

# Multicavitated Left Atrial Myxomas Mimicking Hydatid Cyst and Causing Severe Mitral Stenosis

Driss Britel<sup>1</sup>, Nadia Bourzine<sup>2</sup>, Zouhair Lakhal<sup>3</sup>, Aatif Benyass<sup>4</sup>

<sup>1, 2, 3, 4</sup>Department of Cardiology, IBN Sina Hospital, Mohammed V University, Rabat, Morocco

**Abstract:** *Myxomas are the most common primary cardiac tumors. They usually present as polypoid or oval-shaped masses projecting into a heart chamber from the interatrial septum, they have a soft, gelatinous consistency without a cystic architecture or cavitations. Here, we reported an unusual case of large intra cavity multicavitated left atrial myxoma revealed by acute heart failure with appearance mimicking hydatid cyst and causing severe mitral stenosis in 50-year-old female.*

*myxomas*

**Keywords:** Cardiac tumor; myxoma; cysts; Mitral stenosis; Echocardiography

## 1. Introduction

Cardiac myxoma is a benign neoplasm that represents the most common primary tumor of the heart. Although the left atrium is the most commonly involved site of origin in 75% of cases, it can arise from any of the cardiac chambers. It is more common in women than men, and it can be manifested at any age [1].

Left atrial myxomas become symptomatic when they obstruct the mitral valve, embolize or cause systemic effects [2, 3]. Non-specific symptoms like fever, weight loss, and fatigue have also been reported [4]. Histological examination is usually needed to confirm the diagnosis as in the current case with a multiseptated structure. The only treatment is surgical resection with high success rates, and the recurrences are rare [5].

## 2. Case Report

A 50-year-old female patient was admitted to the hospital due to chest tightness after activity, shortness of breath for 2 years, and worsening of symptoms for 1 month. The only significant past medical history was hypertension which was diagnosed one year prior to admission and for which she was commenced on low dose thiazide diuretic. On physical examination, bilateral crackles were heard along the lungs. Cardiac diastolic murmur was noticed at the apex and at the mitral focus. Electrocardiography (ECG) revealed sinus tachycardia with a heart rate of 115 beats/min, Troponin I was in normal range. Transthoracic echocardiography (TTE) revealed a rounded mobile cystic mass measuring 25 x 33 mm that had a smooth contour. This mass showed protrusion into the left ventricle during diastole causing severe functional mitral stenosis, the left atrium and right ventricle were enlarged, systolic function of left ventricle was preserved while global longitudinal strain was reduced to -14%, pulmonary artery systolic pressure was 65 mmHg (figure 1A).

Transesophageal echocardiography showed a mass with multiple septa attached to the interatrial septum that suggest myocardial hydatid cyst. Mitral valve had normal texture. Color Doppler revealed no flow inside the cavities. Continuous-wave Doppler tracing shows a high transmitral

mean pressure gradient (14 mmHg) (figure 1, B, C). Hydatid serology blood test was performed and returns negative.

Coronary angiography revealed no significant lesions and the patient underwent surgical excision of the mass. Per operative examination of the mass revealed large cystic mass attached to interatrial septum filled with serous fluid (figure 2). The histology showed myxomatous bluish pink background with stellate cells and compressed blood vessels, with no atypical malignant cells in keeping with myxoma (figure 3). Post-operative period was uneventful. The patient was discharged from the hospital 8 days after surgery without symptoms. Pulmonary arterial pressure was 35 mmHg at the end of the first month.

## 3. Discussion

Myxoma is the most common primary cardiac neoplasm, accounting for nearly 50% of benign heart tumors. It originated from the mesenchymal cells of the septal endocardium. It can present as villous, papillary, sessile or pedunculated pattern, the majority of them are solid. Myxomas presenting with cystic form are rare [6-7]. They are filled with serous fluid or blood because of inner hemorrhages.

The types of cystic masses that can appear in LA are as follows: myxoma, hydatid cyst, and interatrial septal aneurysm [8-9]. Owing to their many structural similarities, it is difficult to establish an accurate diagnosis using only preoperative echocardiography. Major complications like stroke, rupture, and hemodynamic problems may develop if they are not removed. Therefore the surgical excision of an LA cyst and histological examination is reasonable for establishing a definitive diagnosis and preventing sequelae [10].

In the current case, attachment to interatrial septum and negative serologic test results for hydatid cyst (ELISA) lead us to suspect myxoma.

In conclusion, even though intra-cardiac cystic lesions are extremely unusual in adults, myxoma should be considered in the differential diagnosis of all cystic left atrial masses.

Volume 9 Issue 7, July 2020

[www.ijsr.net](http://www.ijsr.net)

Licensed Under Creative Commons Attribution CC BY

This case shed light also on the importance of early transthoracic echocardiography in any patient presenting with features of heart failure even when the etiology seems obvious.

