A Giant Mediastinal Lipoma: Case Report

Dev Mediastinal Lipom

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ABSTRACT Lipomas are well-circumscribed mesenchymal tumors that originate from adipose tissue. Mediastinal lipomas are so rare and usually discovered incidentaly and are reported to represent 1.6%-2.3% of all primary mediastinal tumors. Surgical excision is indicated for mediastinal lipoma only when causes pain or when the tumor compromises the adjuvant structures functions. We reported a 59 year old man presented with worsening of pneumonia episodes for last six months. Imaging techniques revealed pulmonary sequestration at lower lobe of the left lung and a giant lipoma at mediastinum which was found incidentaly. The patient underwent operation of pulmonary sequestration resection and frozen section biopsy were performed during the operation which were resulted as a benign tumor lipoma. As lipoma was so adherent to adjacent structures and was not indicated for resection, surgical attempt was not made and retrieved medical follow-up.

Key Words: Mediastinal neoplasms; lipoma; medical oncology

ÖZET Lipomlar sınırları belirgin olarak ayrılan yağ dokusu kökenli mezenkimal tümörlerdir. Mediastinal lipom ise genellikle tesadüfen tanı konulan nadir bir tümördür ve tüm mediastinal tümörler arasında %1,6-%2,3 sıklığa sahiptir. Sadece ağrı yaptığında veya çevre dokulara bası semptomları ortaya çıktığında cerrahi olarak rezeksiyon endikasyonu vardır. Bu yazıda 59 yaşındaki bir erkek hastada tesadüfi saptanan dev bir mediastinal lipom vakası sunulmuştur. Yaklaşık altı aydır pnömoni atakları olan hastanın yapılan tetkikleri sonrasında sol alt zonda pulmoner sekestrasyon saptanmış ve dev bir mediastinal lipom görüntülenmiştir. Hastaya pulmoner sekestrasyo nedeniyle girişim yapılmış ve sekestre alan rezeke edilmiştir. Operasyon sırasında lipomdan frozen biyopsiler alınıp tanı kesinleşmesinin ardından çevre dokulara yapışık olduğundan ve rezeksiyon endikasyonu olmayan tümör yerinde bırakılmış ve hasta postoperatif dönemde medikal takibe alınmıştır.

Anahtar Kelimeler: Mediastinal tümörler; lipom; tıbbi onkoloji

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Lipomas are well-circumscribed mesenchymal tumors that originate from adipose tissue and are reported to represent 1.6%-2.3% of all primary mediastinal tumors.[1] Most mediastinal lipoma are discovered incidentally. Although lipomas are the most common benign neoplasm, occurrence with in the mediastinum is uncommon. In contrast to the frequently multiple subcutaneous lipomas, intrathoracic lipoma is usually a single lesion.

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The presenting symptoms are often due to mass effect such as compression of the primary bronchi, vagus nerve, phrenic nerve, esophagus, vascular structures and heart. Symptoms can include dysphagia, dyspnea, dry cough, jugular venous distention, and cardiac arrhythmias. Excision is indicated only when the tumor causes pain or when compression by the tumor compromises the function of adjacent structures.

CASE REPORT

An 59-year-old man presented with worsening of pneumonia episodes for last six months and underwent close examination. He had a history of 40 years cigarette smoking. Electrocardiogram was sinus rhythm and negative for ischemia. The chest X-ray was not given an obvious finding.

Computed tomography revealed a 4x3 cm solid tumor at lower lobe of the left lung and 14 x 9 cm homogeneous fat density tumor at posterior side of the left atrium (Figure 1). Initially suspect of a malignancy about the solid tumor at left lung, positron emission tomography (PET/CT) and Magnetic Resonance Imaging (MR) were planned and it was showed that both two tumors were at benign character (Figure 2). Fiber-optic bronchoscopy and fine-needle aspiration biopsy were performed but no more details were founded.

In the light of clinical and radiological findings the mass at the left lung was expected to be pulmonary sequestration but not a tumor so an operation was planned in our hospital by both cardiac and thoracic surgeons.

The surgical approach was achieved by left posterolateral incision at lateral decubitus position.The tumor at lower lobe of the left lung was found to be essentially pulmonary sequestration which had feeding arteries from the descending aorta. These feeding branches were ligated and wedge resection was performed.

