A 12-year-old, apparently healthy woman was referred to the echocardiography laboratory as part of evaluation of school physical control. Physical examination was unremarkable. Two-dimensional echocardiography showed a large (14×15×18 mm), nonechogenic, rounded, thin-walled cystic mass attached to the atrial surface of the anterior mitral valve leaflet (Figure [A] and [B]; Movie I in the Data Supplement). Apical 4-chamber view showed normal ventricular size and function (Movie II in the Data Supplement), without left ventricular inflow tract obstruction. Color and spectral Doppler imaging demonstrated minimal mitral valve regurgitation, without turbulence in the left ventricular outflow tract. Transesophageal echocardiography was not performed because of adequate acoustic windows of transthoracic echocardiography. Cardiac MRI clearly depicted the mass and its relationship with the anterior mitral leaflet (Figure [C]; Movie III in the Data Supplement). On spin echo T1 images, the mass showed a homogeneous signal isointense compared with myocardium (Figure [D]) and hyperintense on T2 (Figure [E]), and does not show uptake of gadolinium at the delayed phase, suggestive of cystic nature of the mass (Figure [F]). After 2 years of follow-up, there was no change seen by echocardiography. This case report confirms the fundamental role of echocardiography for the evaluation of intracardiac masses because it supplies adequate information about size and attachment. Additional information about the nature of the lesion and its content is given by MRI. There is no consensus for the treatment of patients with blood cysts. Conservative approach in asymptomatic patients with a small cyst, as in our case, and echocardiographic follow-up are suggested, whereas surgical treatment should be considered if symptoms occur or if the cyst produces any cardiac dysfunction.1,2

Disclosures

None.

References


KEY WORDS: blood cyst  ■  echocardiography  ■  magnetic resonance imaging  ■  mitral valve
Figure. Two-dimensional echocardiography in parasternal long-axis view (A) and apical 4-chamber view (B) shows the blood cyst attached to anterior mitral valve. Cardiac MRI depicted the mass and its relationship with the anterior mitral leaflet (C). On spin echo shows the mass isointense on T1 compared with myocardium (D) and hyperintense on T2 (E), without uptake of gadolinium at the delayed phase (F). Ao indicates aorta; LA, left atrium; LV, left ventricle; RA, right atrium; and RV, right ventricle.
Blood Cyst of the Mitral Valve: Echocardiographic and Magnetic Resonance Imaging Diagnosis

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VIDEO LEGENDS

Video 1: Two dimensional echocardiography in parasternal long-axis view shows the blood cyst attached to anterior mitral valve.

Video 2: Two dimensional echocardiography in apical four chamber view shows the blood cyst attached to anterior mitral valve.

Video 3: Cardiac MRI depicted the blood cyst and its relationship with the anterior mitral leaflet.