#### 4. Consent

Written informed consent was obtained from the patient for the publication of this case report and its accompanying images

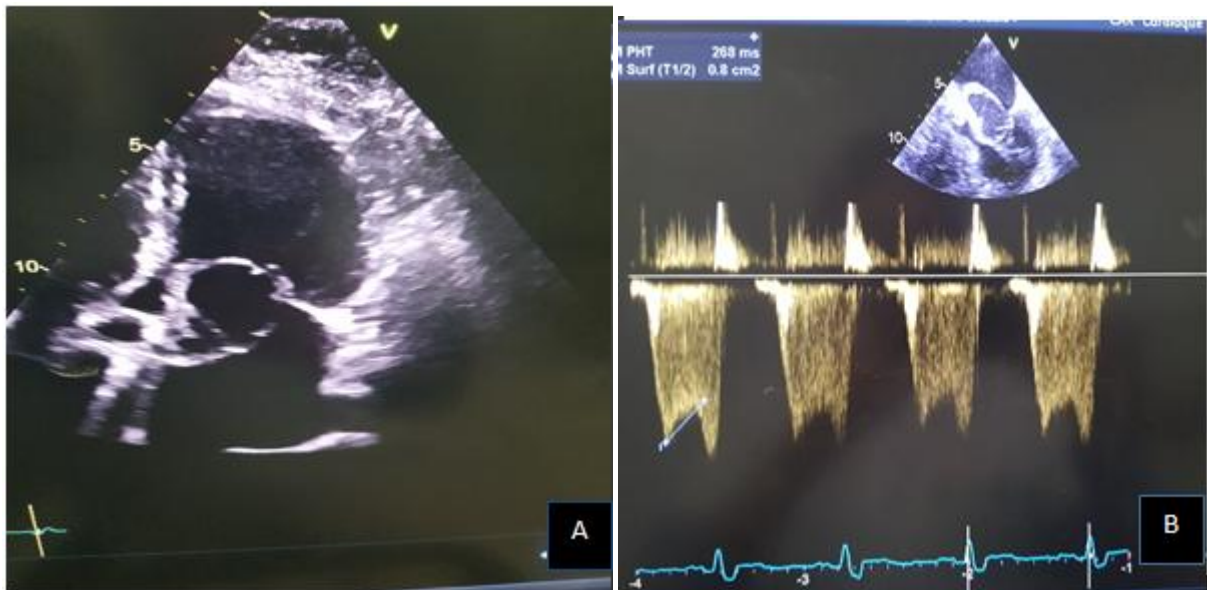
#### 5. Conflict of interest

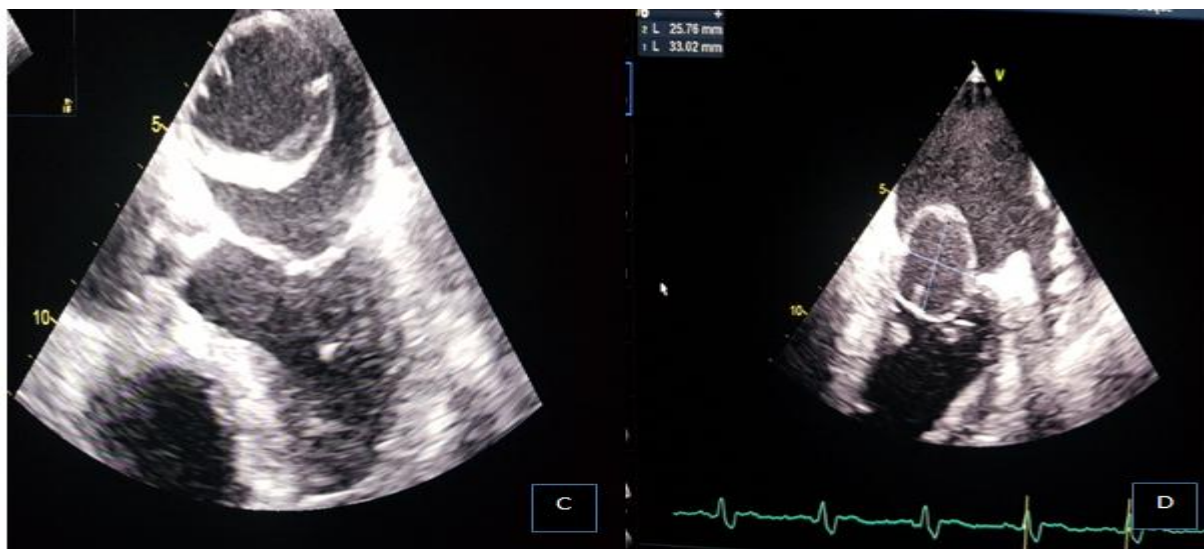
No conflict of interest to declare.

