SCIENTIFIC LETTER

GIANT LEFT ATRIAL MYXOMA WITH RIGHT ATRIAL PROTRUSION VIA ATRIAL SEPTAL DEFECT: ECHOCARDIOGRAPHIC AND SURGICAL CORRELATION

ABSTRACT

Cardiac myxomas are the most common primary tumors of the heart and are predominantly located in the left atrium. The clinical presentation depends on the site of implantation and the hemodynamic effect it generates. We present the case of a patient with an intracardiac mass attached to the interatrial septum that, on echocardiography, prolapsed into the right ventricle during diastole and was associated with dilatation of the right chambers. No atrial septal defect was evident on the preoperative study, so it was initially interpreted as a probable right atrial myxoma. During surgery, a pedicle implanted on the left side of the interatrial septum was found, protruding through a previously undiagnosed wide atrial septal defect. A complete resection with septal closure was performed, with a favorable outcome.
This case highlights the importance of considering associated septal defects in atypical presentations and the need for correlation between echocardiographic and surgical findings.

Keywords: *atrial myxoma; atrial septal defect; cardiac tumors; echocardiography; cardiac surgery.*

Author
Agostina Pochettino

Cardiovascular Surgery, Hospital Italiano de Mendoza, Argentina

Corresponding author:
Agostina Pochettino
pochettino.agostina@gmail.com

Received: 10/10/2025 ***Accepted: 11/12/2025*** ***https://doi.org/10.55200/raccv.v24.n1.0117***

INTRODUCTION

Primary cardiac tumors are a rare condition; among them, myxomas are the most common (50% of cases). More than 75% originate in the left atrium, usually at the edge of the foramen ovale of the interatrial septum, while approximately 20% develop in the right atrium, and a small percentage may be located in both atria or in the ventricles. They most commonly affect patients aged 40 to 60, with a slight predominance among females.[1,2] Their clinical presentation depends on size, mobility, and location; they may present with obstructive, embolic, or systemic symptoms.

Atrial septal defect (ASD) is a common congenital heart defect in the adult population. Although many ASDs are diagnosed in the neonatal period or during childhood and undergo spontaneous closure, a significant proportion persist into adulthood.[3] In these cases, chronic right ventricular volume overload, right atrial dilation, and arrhythmias may occur, even in the absence of symptoms in the early stages.

In exceptional cases, the coexistence of a left atrial myxoma and an ASD may allow tumor protrusion into the contralateral cavity, altering the expected hemodynamic pattern. This circumstance can result in a predominantly right-sided clinical presentation in a tumor of left origin and complicate preoperative echocardiographic interpretation, particularly when the septal defect is not detected in the initial study.

CLINICAL CASE

A 74-year-old female patient with a history of hypertension, dyslipidemia, and liver cirrhosis of probable drug-induced origin. She presented with dizziness and asthenia that had been present for 48 hours.

A Doppler echocardiogram was performed, revealing preserved systolic function with an ejection fraction of 72%, dilated right chambers, and a large, heterogeneous, multilobulated, and mobile mass (approximately 10 cm in diameter), which appeared to be attached to the interatrial septum and, during diastole, prolapsed into the right ventricle through the tricuspid valve (*Figure 1*). No associated septal defect was noted.

Surgical correction was indicated via median sternotomy, aortic and bicaval cannulation, and an approach through the right atrium under cardiopulmonary bypass.

During surgery, a pedunculated myxoma was found implanted on the left surface of the interatrial septum, protruding through a previously undiagnosed wide interatrial communication into the right atrium. Complete *en bloc* resection was performed, with wide excision of the pedicle and closure of the defect using an autologous pericardial patch (*Figure 2*).

The postoperative course was favorable, with no significant residual defects on echocardiographic follow-up.

