Images in Cardiovascular Medicine

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Right Atrial Myxoma in a Patient Presenting with Syncope

77-year-old man with no notable medical history presented with syncope. This was his 1st episode, and it had occurred while he was walking at his usual pace. The physical examination revealed nothing unusual. Electrocardiography showed normal sinus rhythm with nonspecific ST-T changes. Transthoracic and transesophageal echocardiography revealed normal left ventricular size and function, but there was a $4.5 - \times 4.85$ -cm right atrial mass that was prolapsing through the tricuspid valve into the right ventricle during diastole (Figs. 1 and 2). Surgical exploration of the right atrium revealed a $4-\times 5$ -cm shiny mass attached to the interatrial septum. The mass was successfully excised. In addition, the patient underwent triple-vessel coronary artery bypass grafting. Histologic examination of the mass confirmed the diagnosis of cardiac myxoma. The patient recovered without complication.

Myxomas are the most common primary tumors of the heart. Only about 15% to 20% of cardiac myxomas are located in the right atrium; most of these are attached to the interatrial septum.¹ Right atrial myxomas can be asymptomatic. In other cases, symptoms may arise from distal embolization, both pulmonary and systemic (paradoxical embolization through a patent foramen ovale). Myxomas may also manifest with a variety of constitutional signs and symptoms, including fever, weight loss, and arthralgias.² In addition, the local tricuspid valvular obstruction resulting from a myxoma may mimic tricuspid stenosis. Syncope, which occurred in this patient, is a rare manifestation of right atrial myxoma. However, sufficiently large tumors can cause a temporary complete obstruction of the tricuspid valve, resulting in syncope or sudden death. The best treatment is surgical removal of the mass, which is generally curative.

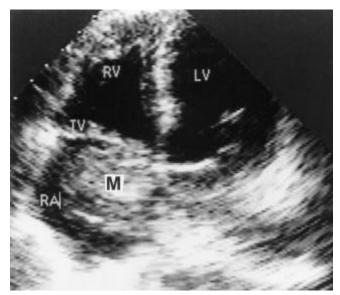


Fig. 1 Transthoracic echocardiography (apical 4-chamber view) showing the right atrial mass attached to the interatrial septum.

M = mass; *LV* = left ventricle; *RA* = right atrium; *RV* = right ventricle; *TV* = tricuspid valve

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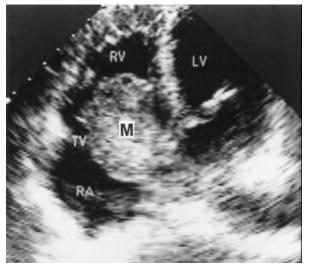


Fig. 2 Transthoracic echocardiography (apical 4-chamber view) showing the right atrial mass prolapsing into the right ventricle.

M = mass; *LV* = left ventricle; *RA* = right atrium; *RV* = right ventricle; *TV* = tricuspid valve

References

- 1. Reynen K. Cardiac myxomas. N Engl J Med 1995;333: 1610-7.
- 2. Roberts WC. Primary and secondary neoplasms of the heart. Am J Cardiol 1997;80:671-82.