

# Large Atrial Myxoma Causing Dynamic Obstruction of the Mitral Valve and Atrial Fibrillation

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A 42-year-old healthy dairy farmer experienced 2 months of progressive exertional dyspnea and fatigue. Two days before presentation he noted palpitations at rest. Auscultatory cardiac examination revealed an irregular rhythm with an early diastolic plop. Electrocardiographic finding of atrial fibrillation with rapid ventricular response (Figure, A) was poorly responsive to intravenous diltiazem drip. Transthoracic echocardiography showed severe left atrial dilation and a large mobile left atrial mass causing pseudostenosis and mitral valve regurgitation (Video, Figure, B). Within 12 hours, the cardiac surgery team performed a mass excision and a maze procedure. The myxoma measured  $5.2 \times 4.8 \times 3.7$  cm and was attached to the left atrial surface by a broad stalk near the posteromedial commissure of the mitral valve, close to the annulus (Figure, B). The postoperative transthoracic echocardiogram showed no marked mitral valve regurgitation and an intact atrial septum. The patient's symptoms and electrocardiographic findings resolved after surgery.

Myxomas make up half of the primary cardiac tumors in adults, and 75% are in the left atrium.<sup>1</sup> Unlike

malignant neoplasms, myxomas arise from the endocardium, vary widely in size, and are pedunculated and gelatinous (Figure, C). Histologic diagnosis is based on hematoxylin and eosin stain showing myxoma cells in a mucopolysaccharide stroma (Figure, D). Auscultatory findings of valvular abnormalities are common (64%), with classic "tumor plop" in 30%.<sup>2</sup> Systemic embolization is present in 30% to 40% of patients, and valvular obstruction can cause sudden cardiac death, so high suspicion and prompt resection are required.<sup>2</sup>

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## SUPPLEMENTAL ONLINE MATERIAL

Supplemental material can be found online at <http://www.mayoclinicproceedings.org>.

1. Burke AP, Virmani R. Cardiac myxoma; a clinicopathologic study. *Am J Clin Pathol*. 1993;100(6):671-680.
2. Reynen K. Cardiac myxomas. *New Eng J Med*. 1995;333(24):1610-1617.

