Respir Case Rep 2017;6(2):107-109 DOI: 10.5505/respircase.2017.86548

A Rare Case of Pleural Leiomyoma

Nadir Bir Plevral Leimiyoma Olgusu

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Abstract

A 56-year-old female patient presented with chest pain and shortness of breath ongoing for 3 years. Chest X-ray and computed tomography of the thorax revealed mass 16 x 13 x 12 cm in size in the right middle and lower lobes. Right posterolateral thoracotomy was performed. According to frozen biopsy, mass was determined to be degenerative leiomyoma. Histopathologically, tumor consisted of packets and bundles of smooth muscle fibers without significant cellular necrosis or mitotic activity. Macroscopic appearance of the tumor was white-yellow color and texture was very hard. Due to size and location, tumor was removed with 2 incisions. Aim of this report was to emphasize the need for removal of leiomyoma due to malignant potential of pleural origin.

Key words: *Intrathoracic, benign, leiomyoma.*

Özet

Elli altı yaşında kadın hasta üç yıldır devam eden göğüs ağrısı, nefes darlığı ve göğsünün sağ tarafında şişlik yakınmaları ile başvurdu. Akciğer grafisinde ve bilgisayarlı toraks tomografisinde sağ akciğerde 16x13x12 cm ebadında kitle lezyonu görüldü. Hastaya sağ torakotomi uygulandı. Kitle mediastinal plevradan kaynaklanıyordu. Tümör parçalanarak çıkarıldı. Makroskopik olarak tümör sert, düzensiz yüzeyli, beyaz-sarı renkte bir kitle idi. Histolojik olarak olarak belirgin hücresel nekroz ve mitotik aktivitesi olmayan düz kas liflerinden oluşuyordu. Amacımız çok nadir görülen plevral kaynaklı leimiyomanın malignite potansiyelinden dolayı çıkarılması gerektiğini vurgulamaktır.

Anahtar Sözcükler: *İntratorasik, benign, leiomyom.*

Pleural leiomyoma is rare, benign tumor. Leiomyoma originates from smooth muscle cells, and is usually seen in gastrointestinal and urogenital organs. It is rarely observed in the respiratory system; however, leiomyoma can appear in the pulmonary parenchyma, mediastinum, chest wall, diaphragm, or pleural cavity (1-5).

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Submitted (Başvuru tarihi): 25.11.2016 ***Accepted (Kabul tarihi):*** 25.01.2017

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CASE

A 56-year-old female patient presented at hospital with chest pain. Cytopathological diagnosis was thoracic leiomyoma based on transthoracic needle aspiration biopsy. The patient had severe chest pain with dyspnea. On physical examination, the chest wall was edematous and venous dilatations were notable, as in superior vena cava syndrome.

Laboratory findings were nonspecific. Chest X-ray and computed tomography revealed thoracic leiomyoma filling about 75% of the right hemithorax (16 x 13 x 12 cm) (Figure 1 and 2). Right posterolateral thoracotomy was performed for obvious mass. Texture of the tumor was hard as a rock. Due to high vascularity and bleeding, obtaining intraoperative frozen section was very difficult. Pathological result was benign tumor. Due to large size of the tumor, second thoracotomy was performed 3 intercostal spaces below the first. Tumor was superomedially adjacent to the mediastinum and inferior to the diaphragm. Parenchyma was pushed to the hilus (Figure 3 and 4). The tumor was shredded and completely removed with 2 thoracotomies. After controlling bleeding, incisions were closed and the patient was taken to intensive care. On postoperative third day, the patient was taken to preoperative room, and after removal of chest tubes, the patient was discharged for oncological consultation.

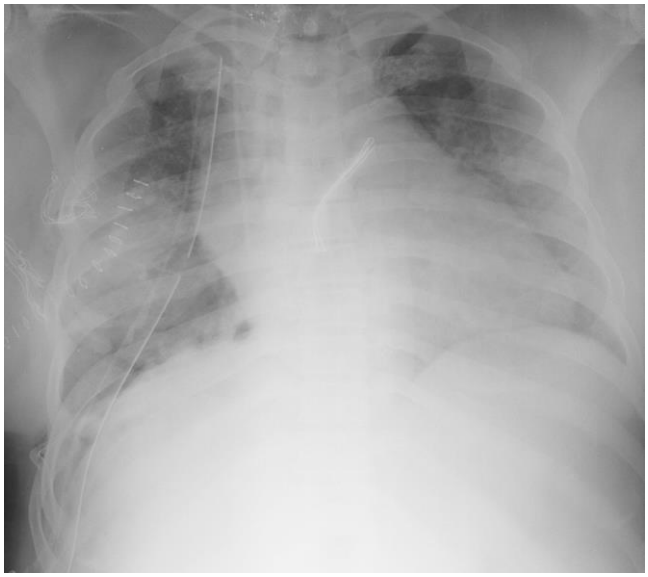

Figure 1: *Appearance of mass on chest x-ray*

DISCUSSION

Although the majority of pleural nodules are metastatic, benign nodules such as solitary fibrous tumor, lipoma, or hemangioma may be seen. Intrathoracic soft tissue tumors are rare, and have usually descended from the upper respiratory tract and mediastinum. Differential diagnosis of pleural spindle cell tumor should include solitary tumor cell neoplasm, smooth muscle tumor, spindle cell carcinoma, thymoma, and sarcomatoid and lipomatous variants of mesothelioma (6-8). Usually, leiomyoma of urogenital or gastrointestinal tract is benign, smooth muscle tumor. Leiomyoma is rarely associated with respiratory tract and pleura (9-11). In the present case, degenerative leiomyoma of mature pleural origin was histopathologically diagnosed. No recurrence was observed in 1 year of follow-up.