#### References

- [1] Ibanez B, Marcos-Alberca P, Rey M, de Rabago R, Orejas M, Renedo G, Farre J. Multicavitated left atrial myxoma mimicking a hydatid cyst. *Eur J Echocardiogr.* 2005; 6:231–233.
- [2] Benezet-Mazuecos J, Marcos-Alberca P, Farre J, Manzarbeitia F, Rabago R, Rey M. Multicystic/cavitated giant left atrial myxomas: a matter of technology? *Eur J Echocardiogr.* 2008; 9:101–102.
- [3] Tolstrup K, Shiota T, Gurudevan S et al (2011) Left atrial myxomas: correlation of two-dimensional and live three-dimensional transesophageal echocardiography with the clinical and pathologic findings. *J Am SocEchocardiogr* 24(6):618–624. doi:10.1016/j.echo.2011.01.007 (Epub 2011 Mar 1)
- [4] Schlaudraff K, Grunenfelder J, Turina M. Cystic tumor in the left atrium: an unusual aspect of a myxoma. *ThoracCardiovasc Surg.* 2004; 52:302–304.
- [5] Reynen K. Cardiac myxomas. *N Engl J Med.* 1995; 333:1610–7.
- [6] Goswami KC, Shrivastava S, Bahl VK, Saxena A, Manchanda SC, Wasir HS. Cardiac myxomas: clinical and echocardiographic profile. *Int J Cardiol.* 1998;63:251–9.
- [7] Ojji Dike B, Ajiduku Stella S, OmonuaOmonuyi O, AbdulkareemLukman L, Parsonage Will. A probable right atrial myxoma prolapsing through the tricuspid valve into the right ventricle: a case report. *Cases Journal.* 2008; 1:386
- [8] McCarthy PM, Piehler JM, Schaff HV, et al. The significance of multiple, recurrent and 'complex' cardiac myxomas. *J ThoracCardiovasc Surg.* 1986; 91:389–96.
- [9] Pinede L, Duhaunt P, Loire R. Clinical presentation of left atrial cardiac myxoma. A series of 112 consecutive cases. *Medicine (Baltimore)* 2001; 80:159–72.
- [10] Ezas S, Sfiras N, Kastellanos S. An atypical left atrial myxoma causing intracavitary pressure gradient and typical diastolic transmitral flow of severe mitral stenosis. *Int J Cardiol.* 2005; 102:165–7.

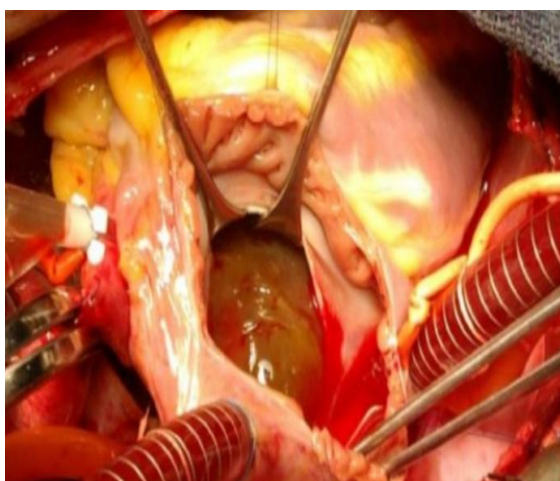
#### Figure Legend



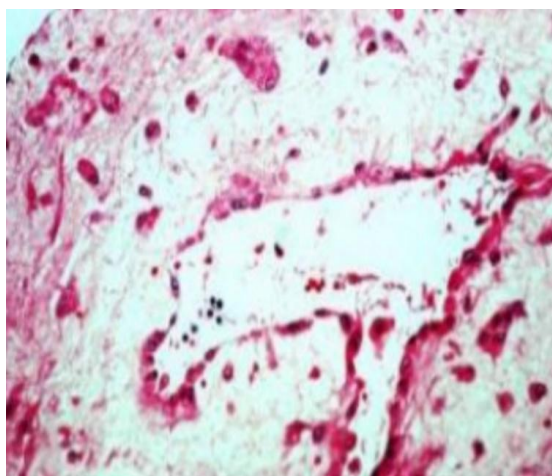


**Figure 1:**

- A: Transthoracic echocardiography 5 chambers view showing mobile cystic mass in the left atrium attached to the interatrial septum.
- B: Transesophagealechocardiography: Continuous-wave Doppler tracing shows a high transmitral mean pressure gradient (14 mm Hg).
- C: Mid-oesophageal four-chamber showing cavitated mass with multiple septa attached to the interatrial septum measuring 2,5 x 3,3 cm prolapsing into LV across MV and causing mitral stenosis in diastole
- D: 0 degree view showing the same multiloculated left atrial cystic mass



**Figure 2:** Per operative view: cystic mass was exposed through the left atriotomy.



**Figure 3:** Microscopic appearance of the myxoma: Typical myxoid cells are arranged in cords or in nest, surrounded by abundant myxoidstroma (x40)