The giant lipoma was seen at extrapericardial posterior side of the left atrium. The borders of the tumor was not clear and was adhered to the pericardium. The lipoma was so huge and was passing on the opposite side of the mediastinum. Frozen section biopsy was performed during the operation and resulted as a benign tumor lipoma. So as the lipoma was not compromise the function of adjacent structures and was so adherent to surrounding tissues, surgical attempt was not made.

The patient made an uneventful recovery and was discharged 7 days after the operation and there were no pulmonary or other systems problems in the first month follow-up.

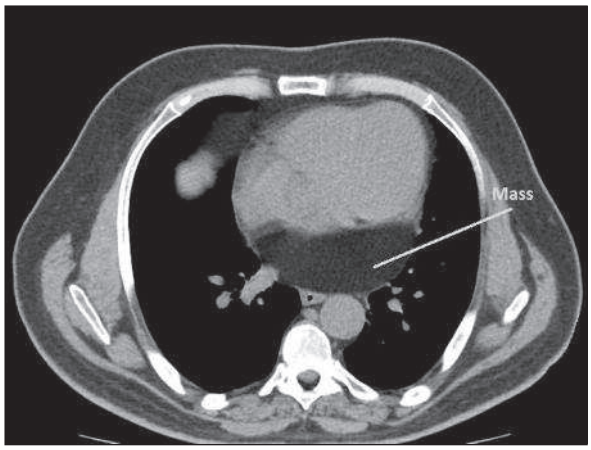

FIGURE 1: The borders of the tumor was not clear and was adhered to the pericardium at CT image.

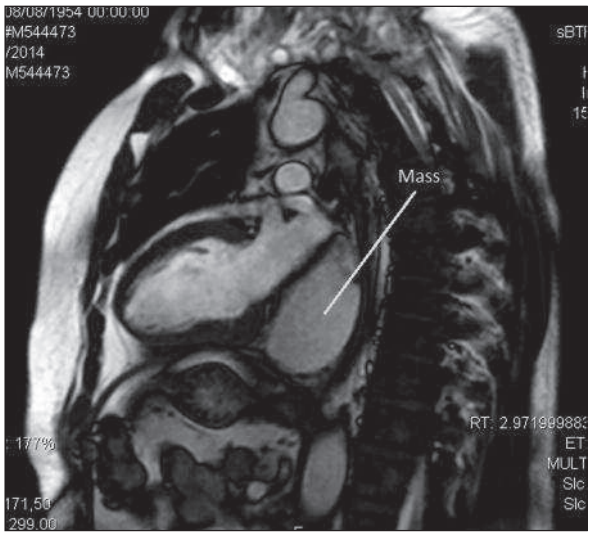

FIGURE 2: MR image is seen of a homogeneous fat density tumor at posterior side of left atrium.

DISCUSSION

Lipomas are benign tumors and are considered as one of the most frequent benign tumors of adult adipose tissue.[2] Lipomas located in the thoracic cavity are extremely rare. Diagnosis of mediastinal tumors in almost all reported cases was done in live and asymptomatic patients during routine examination.[1,3,4]

Mediastinal lipomas are usually found in the anterior mediastinum. Previously, cases have been reported in which lipomas were found to compress vascular structures. Mediastinal lipoma causes superior vena cava syndrome or Horner's syndrome due to tumor mass effect, spinal nerve paralysis, swallowing disorder due to esophageal compression, respiratory discomfort and arrhythmia.[5]

In this case the patient had respiratory discomfort and problems because of pulmonary sequestration and after resection surgery, there were no respiratory or other systems problems so operation was only indicated because of the pulmonary sequestration but not lipoma.

For the surgical approach, thoracoscopic tumor excision has recently been reported. However, it is difficult to perform thoracoscopic surgery due to high risk of bleeding.[6] So because of having two different located tumors we did not choose thoracoscopic method. In the present case, we made a preoperative diagnosis of lipoma, but could not rule out the possibility of liposarcoma. Well-differentiated liposarcoma has a high local recurrence rate (53%) and a strong tendency toward local recurrence following incomplete resection.[7]

Mediastinal lipomas usually are slow growing and may reach a considerable size, usually without producing symptoms. In a review study of intrathoracic lipomas was reported only one symptomatic case among a total of 10 cases of intra thoracic lipomas over a 16-year period.[8]

As in our case, if there is an asymptomatic mediastinal lipoma, the recommended treatment is only follow up but if the tumor affects the function of adjacent structures, surgery is needed and if possible complete resection should be performed.

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