Left Atrial Myxoma Presenting as a Cystic Mass

A 35-year-old woman presented after 5 months of increasingly severe dyspnea on exertion. Her physical examination and laboratory values were unremarkable. Chest radiography revealed cardiomegaly. Unenhanced chest computed tomography (CT) showed an enlarged left atrium with subtle central (12 Hounsfield units [HU]) and peripheral (21 HU) hypodensity (Fig. 1). Further characterization with contrast-enhanced chest CT revealed a large, apparently cystic left atrial mass with central nonenhancement (12 HU) and a thick rim-enhanced wall (77 HU) (Fig. 2). Transthoracic echocardiography confirmed a pedunculated mass prolapsing through the mitral valve (Fig. 3). The mass was surgically removed, and pathologic examination revealed a 7-cm atrial myxoma (Fig. 4).

Comment

Primary cardiac tumors are uncommon; their reported incidence is 0.0017% to 0.19% in autopsy series of unselected patients. Approximately 75% are benign, and 50% are cardiac myxomas, which occur most often in the left atrium. Atrial myxomas usu-
ally show heterogeneous enhancement (67% of cases) on contrast CT, with an average density of 43 HU.\(^1\)\(^4\) Tumor enhancement correlates histologically with myxomatous elements and inflammation, whereas noneenhanced areas indicate necrosis and cystic changes.\(^3\)

Our patient’s rim-enhanced mass did not have the typical heterogeneous enhancement pattern, and its low-density nonehanced central portion was probably secondary to its abundant gelatinous myxoid matrix.\(^5\) The main differential considerations, outside of myxoma, were intracardiac thrombus and hydatid cyst. Atrial thrombus, however, is frequently located in the atrial appendage or on the posterior and lateral walls and is not associated with prolapse. Because of the thick-walled rim enhancement and lack of wall calcification, cystic hydatid disease was unlikely. Ultimately, multiple imaging characteristics—large size, position adjacent to the interatrial septum, mobility, and prolapse across valves—made myxoma the most likely diagnosis.\(^4\)

This case describes an uncommon variant of atrial myxoma and serves as a reminder that this condition should be considered in the differential diagnosis of apparently cystic intracardiac masses. It also emphasizes the role of chest CT in the evaluation of these masses and the usefulness of imaging in differentiating myxoma from other possible causes of an intracardiac mass.

References