

Atypically shaped esophageal leiomyoma mimicking lymphadenopathy

Lenfadenopati görünümü veren atipik şekilli özofagus leiomyomu

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ABSTRACT

Leiomyoma is the most frequently seen benign tumor of the esophagus. In this article, we report a 41-year-old male patient with complaint of dysphagia. On computed tomography of the thorax, an image resembling a conglomerated lymph node measuring 3.5x2 cm was detected in the lower left paratracheal region. In the esophagoscopy, a submucosally localized mass was seen at 22nd-24th cm of the esophagus. The patient was taken under operation using a thoracoscopic technique and the mass was totally resected through enucleation. Esophageal leiomyoma may mimic mediastinal lymphadenopathy radiologically. For a minimally invasive procedure, thoracoscopic enucleation of these tumors should be the first applied method in surgical treatment.

Keywords: Esophagus; leiomyoma; lymphatic diseases; surgery; thoracoscopy.

Esophageal leiomyoma is a lesion that originates from the smooth muscle cells in the muscular layer of the esophagus. Particularly large and abnormally shaped leiomyomas may cause dysphagia. It generally has intramural localization, and there may be difficulties in terms of differential diagnosis. Esophageal leiomyomas can be successfully removed with open surgery or the enucleation method, which uses minimally invasive techniques because leiomyomas bind relatively loosely to the surrounding tissues.^[1]

In this article, we aimed to present an esophageal leiomyoma case that was examined due to dysphagia in which computed tomography of the thorax disclosed an image mimicking enlarged mediastinal lymph node.

ÖZ

Leiomyom özofagusun en sık görülen benign tümörüdür. Bu yazıda, yutma güçlüğü yakınması olan 41 yaşında bir erkek hasta sunuldu. Toraks bilgisayarlı tomografisinde, sol alt paratrakeal bölgede 3.5x2 cm boyutlarında konglomere lenf nodu benzeri görünüm tespit edildi. Özofagoskopide, özofagusun 22-24. santimetresinde submukozal yerleşimli kitle görüldü. Hasta torakoskopik teknik kullanılarak ameliyata alındı ve kitle enükleasyon yoluyla total olarak rezeke edildi. Özofagus leiomyomu radyolojik olarak mediastinal lenfadenopati benzeri görünüm verebilir. Minimal invaziv bir işlem için bu tümörlerin torakoskopik enükleasyonu cerrahi tedavide ilk uygulanan yöntem olmalıdır.

Anahtar sözcükler: Özofagus; leiomyom; lenfatik hastalıklar; cerrahi; torakoskopi.

CASE REPORT

A 41-year-old male patient was admitted to our clinic with dysphagia. He had had dysphagia for the past three years which had deteriorated within the last year. The physical examination of the patient was normal, but posteroanterior chest radiograph disclosed a left hilar mass. Computed tomography of thorax revealed a mass resembling a conglomerated lymph node 3.5x2 cm in size in the lower left paratracheal region (Figure 1). We performed esophagoscopy since the lesion was adjacent to esophagus and observed a submucosally localized mass at 22nd-24th cm of the esophagus. The mucosal surface was quite smooth; thus, we performed no biopsy. With the presumptive diagnosis of



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esophageal leiomyoma, we operated the patient under general anesthesia via a right thoracoscopy. Posterior mediastinal pleura was opened, dissected and the mass was enucleated with blunt and sharp dissection (Figure 2). Then, we primarily closed esophageal muscle layers with absorbable sutures. The patient, who had no postoperative complications, was discharged on the fourth day. Histopathological examination revealed a leiomyoma, while the patient showed full clinical and radiological recovery. He remained asymptomatic at the end of his one-year follow-up period.

DISCUSSION

Radiological and endoscopic procedures are performed for diagnostic purposes in patients who are suspected to have esophageal leiomyoma. A computed tomography of the thorax, which is often used in such cases, can give detailed information on the density and size of the lesion, as well as its association with neighboring tissues. However, smooth, marginated masses with soft tissue density may be seen on tomography in leiomyomas localized in the middle part of the esophagus, as in our patient. This condition necessitates differential diagnoses, primarily for the causes leading to mediastinal lymphadenopathy and some other diseases, including malign esophageal tumors such as epithelial tumors or leiomyosarcoma, neurofibroma, hemangioma, diverticulum, infected bronchogenic cysts, or Castleman's disease.^[2]

