integrity. The muscular layer was reapproximated using interrupted sutures. On postoperative day 2, imaging showed no leak or stricture. Oral intake was resumed, and she was discharged on postoperative day 4. At the 3-month follow-up, she was asymptomatic with complete resolution of dysphagia (Figure 1).

Histopathology

Microscopic examination of the excised mass revealed a benign neoplasm composed of interlacing bundles of spindle cells, exhibiting no significant mitotic activity or pleomorphism, consistent with leiomyoma. These findings confirmed the diagnosis and excluded malignancy.

Figure 1- Separation of the leiomyoma from the esophageal mucosa and muscle.

Figure 2 - The leiomyoma has been removed.

Conclusion

Thoracoscopic excision of esophageal leiomyoma is a safe and effective treatment for symptomatic patients. This case highlights the importance of accurate diagnosis and demonstrates the value of minimally invasive surgical techniques in achieving optimal outcomes.

References:

1. Mutrie CJ, Donahue DM, Wain JC, et al. Esophageal leiomyoma: a 40-year experience. Ann Thorac Surg. 2005; 79(4): 1122–1125.
2. Zengin M, Yıldızhan B, Yıldızhan E. Thoracoscopic enucleation of esophageal leiomyoma: case report and literature review. Turk J Thorac Cardiovasc Surg. 2019; 27(4): 575–578.
3. Seremetis MG, Lyons WS, deGuzman VC, Peabody JW Jr. Leiomyomata of the esophagus. An analysis of 838 cases. Cancer. 1976; 38(5): 2166–2177.
4. Lee LS, Singhal S, Brinster CJ, et al. Current management of esophageal leiomyoma. J Am Coll Surg. 2004; 198(1): 136–146.
5. Kent M, d'Amato T, Nordman C, et al. Minimally invasive resection of benign esophageal tumors. J Thorac Cardiovasc Surg. 2007; 134(1): 176–181.
6. Puli SR, Reddy JB, Bechtold ML, et al. Endoscopic ultrasound in identifying the layer of origin of gastrointestinal tract tumors: a meta-analysis. World J Gastroenterol. 2008; 14(10): 1479–1483.
7. Miettinen M, Sarlomo-Rikala M, Sobin LH, et al. Esophageal stromal tumors: a clinicopathologic, immunohistochemical, and molecular genetic study. Am J Surg Pathol. 2000; 24(2): 211–222.
8. Hatch GF, Wertheimer-Hatch L, et al. Tumors of the esophagus. World J Surg. 2000; 24(4): 401–411.
9. Von Rahden BH, Stein HJ, et al. Enucleation of submucosal tumors of the esophagus: minimally invasive versus open approach. Surg Endosc. 2004; 18(6): 924–930.
10. Hazelrigg SR, Mack MJ, et al. Thoracoscopic enucleation of benign esophageal tumors. Ann Thorac Surg. 1992; 54(6): 1211–1213.
11. Orringer MB, Stirling MC. Esophageal leiomyomectomy: indications and results. Ann Thorac Surg. 1989; 47(1): 49–54.