

## IMAGE IN CARDIOLOGY

## Transpulmonary resection of an interventricular septal fibroma in an adult patient



### Resseção transpulmonar de um fibroma do septo interventricular num doente adulto

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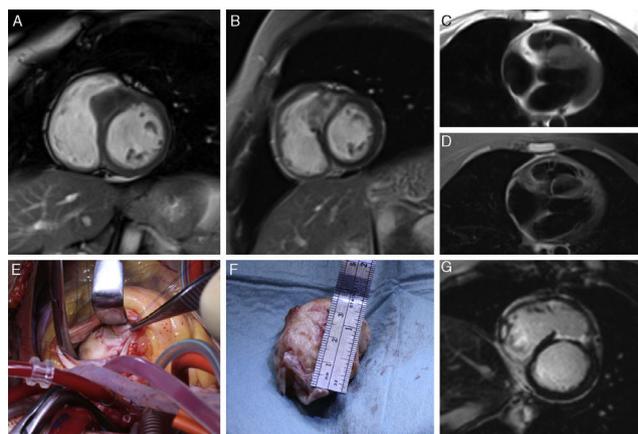
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A 39-year-old woman was referred to our institution for a cardiac mass discovered incidentally during transthoracic echocardiography performed for unrelated reasons. She was asymptomatic and the physical examination was normal.

To further characterize the mass, she underwent magnetic resonance imaging (MRI). The study revealed a solid nodular intramyocardial tumor (3.2 cm×2.2 cm×1.6 cm) located within the basal interventricular septum (Figure 1A). The lesion was isointense in T1-weighted sequences and hypointense in T2-weighted sequences (Figure 1C and D). There was no perfusion within the tumor on first-pass gadolinium perfusion images and heterogeneous late gadolinium enhancement was evident (Figure 1B). Computed tomography excluded calcifications within the tumor. A diagnosis of fibroma was considered.

Taking into account the uncertainty concerning the nature of the tumor, right ventricular outflow tract (RVOT) obstruction and high risk of malignant arrhythmias, the patient underwent surgical resection. The tumor was resected through a pulmonary artery approach (Figure 1E and F), avoiding right ventricular (RV) myectomy. The intraoperative and postoperative course was uneventful. Pathologic examination confirmed the diagnosis of fibroma.



**Figure 1** (A) Cine magnetic resonance imaging (MRI), short-axis view; (B) MRI, late gadolinium enhancement; (C) T1-weighted MRI; (D) T2-weighted MRI; (E) surgical approach through the pulmonary artery; (F) macroscopic appearance of the tumor; (G) follow-up MRI, late gadolinium enhancement.

After a six-month follow-up, the patient was asymptomatic and MRI showed no evidence of tumor recurrence or RVOT obstruction (Figure 1G).

Cardiac fibromas are extremely rare in adults. MRI provides valuable information for their diagnosis and

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management. Surgical resection is the gold standard when symptomatic. In asymptomatic patients, the choice between surgical and conservative management is controversial and should take into account the risk of sudden cardiac death and the likelihood of technical complications of surgery. Avoiding RV myectomy can obviate potential late RV arrhythmias.

### **Ethical disclosures**

**Protection of human and animal subjects.** The authors declare that no experiments were performed on humans or animals for this study.

**Confidentiality of data.** The authors declare that they have followed the protocols of their work center on the publication of patient data.

**Right to privacy and informed consent.** The authors have obtained the written informed consent of the patients or subjects mentioned in the article. The corresponding author is in possession of this document.

### **Conflicts of interest**

The authors have no conflicts of interest to declare.