



# Giant Intrapericardial Extracavitary Lipoma in a Patient Taken into Emergency Surgery with the Diagnosis of Massive Pericardial Effusion

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## ABSTRACT

Among all benign cardiac tumors, lipomas are rarely encountered and generally asymptomatic. Our patient, who applied to hospital with chest pain, was diagnosed with ST elevated inferior myocardial infarction. The patient was operated following pericardial tamponade. Intrapericardial extracavitary lipoma was discovered incidentally.

**Key Words:** Lipoma; mediastinal mass; tumor; pericardial tamponade

## Masif Perikardiyal Efüzyon Tanısıyla Acil Operasyona Alınan Hastada Dev İntra-perikardiyal Ekstrakaviter Lipom

### ÖZET

Kardiyak lipomlar benign kalp tümörleri arasında nadir görülürler ve genellikle asemptomatiktirler. Vakamız 61 yaşında göğüs ağrısı ile başvuran ve inferior miyokard enfarktüsü ile interne edilen, intraperikardiyal ekstrakaviter lipom olgusudur. Tamponad kliniği ile acil opere edilen hastada rastlantısal bulunmuştur.

**Anahtar Kelimeler:** Lipom; mediastinal kitle; tümör; perikardiyal tamponad

## INTRODUCTION

Primary cardiac tumors are rarely seen. In autopsy examinations, the prevalence is 0.0017-0.056%<sup>(1)</sup>. Patients are usually asymptomatic and diagnosed incidentally by transthoracic echocardiography (TTE), computerized tomography (CT) or magnetic resonance imaging (MRI). Big cardiac lipomas may cause symptoms like dyspnea, palpitation, exercise intolerance.

## CASE REPORT

A 61-year-old male patient was admitted to the emergency room with chest pain. The patient was diagnosed with ST elevated myocardial infarction and transferred to the angiography unit urgently. Following coronary angiography, coronary stent was applied to the right coronary artery successfully. For the lesions on the left anterior descending artery (LAD) and circumflex artery (Cx), the patient was referred to coronary artery bypass grafting (CABG) procedure on elective conditions.

The patient was also diagnosed with pericardial effusion during the coronary intensive care unit period. The patient had complained about dyspnea for years. The patient's clinical condition deteriorated, cardiac tamponade and cardiac arrest occurred. The patient was taken into the operation room urgently. Median sternotomy was performed. 200 ml of pericardial fluid was discharged. Hemodynamic condition was stabilized. Besides the pericardial fluid, a big, yellow, smooth encapsulated mass holding onto the posterior pericardium contiguous with the inferior, posterior and lateral walls of the myocardium was detected (Figure 1). Under cardiopulmonary bypass, CABG surgery was performed on LAD and Cx arteries. The tumor was excised totally with the pedicle, as well.

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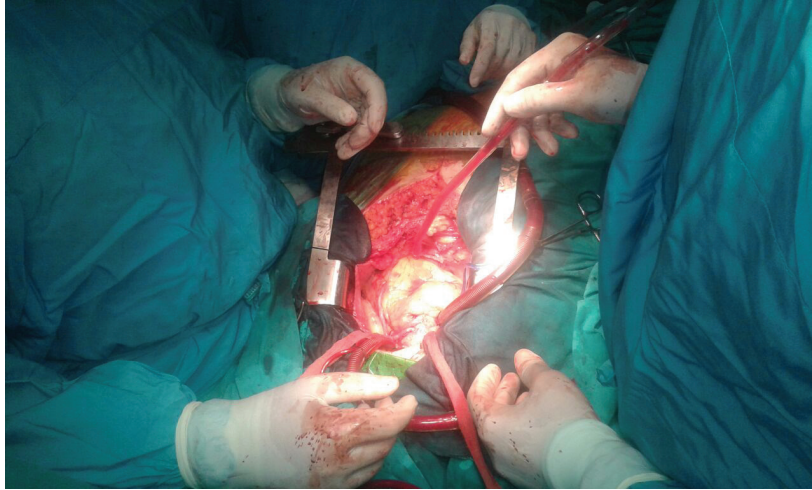
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**Figure 1.** Photograph obtained during surgery showing lipoma located infero-posterior side of the heart pushing apex of the heart anteriorly.