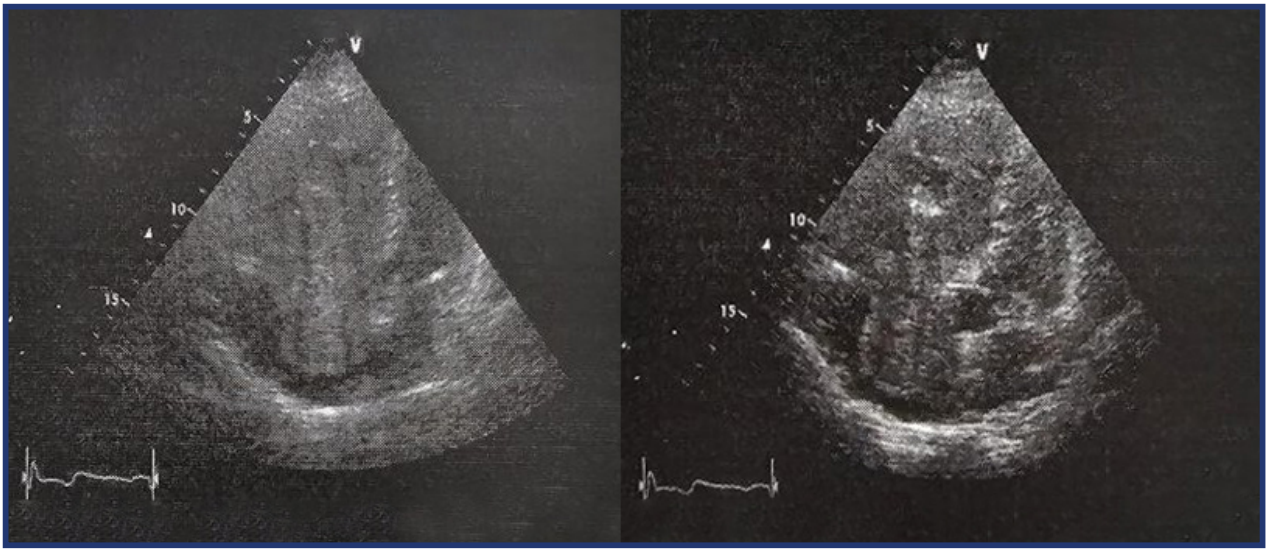

FIGURE 1. Preoperative echocardiogram. A mobile mass was observed in the right atrium extending through the tricuspid valve into the right ventricle.

DISCUSSION

Atrial myxoma is the most common benign primary tumor in adults, with a clear predominance in females and a higher incidence among those aged 40 to 60 years.

The anatomical origin of the myxoma is determined by the site of the pedicle's attachment, while the clinical presentation depends on the hemodynamically affected chamber. Obstructive symptoms occur when the myxoma prevents proper filling of the affected atrium, and/or interferes with mitral or tricuspid valve function.[4] In this case, transseptal protrusion through an undiagnosed atrial septal defect led to

