

## Case report



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## Giant left atrial myxoma mimicking mitral valve stenosis

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## Abstract

*Cardiac myxomas are the most common forms of primary heart tumors. We report a 38-year-old woman without medical history and any cardiovascular risk factors was admitted in the emergency department for dyspnea and hemoptysis. Transthoracic echocardiography showed a giant left atrial myxoma appended to the atrial surface of the anterior mitral valve with a subtotal obstruction of the mitral orifice during the diastole. A mild mitral regurgitation was found. Pulmonary hypertension was confirmed by Doppler PAPs = 55 mmHg. The patient was scheduled for cardiac surgery with worst outcome at seven day.*

## Introduction

Cardiac myxomas are the most common forms of primary heart tumors. Its location may be life threatening. In 50% of cases, the diagnosis is made at the complication stage and 10% of the patients are completely asymptomatic. Transthoracic and transesophageal echocardiography allow diagnosis with sensitivity close to 100%. We present a case of patient diagnosed with giant left atrial myxoma.

## Patient and observation

A 38-year-old female patient without past medical history, presented to the emergency department for stage III NYHA (New York Heart Association) dyspnea with progressive aggravation from six months associated with hemoptysis on the last week before admission. The clinical examination found a patient in good condition, blood pressure was 123/84 mmHg. The heart rate was at 80 beats per minute. The cardiac auscultation revealed a diastolic rolling at the mitral focus, of intensity 4/6. Respiratory rate was 20 breaths per minute, oxygen saturation was 98% on air room and she was afebrile. Chest x-ray showed an enlarged cardiac silhouette with a cardio-thoracic index at 0.7 and left atrial enlargement (Figure 1). The electrocardiogram (ECG) was normal. Transthoracic echocardiography showed a dilated left atrial containing a pedunculated mass of 16.4 cm<sup>2</sup>, heterogeneous with irregular surface not mobile, appended to the atrial surface of the anterior mitral valve (Figure 2) with a subtotal obstruction of the mitral orifice during the diastole (Figure 3). The systolic ejection fraction was 62%. A mild mitral regurgitation was also found. The systolic pulmonary pressure was elevated to 55 mmHg. The patient was transferred to cardiovascular surgery and underwent emergency surgery. Histological examination confirmed the diagnosis of myxoma of the left atrium. The surgical sequences were complicated and the patient died after 7 day of the surgery from a septic shock.

## Discussion

The primary cardiac tumors (PCT) are rare with an incidence of 0.0017 to 0.19% in autopsy series performed in non-selected [1]. Myxomas are the most frequent PCT and account for about 50% of the cases [2,3]. Cardiac myxoma (CM) are defined by the World Health Organization as a neoplasm composed of stellate to plump, cytologically bland, mesenchymal cells set in a myxoid stroma [4]. Myxomas are more common in women (76%) [2,3] and occurred much more frequently between the ages of 30 to 60 years [1-3]. Sporadic myxomas have a variable evolution protean and may vary from asymptomatic cases (with a tumor < 4 cm) to unexpected sudden death (generally caused by blood flow obstruction or embolization) in 15% of cases. The most frequent manifestations reported are: symptoms due to a possible mitral valvopathy (43%), systemic embolisms (27%), pulmonary embolism (25%), pericarditis (0.03%), atrial fibrillation (15%) and completely asymptomatic in 12% [5]. The size, location and mobility of myxoma determine the severity of the mitral valve obstruction [6,7]. Up to more than a half of left atrial myxomas show obstructive symptoms [3], but only in 10% of patients will it cause severe mitral stenosis [7]. In our case, the giant myxoma occupied almost the half left atrial cavity causing a moderate mitral valve stenosis. Also, the presence of hemoptysis, an uncommon clinical feature in this entity, in a young patient, can masquerade as mitral valve disease [3]. The early echocardiographic exam plays a pivotal role in the diagnosis and clinical management of these patients. In this regard, a recent large series of left atrial myxoma emphasizes this topic because the presence of cardiac signs paradoxically could increase the diagnosis delay, probably due to the belief that clinical symptoms are explained by another more common disease, like hypertensive cardiomyopathy or ischemic heart disease [3]. Surgical treatment is the only operative alternative consisting of complete resection of the tumor and its implantation base to avoid any risk of recurrence. Early mortality is low below 5%. Late

morbidity is dominated by the risk of tumor recurrence and the occurrence of distant metastasis [8] .

