

# Unusually Large Left Atrial Myxoma Causing Mitral Valve Occlusion and Hiding a Severe Mitral Regurgitation: A Case Report

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## ABSTRACT

We report a case of a 68-year-old woman with a large left atrial myxoma occluding the mitral valve. The tumor was diagnosed by preoperative echocardiogram. During the operation and after the myxoma resection, a severe mitral valve regurgitation, which was not observed during the preoperative echocardiogram, was noticed. Mitral valve defect was corrected by an annuloplasty ring, and the patient had an uneventful recovery. Careful evaluation of the mitral valve during a myxoma resection operation is recommended.

## INTRODUCTION

Atrial myxomas represent the most common heart tumors. This kind of tumor may be asymptomatic or can cause several complications. We present a case in which a large left atrial myxoma caused mitral valve occlusion and hid a severe mitral regurgitation.

## CASE REPORT

A 68-year-old woman with a history of hypertension, transient ischemic attack, smoking, and dyslipidemia presented to the emergency department because she had collapsed. Cardiac resuscitation was promptly performed. A systolic murmur on the fifth left intercostal space indicating a mild mitral regurgitation was recorded. The 12-lead echocardiogram performed after cardiac resuscitation showed a sinus tachycardia and an abnormal P wave similar to that of an atrial enlargement. Transthoracic echocardiography was immediately performed. In the 4-chambers view (Figure A), a large mobile myxoma (6-cm diameter) was observed. It was moving from the left atrium to the left ventricle and was attached with a small pedicle to the atrial

septum (Figure B); at the same time, a trivial mitral valve regurgitation was also shown. During the systole, the myxoma totally occluded the mitral valve orifice. Because of the unstable hemodynamic status and the high imminent risk of cardiac arrest, an emergency operation was planned. The patient underwent the operation, which consisted of removing the myxoma with its own pedicle from the atrial septum through a right and left atriotomy. Part of the atrial septum was removed and then closed with an autologous pericardial patch. The mitral valve was checked, and a severe incompetence of the valve was observed by the hydrodynamic test. All the examined mitral valve components were normal. The insufficiency was caused only by the annulus dilatation. To correct the mitral regurgitation, a mitral annuloplasty was performed by applying a complete prosthetic ring. The patient had an uneventful recovery, and she was discharged home on the sixth postoperative day.

## DISCUSSION

Atrial myxomas are very rare and they are one of several types of primary cardiac tumors. The incidence of these neoplasms is between 0.0017% and 0.35% [Ipek 2005]. Cardiac myxomas represent the most common tumors of the heart, and the left atrium is the more frequent site of localization, ranging between 81% and 85.2% [Acebo 2003; Ipek 2005]. Myxomas occur more frequently in older adults and they are more common in women. Generally they have a thin and short pedicle and are composed by cells and primitive capillaries within a myxoid matrix. Due to a potential source of cerebral and systemic embolization, urgent operation is indicated, mainly when the mass is excessively mobile. Atrial myxoma has been described as a cause of myocardial infarction [Demir 2005], associated with a secundum atrial septal defect [Watanabe 2003], described as a cause of mitral valve obstruction [Lanza 2002; Yilmaz 2004], or associated with mitral insufficiency [Ceviz 2004]. In this case report, we described an unusual case of mitral valve obstruction due to the migration of an atrial myxoma from the left atrium to the left ventricular chamber during the cardiac cycle and the concomitant presence of a severe mitral regurgitation that was not detected during the preoperative echocardiogram. It is probable that the atrial mass almost completely covered

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In the 4-chambers view (A), a large mobile myxoma (6-cm diameter) was observed. It was moving from the left atrium to the left ventricle and was attached with a small pedicle to the atrial septum (B).

the mitral valve orifice, avoiding the normal blood flow and the regurgitant flow through the valve. After the myxoma resection, a severe mitral regurgitation was noticed only after testing the mitral valve by introduction of a normal saline solution inside the left ventricle with a syringe.

In conclusion, a careful inspection of the mitral valve is recommended in patients with an atrial myxoma. Although the echocardiogram is considered the tool of choice to study cardiac myomas, sometimes the presence of a mitral valve defect cannot be seen and a careful evaluation of the mitral valve during the operation must be considered as a rule.

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