Left Ventricular Cardiac Cyst
Unusual Echocardiographic Appearance of a Cardiac Hemangioma
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A 23-year-old man presented with recent intermittent shortness of breath. He was healthy, with no significant medical history. Transthoracic echocardiographic examination revealed a left ventricular cyst attached to the interventricular septum (Figure, A); the rest of the echocardiographic examination was unremarkable. Cardiac magnetic resonance imaging was requested for tissue characterization. The lesion demonstrated high signal intensity on both T1- and T2-weighted fast spin echocardiography (Figure, B and C). In addition, the lesion demonstrated a homogeneous rapid enhancement pattern during first-pass infusion of gadolinium-containing contrast, indicating high vascularity (Movie I in the online-only Data Supplement and Figure, D and E). On delayed myocardial enhancement imaging, the mass showed marked enhancement because of its high vascularity (Figure, F). The tumor was surgically excised, and the patient had an uneventful recovery. Pathology examination revealed a lesion composed of thin-walled ectatic vessels with diffused capillary proliferation consistent with capillary hemangioma (Figure, G).

Cardiac hemangiomas are rare benign vascular tumors that account for 5% to 10% of benign cardiac tumors.1 The tumors may be asymptomatic and discovered incidentally or cause shortness of breath, chest pain, and other cardiac symptoms. Three types of hemangiomas are identified: a capillary type consisting of closely packed capillary struts, a cavernous type consistent of dilated vascular channels lined by flattened endothelial cells, and a mixture of both that has combined features.

Typically cardiac hemangiomas are hyperechoic lesions on echocardiographic examination. On cardiac magnetic resonance examination, the tumors demonstrate an intermediate signal intensity in T1- and T2-weighted images, respectively.2 A rapid homogeneous enhancement during gadolinium infusion is characteristic of capillary hemangioma resulting from high tumor vascularity, which is characterized by a vascular blush on coronary angiography. Cavernous hemangiomas have large vascular spaces with slow flow and therefore typically do not enhance at angiography. The other differential diagnosis of heart

Figure. A, A 2-dimensional echocardiography apical 4-chamber view. A well-circumscribed circular cystic mass is attached to the midventricular septum with a stalk measuring 2.56 x 2.06 cm. The mass is seen moving freely in the left ventricular (LV) cavity. B, T1-weighted fast spin echo with blood suppression in the 4-chamber view. The tumor is located in the LV with intermediate to high signal intensity compared with the myocardium. C, T2-weighted fast spin echo with blood suppression in the 4-chamber view. The LV mass demonstrated high signal intensity compared with the myocardium. D and E, Early and late first-pass perfusion images. The mass in the LV demonstrated rapid and homogenous filling, a finding that indicates vascular lesion. F, Myocardial delayed enhancement, 4-chamber view, demonstrates marked enhancement in LV mass. Because of the high vascularity, the tumor is still discernible from the LV cavity (arrow). G, Histological examination of the mass showing capillary hemangioma with closely packed capillary proliferation and ectatic vessel (hematoxylin and eosin; magnification ×200).
and pericardium cyst includes pericardial cyst, echinococcal (hydatid) cyst, and blood cysts.

In summary, the echocardiographic appearance of a capillary hemangioma in this case differs from previous echocardiographic description in that it presented as a cystic structure. This finding should broaden the spectrum of the potential appearance of capillary hemangioma and possible differential diagnosis of left ventricular cyst. In addition, this case illustrates the essential role of cardiac magnetic resonance in tissue characterization of cardiac tumors to avoid erroneous preoperative diagnosis of cardiac cyst.

Disclosures
None.

References
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