## Conclusion

The myxoma can induce dramatic symptomatology and involve the patient's prognosis. Surgical treatment remains the only therapeutic option.

## Competing interests

The authors declare no competing interests.

## Authors' contributions

All authors contributed equally to the write up of the clinical case.

## Figures

**Figure 1:** chest X-ray showed an enlarged cardiac silhouette with a cardio-thoracic index at 0.7 and left atrial enlargement

**Figure 2:** transthoracic echocardiography showed a dilated left atrial containing a pedunculated mass of 16.4 cm<sup>2</sup>, heterogeneous with irregular surface not mobile, appended to the atrial surface of the anterior mitral valve

**Figure 3:** transthoracic echocardiography showed a subtotal obstruction of the mitral orifice during the diastole

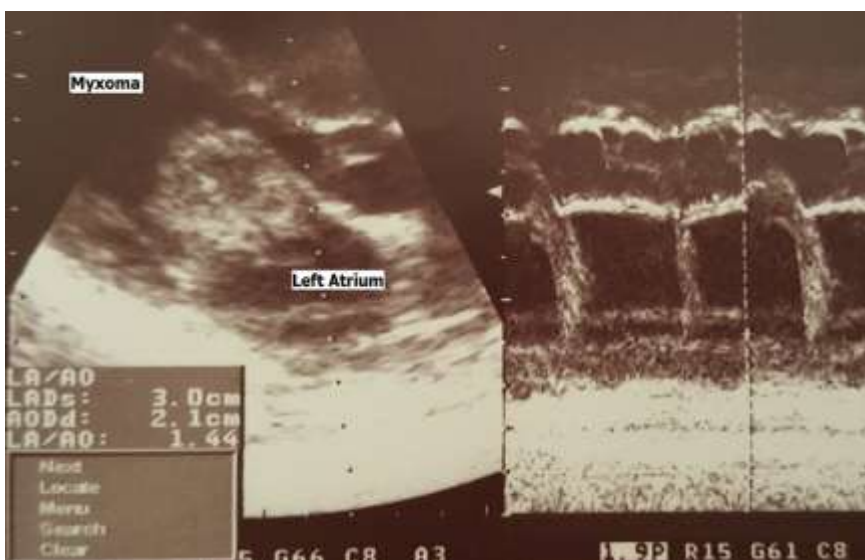
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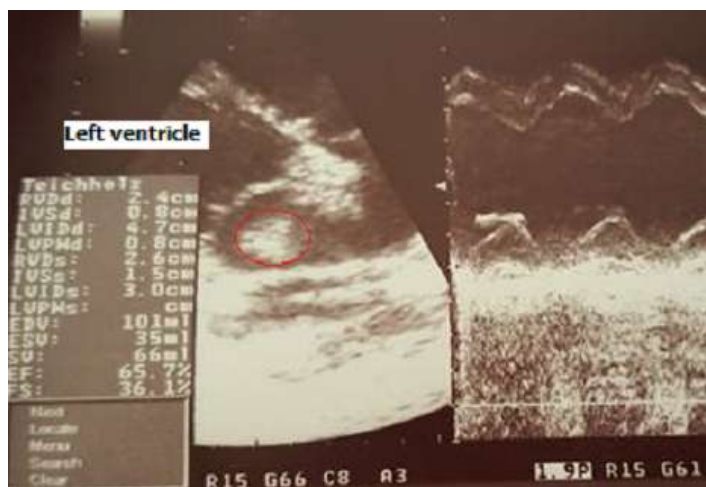
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**Figure 1:** chest X-ray showed an enlarged cardiac silhouette with a cardio-thoracic index at 0.7 and left atrial enlargement



**Figure 2:** transthoracic echocardiography showed a dilated left atrial containing a pedunculated mass of 16.4 cm<sup>2</sup>, heterogeneous with irregular surface not mobile, appended to the atrial surface of the anterior mitral valve



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