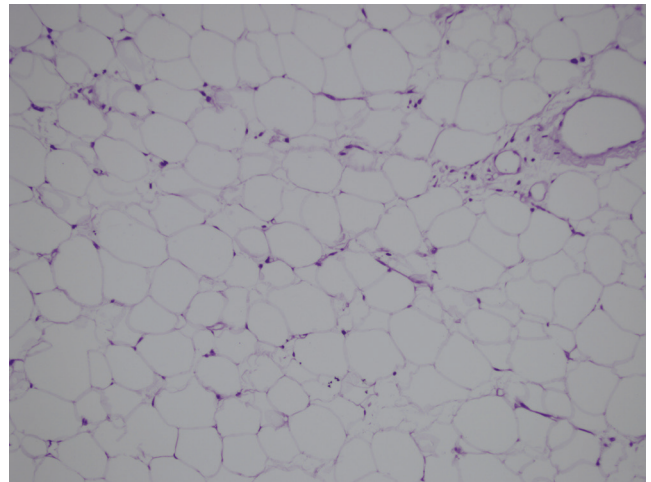


**Figure 2.** Lipoma that was excised during surgery.

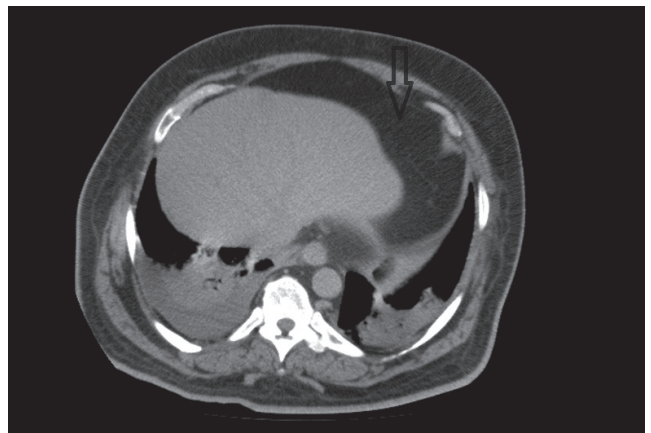
Encapsulated lipoma that originated from the posterior pericardium with a small neck, in contiguous with the left atrial auricle, left ventricle and posterior wall of the heart, progressing to the diaphragm, crescent in shape, 127-57 mm in size, 960 grams by weight (Figures 1,2).

Pathology specimen showing characteristic adipose tissue cells and loose connective tissue (Figure 3).

CT images were also obtained. CT images of lipomas are generally homogeneous and encapsulated well circumscribed masses containing fibrous septa (Figure 4).



**Figure 3.** Lipid filled adipose tissue cell, loose connective tissue.



**Figure 4.** CT images of the case showing tumor adjacent to the posterolateral side of the heart, showing effusion anteriorly.

## DISCUSSION

Cardiac lipomas are rare benign cardiac tumors that may originate from the subendocardium, subepicardium or myocardium. Lipomas comprise 10% of all primary cardiac tumors and 14% of all benign cardiac tumors<sup>(2)</sup>. Depending on the localization and progression, they may not cause any symptoms. Subepicardial lipomas normally develop slowly. Massive pericardial lipomas may cause dyspnea by lowering the left ventricle filling pressures or tidal volume of the lungs. Arrhythmia may also be seen. Intracavitary lipomas might cause congestive cardiac failure, syncope and sudden cardiac death<sup>(3,4)</sup>.

Lipomas may be confused with diaphragmatic hernias, left atrium filled with thrombus, liver herniation or pericardial effusion<sup>(5)</sup>. Chest x-ray may show an enlarged cardiac silhouette<sup>(6)</sup>. CT and MRI images help to learn more about the vascular relationship, localization and lipomatous structure<sup>(2)</sup>. CT images are diagnostic for lipomas originating from the epicardium. Lipomatous structure is easily recognized well with CT. Contrast CT scan shows density variation between lipomas, intracardiac cavities, coronary arteries and the myocardium<sup>(7)</sup>. TTE may reveal cardiac masses and intracardiac infiltration. TTE has limited capability of recognizing different kind of tissues. TTE is the first method to evaluate cardiac tumors, but CT scan enables us to get more information about the size, origin and localization<sup>(8)</sup>.

Intrapericardial lipomas have very good prognosis. Recurrence has not been reported even in incomplete excision.

**Informed Consent:** The informed consent has been obtained from the patient and the patient's relatives.

**Peer-review:** Externally peer-reviewed.

**Author Contributions:** Concept/Design - AE, DY; Analysis/Interpretation - İD, HE; Data Collection - AE, CA; Writing - CA, AE; Critical Revision - İD, HE, DY; Final Approval - AE, İD, HE, CA, DY; Statistical Analysis - AE, İD, HE, CA, DY; Obtained Funding - AE, İD, HE, CA, DY; Overall Responsibility - AE, İD, HE, CA, DY.

**Conflict of Interest:** The authors have no conflict of interest to declare.

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