



IMAGES IN CARDIOLOGY

**Hemoptysis as the presenting symptom in cardiac sarcoma**

**Hemoptise como o sintoma de apresentação em sarcoma cardíaco**

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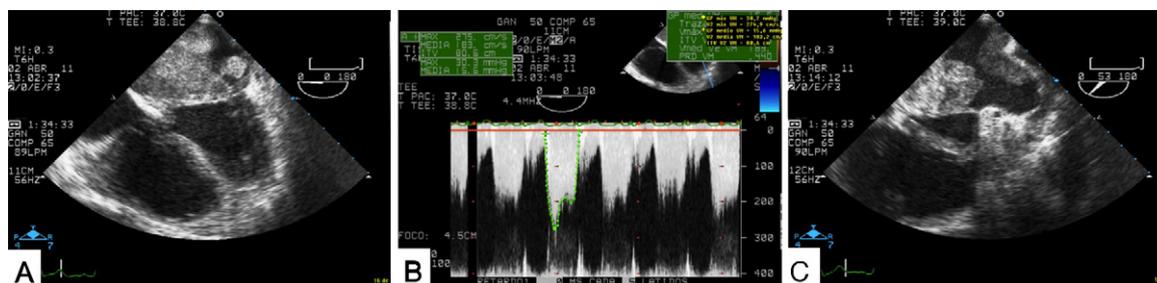
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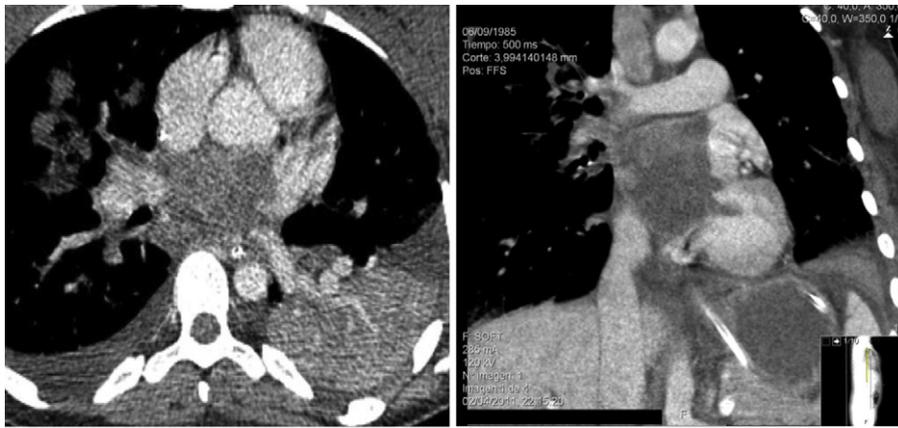
A healthy 25-year-old woman was admitted to the emergency department with a three-week history of gradual dyspnea on exertion, asthenia and weight loss. One week before admission, her dyspnea had worsened and had also presented at rest, with cough and hemoptysis, so she decided to seek medical attention. Physical examination revealed a mid-diastolic cardiac murmur. The transthoracic echocardiogram showed a large mass with irregular echogenicity filling the whole of the left atrium. Transesophageal echocardiography was performed and revealed the mass in the left atrium prolapsing into the left ventricle

during diastole and causing mitral valve obstruction (Fig. 1A; Online Videos A–C). Continuous-wave Doppler ultrasound indicated severe mitral valve obstruction (mean gradient of 16 mmHg) (Fig. 1B). The study also revealed extension into all the pulmonary veins (Fig. 1C). A computed tomogram of the thorax was performed and confirmed the diagnosis (Fig. 2; Online Video D). Cardiac surgery was performed with complete tumor resection (Fig. 3). The histopathological examination with immunohistochemical stain (Fig. 4A), hematoxylin–eosin stain (Fig. 4B) and electron microscopy (Fig. 4C) showed an undifferentiated pleomorphic sarcoma

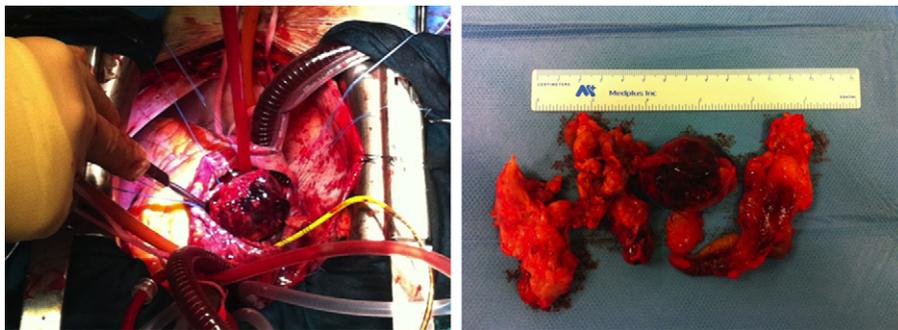


**Figure 1** (A) Transesophageal echocardiogram 4-chamber view: a large tumor with irregular echogenicity filling the whole of the left atrium. (B) Transesophageal echocardiogram: mitral valve obstruction. (C) Transesophageal echocardiogram focusing on the left atrium (53°): mass in the left atrium extending into the pulmonary veins.

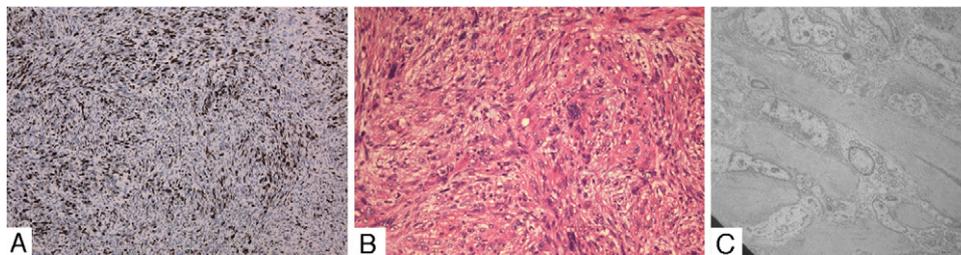
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**Figure 2** Cardiac computed tomography (CT): CT images showing the tumor occupying almost the entire left atrial chamber and infiltrating the pulmonary veins.



**Figure 3** Cardiac surgery and surgical specimen.



**Figure 4** (A) Immunohistochemical stain. (B) Hematoxylin-eosin stain. (C) Electron microscopy.

(pleomorphic malignant fibrous histiocytoma). The patient started chemotherapy and was discharged 17 days after surgery. Unfortunately, twenty days after discharge, she was readmitted to the hospital because of headache. Cranial computed tomography revealed multiple intracranial lesions suggestive of metastases. She underwent 10 sessions of holocranial radiotherapy. Six months after surgery she is alive but multiorgan metastatic disease has been demonstrated.

### Conflicts of interest

The authors have no conflicts of interest to declare.

### Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at [doi:10.1016/j.repc.2012.04.005](https://doi.org/10.1016/j.repc.2012.04.005).