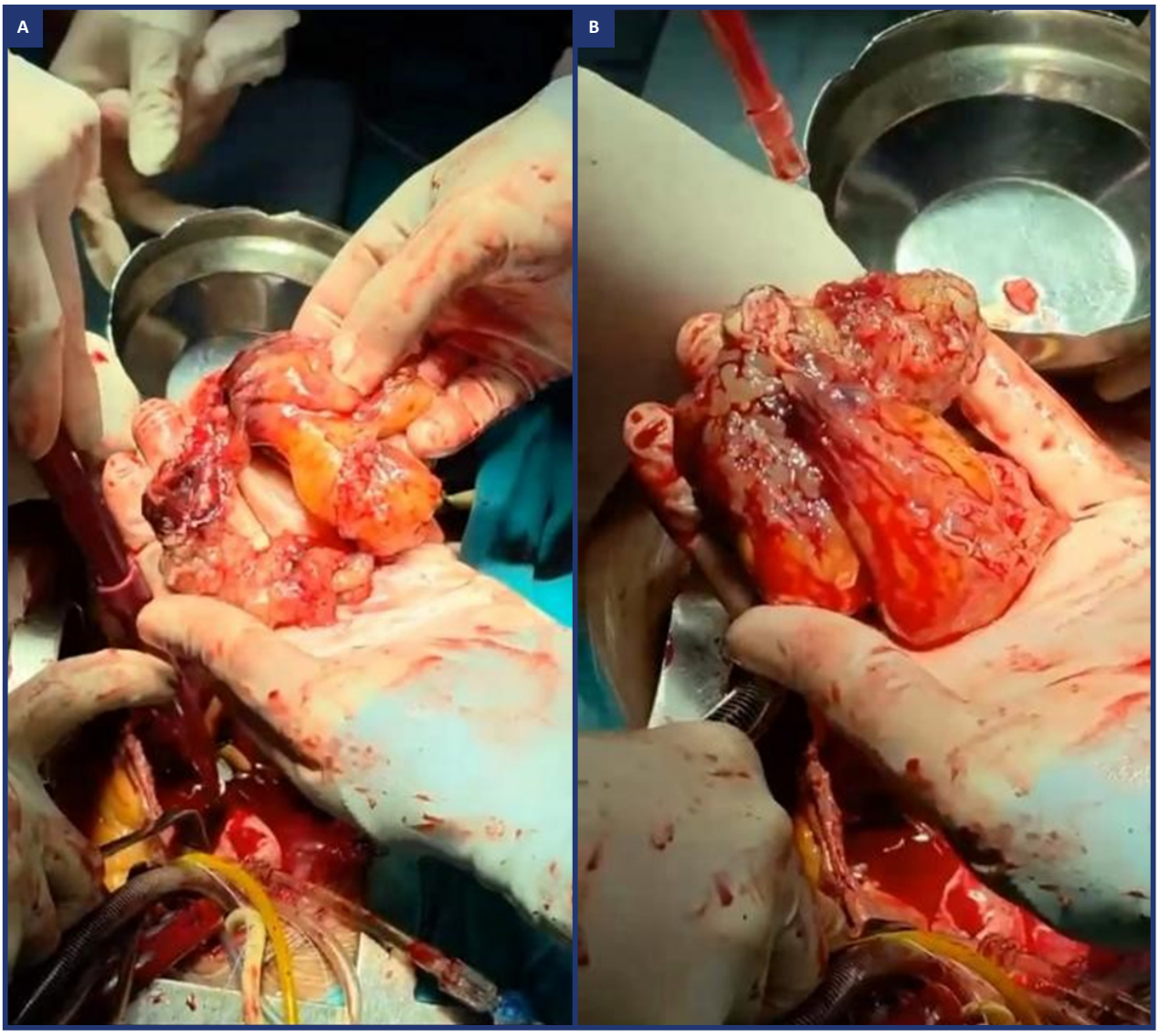

FIGURE 2. A and B: Intraoperative findings. A large atrial tumor with a pedicle attached to the left side of the interatrial septum.

predominantly right-sided physiology, mimicking a primary right atrial tumor.

The absence of echocardiographic visualization of the atrial septal defect may be due to limitations of the transthoracic study, especially in the presence of large masses that alter septal anatomy. The transseptal approach confirmed the left-sided origin and enabled complete resection with adequate closure of the defect.

This case underscores that, in the presence of septal masses with discordant hemodynamic behavior, the possibility of associated atrial septal defects should be considered, even when they are not evident on the initial echocardiographic evaluation.

CONCLUSION

A left atrial myxoma can mimic a right-sided tumor when it protrudes through an undiagnosed atrial septal defect. The hemodynamic impact does not always reflect the anatomical site of implantation; therefore, echocardiographic and surgical correlation is essential for a definitive diagnosis.

Declaration

The author declares no conflicts of interest.

REFERENCES

1. González EL, Pizzi MN, Caponi MG, Vigliano C, Varela Otero MDP, Dulbecco E, et al. Mixomas cardíacos: presentación clínica, resultados quirúrgicos y pronóstico a largo plazo. Rev Argent Cardiol. 2010;78(2):108-113. doi.org/10.7775/rac.v77i2.2186

2. Menillo AM, Alahmadi MH, Pearson-Shaver AL. Atrial septal defect. In: StatPearls. Treasure Island (FL): StatPearls Publishing; 2025.

3. Blixenkrone-Møller E, Dannesbo S, Dehn AM, et al. Comunicaciones interauriculares: prevalencia y subtipos en 12,385 recién nacidos: un estudio de Copenhagen Baby Heart. Pediatr Cardiol. 2025;46:1570-1580. doi:10.1007/s00246-024-03571-0

4. Musolino AD, Griotti J, Desiderio A. Mixoma auricular, una patología de cuidado. Rev Cient Durand. 2025. Disponible en: https://revistacientificadurand.com/wp-content/uploads/2025/01/art.15.pdf