**Özet:**

Leiomyosarkoma kalbin son derece nadir görülen kitlelerindendir. 50 yaşında kadın hasta, çarpıntı ve dispne şikayeti ile başvurdu ve miksoma tanısı aldı. Obstrüktif semptomlar ve embolik riskler nedeniyle tümörün cerrahi çıkarılmasını sağladık ve patolojik olarak leiomyosarkom tanısı kondu. Ameliyat sonrası BT incelemesinde metastaz görülmedi. Ameliyattan üç ay sonra, hastanın yeniden dispne ve palpitasyon şikayetleri oldu. Transtorasik ve transözofageal ekokardiyografide mobil sol atriyal kitle saptandı. Ve hasta ilk ameliyattan 3 ay sonra yeniden açık kalp ameliyatı oldu. Sol atriyumda mitral kapağa hareketli jelatinimsi bir kitle vardı. Tümör rezeke edildi ve mitral kapak replasmanı yapıldı.

Anahtar Kelimeler: Kardiyak tümör; Leiomyosarkom; Mixoma

**Abstract:**

Leiomyosarcoma is extremely rare mass of the heart. A-50-years-old female patient complained of palpitation and dyspnea was diagnosed as myxoma. We made urgent surgical removal of the tumor and leiomyosarcoma was pathological diagnosis. Post-operative CT scan revealed no metastases. Three months after surgery, dyspneea and palpitation became resymptoms of her. Transthoracic and transesophageal echocardiography revealed a mobile left atrial mass. And she went redo open heart surgery 3 months after first operation. There was a mobile gelatinous mass in the left atrium through to the mitral valve. The tumor was resected and mitral valve replaced.

Keywords: Cardiac Tumor; Leiomyosarcoma; Myxoma

**Introduction:**

Primary cardiac tumors are rare, and most of them are benign. Myxoma is the most common

benign cardiac tumor, and angiosarcoma is the most common malignant one.

Leiomyosarcoma is a smooth muscle cell tumor and seen rarely. Leiomyosarcoma is a

malignant mesenchymal tumor and originating from heart with an incidence of 0.001% to

0.03% (1)and 1% of all neoplasms. Here, we describe a 50-year-old female with repeating

leiomyosarcoma admitted with increasing dyspnea 3 months after the first operation. Here

initial preoperative diagnosis was left atrial myxoma.

**Case Report:**

A 50-year-old female was admitted to cardiology department with shortness of breath (New York Heart Association class III-IV). The patient did not have personal history of cardiac disease. The patient was referred to us with a suspected diagnosis of left atial myxoma. Median sternotomy and aortic-bicaval cannulation were performed for excision of the left atrial mass. The mass was due to the left atrium roof between the pulmonary veins.

An immunohistochemical stain was positive for smooth muscle actin and desmin, and negative for CD34, CD31, and S-100 protein. After histopathological and immunohistochemical exams, we concluded that the tumor was a grade II/III leiomyosarcoma. There was no evidence for another metastasis in positron emission tomography (PET)/CT.

Three months after this operation, the woman returned with increasing dyspnea and was admitted with a recurrent tumor. An echocardiogram revealed a new hypoechoic and heterogeneous mass in the left atrium, which intermittently obstructed the mitral valve orifice.

Cardiopulmonary bypass was performed by aorto-bicaval cannulation. A mass was found in the posterior wall of the left atrium that was invading the mitral valve. (fig.1)The tumor was resected, and the underlying endocardium of the atrial wall was dissected from the myocardium; the mitral valve was replaced.(fig.2) The operation was done without complications. We believed that the tumor had been completely removed, and in the early postoperative period there was no metastases; thus, the oncologists did not pursue chemotherapy. She was extubated 12 hours after surgery and was transferred to a general ward on the third post-operative day. She is now five months out of the surgery and in a good condition without recurrence or metastasis.

**Discussion:**

The incidence of primary cardiac tumors is 0.02%. Of all cardiac tumors, only 20.6% of them are malignant; of these, only 0.025% are primary leiomyosarcomas (1). Dyspnea, chest pain, arrhythmia, and heart failure are the main symptoms of cardiac leiomyosarcoma. The standard methods for the diagnosis of leiomyosarcoma are transthoracic and transesophageal cardiac echography and cardiac CT. The diagnosis is generally made intraoperatively or during the autopsy, and the median survival after diagnosis is 6 months (1).

The myocardium, mitral valve, pulmonary artery, left atrium, and pericardium and often included in cardiac sarcomas (2). The left atrium is the more common chamber for leiomyosarcoma as in our case. The tumors usually have a broad, gelatinous base.

Indications for surgery for cardiac tumors arise from increased embolic risk, from hemodynamic disorders associated with tumor growth, and cardiac dysrhythmia. Metastases and local recurrence are common after removal, and thus the prognosis is poor (6 months after diagnosis)(1). The average age of patients with leiomyosarcoma is 45 years with an incidence in women that is twice as high. 1 Local recurrence and metastasis to the brain and lungs must be suspected after primary leiomyosarcoma.

Wang et all reported that the most common symptoms are the obstructive ones. The left atrium is the most common site, and surgery is the most common therapy in a study of 79 patients(3). This is especially true when it is located in the left atrium. The tumor may be misdiagnosed as cardiac myxoma by echocardiography(4,5). In our case, myxoma was the first diagnosis too.

The findings for malignancy are immobile mass, pericardial effusion, broad base of the tumor, and neovascularity (4). Cardiac magnetic resonance imaging is recommended for additional structured and functional assessment of most reported misdiagnosis(5).

**Conclusion:**

Surgical resection combined with chemotherapy is the basic treatment for cardiac leiomyosarcoma. The effect of radiotherapy is restricted because of low sensitivity and myocardium damage. In our case, there were no metastases, and the oncologists decided to follow the patient without chemotherapy.

**Conflict of interest**

None

**References:**

1. Butany J, Nair V, Naseemuddin A, Nair GM, Catton C, Yau T. Cardiac tumors: Diagnosis

and management. Lancet Oncol 2005; 6: 219- 228.

2. Suzuki R, Miyamoto T, Hirayama R, Sakaguchi T, Uekihara K, Yoshioka Y. Primary

cardiac leiomyosarcoma causing severe pulmonary hypertension. Journal of Cardiac

Surgery 2017; *32*: 794–796.

**3.** Wang JG, Cui L, Jiang T, Li YJ, Wei ZM..Primary cardiac leiomyosarcoma: An analysis of

clinical characteristics and outcome patterns. Asian Cardiovasc Thorac Ann. 2015; 23: 623–

630.

4. Mazzola A, Spano JP, Valente M, Gregorini R, Villani C, Di Eusanio M, et al.

Leiomyosarcoma of the left atrium mimicking a left atrial myxoma. J Thorac Cardiovasc Surg

2006; 131: 224–6.

5. Ann SH, Jung SY, Yi JE, Chin JY, Kim TS, Jung HO, et al. A primary left atrial

leiomyosarcoma mimicking myxoma: echocardiographic findings. Echocardiography 2012;

29: E226–9.

Figure Legends

Figure 1: Intraoperative viewo f the tumor

Figure 2:The existed Leiomyosarcoma