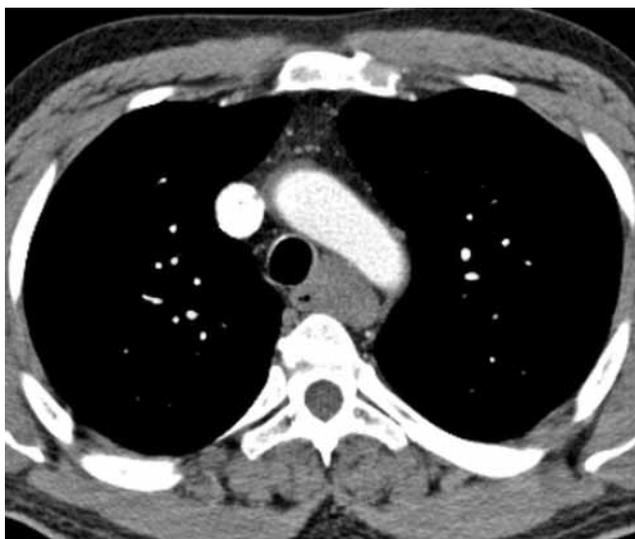


Figure 1. Computed tomography of thorax showing an image of lesion, with soft tissue density, localized in lower left paratracheal region.

Endoscopic ultrasound (EUS), endobronchial ultrasound (EBUS), and esophagoscopy are the first procedures that come to mind for the differential diagnosis of mediastinal lymphadenopathy in particular. Since our patient's complaint was dysphagia and the mass seemed to invade the esophagus radiologically, we suspected that the lesion may have been of esophageal origin, although the tomographic image of the lesion in our patient resembled mediastinal lymphadenopathy caused by either lymphoma or sarcoidosis. For that reason, neither EUS nor EBUS was considered for the patient, and esophagoscopy was preferred. During the esophagoscopy, we observed a submucosally localized mass where the surfacing mucosa was smooth, leading us to think that the lesion was most likely benign. Thus, both for this reason and to avoid any tissue scarring, which may have caused issues in the surgical procedure we decided on straightforward surgery with no prior biopsy. In this context, a study conducted by Punpale et al.^[3] indicated that if leiomyoma is suspected during esophagoscopy, a biopsy should not be performed, as it may cause scarring at the biopsy site, hampering definitive extramucosal resection. Only an ulcerated growth should be biopsied to rule out malignancy.^[3]

In the differential diagnosis of esophageal leiomyoma, the diagnostic value of needle aspiration biopsies harvested with EUS or EBUS is limited. Such biopsies taken from submucosal or intramural lesions are often not recommended, due to possible side effects such as complications and more challenging surgery.

Another condition that needs to be considered in differential diagnosis is leiomyosarcoma. Leiomyosarcomas of the esophagus are rare, malignant, smooth-muscle tumors with similar radiological characteristics as leiomyomas. It should be noted here that postoperative needle aspiration biopsies performed for diagnostic purposes are not effective

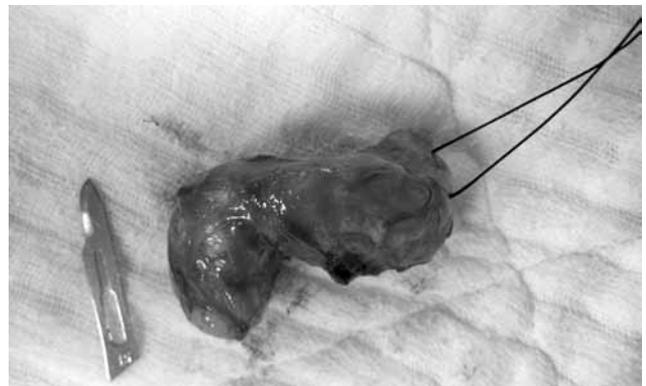


Figure 2. Macroscopic image of resected material.

in distinguishing these two lesions from one another pathologically. Additionally, in leiomyosarcomas, endoscopic biopsies might give a high false negative rate, especially in cases where the mucosa is intact.

With the increasing technological developments and experience in recent years, thoracoscopic methods have become the gold standard in the surgical treatment of esophageal leiomyoma, as in most chest surgeries. It is emphasized in the literature that single leiomyomas with a diameter smaller than 5 cm should be removed by the thoracoscopic method.^[1,4] The fact that the leiomyoma was localized on the left of the esophagus in our patient did not constitute an obstacle for a thoracoscopic approach. After we suspended the esophagus from the proximal and distal sides of the mass, we dissected the lesion from the surrounding tissues. Because leiomyomas are localized in muscle layers and their binding with the surrounding tissues is rather loose, as in our patient, the enucleation procedure becomes easier. The size of the defect in the esophageal muscle layers in our patient was relatively large after the enucleation. We closed the muscle layers, thinking that if the muscle tissues of the esophagus were left open, the mucosal layer would be in direct contact with the thorax, and the negative pressure in the thorax, over time, could contribute to the development of a traction pseudodiverticulum in this region.^[5,6]

In conclusion, esophageal leiomyoma may give a radiological appearance similar to mediastinal

lymphadenopathy. To be minimally invasive, thoracoscopic enucleation of these tumors should be the first means attempted in surgical treatment, and the esophageal muscle layers should be closed at the end of the procedure to prevent possible complications.

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