Pleural leiomyoma is typically a properly encapsulated tumor with benign histological findings; however, rarely, it can have low malignant potential (12). Few cases have been described in the literature due to uncommon occurrence. It has slow growth pattern, but can eventually become extremely large and invade the mediastinum. Asymptomatic cases may be found by chance, but with growth, tumor can cause pain, dyspnea, cough, dysphagia and superior vena cava syndrome (5,12).

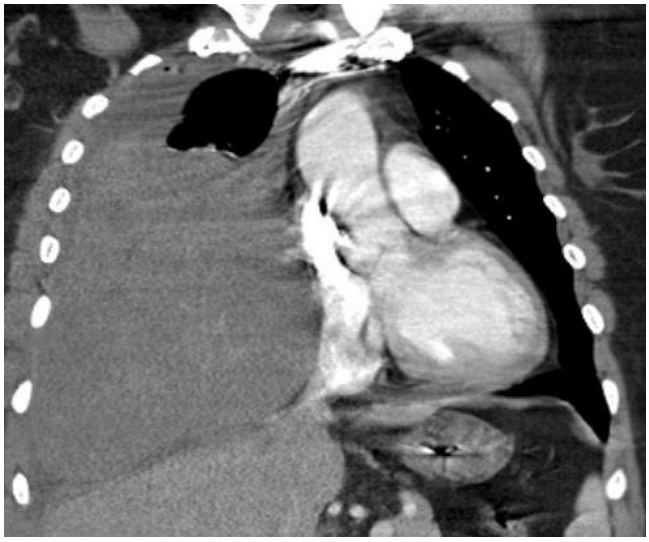

Figure 2: *Appearance of the mass on thorax tomography*

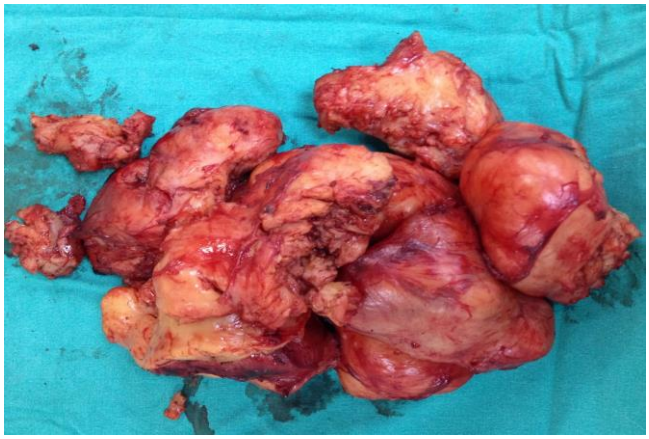

Figure 3: *Image of removed the mass*

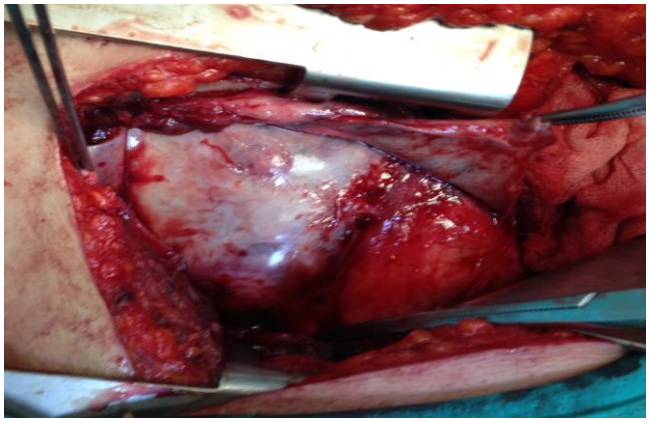

Figure 4: *Thoracotomy image*

In diagnosis of leiomyoma, auscultation and percussion findings can be helpful, but laboratory tests are not very valuable. Criterion standard for diagnosis is radiological imaging, in particular magnetic resonance imaging, and angiography may be added. For definitive diagnosis, however, smooth myofibers must be observed cytopathologically.

Most appropriate treatment strategy is to surgically remove all of tumoral mass due to malignant transformation probability. Comparatively small tumors may be resected by video assisted surgery, but local invasion must be considered.

CONCLUSION

Leiomyoma is potentially a malignant tumor, and regardless of size, must be completely removed

CONFLICTS OF INTEREST

None declared.

AUTHOR CONTRIBUTIONS

Concept - M.O., A.E., D.A.; Planning and Design - M.O., A.E., D.A.; Supervision - M.O., A.E., D.A.; Funding - M.O., A.E.; Materials - M.O.; Data Collection and/or Processing - A.E., M.O.; Analysis and/or Interpretation - M.O., A.E.; Literature Review - A.E., M.O.; Writing - M.O., A.E., D.A.; Critical Review - M.O., A.E.

YAZAR KATKILARI

Fikir - M.O., A.E., D.A.; Tasarım ve Dizayn - M.O., A.E., D.A.; Denetleme - M.O., A.E., D.A.; Kaynaklar - M.O., A.E.; Malzemeler - M.O.; Veri Toplama ve/veya İşleme - A.E., M.O.; Analiz ve/veya Yorum - M.O., A.E.; Literatür Taraması - A.E., M.O.; Yazıyı Yazan - M.O., A.E., D.A.; Eleştirel İnceleme - M.O., A.E.

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