

# Giant Left Atrial Myxoma: Cause for Position-Dependent Nocturnal Dyspnea and Cardiac Murmur

Julia Hillebrand<sup>1</sup> Sven Martens<sup>1</sup> Andreas Hoffmeier<sup>1</sup>

<sup>1</sup>Department of Cardiothoracic Surgery - Division of Cardiac Surgery, University Hospital of the Westfaelische Wilhelms-University Muenster, Muenster, Germany

Address for correspondence Dr. Julia Hillebrand, MD, Department of Cardiothoracic Surgery - Division of Cardiac Surgery, University Hospital of the Westfaelische Wilhelms-University Muenster, Albert-Schweitzer-Campus 1, D-48159 Muenster, Germany (e-mail: julia.hillebrand@ukmuenster.de).

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## Abstract

Primary tumors of the heart are rare. The majority of them are benign, the left atrial myxoma being the most frequent one. Clinical appearance varies from unapparent to life-threatening complications such as stroke, acute heart failure, or even sudden death. Diagnosis and consecutive surgical treatment strongly depend on the clinical symptoms, but their extent does not correlate with the risk for serious complications. Therefore, patients with variable clinical presentation can be especially endangered. Consequent diagnostic and immediate operative therapy is essential.

## Keywords

- ▶ myxoma
- ▶ heart failure
- ▶ pathological

## Introduction

Primary tumors of the heart are rare. The majority of cardiac tumors are benign, the left atrial myxoma being the most frequent one. Clinical appearance varies from unapparent to life-threatening complications such as stroke, acute heart failure, or even sudden death.<sup>1–5</sup> Diagnosis and consecutive surgical treatment strongly depend on the clinical symptoms, but their extent does not correlate with the risk for serious complications.<sup>1</sup> Therefore, patients with variable clinical presentation can be especially endangered. Consequent diagnostic and immediate operative therapy is essential.

## Case Description

We report on surgical treatment of a 39-year-old woman, who had recurrent position-dependent attacks of nocturnal dyspnea. The patient was in a good general condition and her comorbidity was arterial hypertension and diabetes mellitus. At the time of hospital admission, laboratory findings showed a microcytic anemia; therefore, the patient was treated with folic acid and vitamin B6. Furthermore, the chest X-ray demonstrated signs of pulmonary congestion and pneumonic infiltration. The leukocyte count was within the normal range, whereas C-reactive protein was elevated by 12.6 mg/dL.

Initially, there were no more pathological findings and the presumption diagnosis was a bronchopulmonary infection. However, an inclination toward the left as in auscultation for the mitral valve led to dyspnea. To clarify, a cardiac involvement further diagnosis comprised a cardiac echocardiography. This examination showed a giant left atrial tumor with a length of approximately 8.7 cm<sup>2</sup>, prolapsing into the left ventricle.

Therefore, urgent cardiac surgery was indicated. After induction of general anesthesia, we performed median sternotomy. Extracorporeal circulation was installed via bicaval connection for venous drainage and cannulation of the ascending aorta for the arterial inflow. The access to the left atrial tumor was performed transeptally. The tumor mass was adherent to the interatrial septum. Therefore, excision of the membranous septum was needed for complete resection. In addition, loose tumorous fragments had to be removed from the bottom of the left atrium as the tumor fell apart during handling, which is not uncommon and one of the principal dangers of this disease. ▶ **Fig. 1** shows the extracted tumor (~8.0 × 4.0 cm<sup>2</sup>) and one loose fragment. Histopathological examination confirmed the presumed diagnosis of a myxoma. The interatrial septum was reconstructed by the implantation of a bovine pericardial patch. Surgical procedure and postoperative course were without further complication. After 6 days, the patient left hospital in a good clinical condition.

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**Fig. 1** Giant left atrial myxoma.

## Discussion

A giant left atrial myxoma can be associated with life-threatening complications.<sup>1–5</sup> However, the extent of clinical impairment does not correlate with the risk for secondary complications.<sup>1</sup> In 2010, Cabrera et al described that even asymptomatic patients with giant atrial myxoma can be affected by embolic complications or sudden death in up to 15%.<sup>2</sup> Hence, a consequent diagnostic investigation, differential diagnosis, and prompt surgical treatment are of immense importance.

Among other things, clinical presentation of patients with left atrial myxoma strongly depends on tumor size and localization. Obstruction of the mitral valve, mimicking stenosis often occurs.<sup>1,3</sup> Nevertheless, diagnosis of left atrial myxoma is still challenging in patients suffering from unspe-

cific symptoms or in cases of lacking symptoms of heart failure. Even murmur-free cases have been described.<sup>3</sup>

## Conclusion

The presented case demonstrates another diagnostic aspect in a patient with myxoma, as symptoms were position dependent (inclination toward the left) and nocturnal dyspnea occurred consecutively. Every patient suffering from position-dependent symptoms such as dyspnea or syncope should be examined by echocardiography, to exclude a causal cardiac tumor. Furthermore, it can be helpful to perform auscultation in different positions. It underlines that accurate anamnesis is essential and that cardiac tumors should be taken into account in the case of varying clinical symptoms such as nocturnal attacks of dyspnea or position-dependent cardiac murmur.

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