Spontaneous Left Atrial Dissection and Hematoma Mimicking a Cardiac Tumor

Findings From Echocardiography, Cardiac Computed Tomography, Magnetic Resonance Imaging, and Pathology

Antonella Lombardo, MD; Nicola Luciani, MD; Vittoria Rizzello, MD; Luigi Natale, MD; Faustino Pennestrí, MD; Riccardo Ricci, MD; Lorenzo Bonomo, MD; Gian Federico Possati, MD; Filippo Crea, MD

A 59-year-old woman with no history of cardiac surgery or thoracic trauma presented to the emergency department with tachycardia and dyspnea. The ECG showed sinus rhythm (110 bpm). X-rays showed interstitial pulmonary edema. Transthoracic echocardiography revealed a mild enlargement of the left atrium (LA), normal left ventricular function, and a large fixed mass occupying almost entirely the LA and arriving just near the posterior mitral annulus. Moderate mitral regurgitation was present. Transesophageal echocardiography confirmed the presence of an inhomogeneous cyst-like mass with a thin hyperechogenic wall coming from the posterolateral wall of the LA and involving the interatrial septum roof (Movie). Cardiac computed tomography and gadolinium-enhanced magnetic resonance imaging were also performed (Figure).

On the basis of the findings of the 3 techniques, a presumptive diagnosis of LA tumor was made and a cardiac operation was performed with institution of cardiopulmonary bypass. A vertical extended transseptal incision was made and an intramural mass was found in the posterior wall of the LA bulging into and occupying two thirds of the cavity. Macroscopically, no sign of infiltration was found in and outside the LA wall, and no pericardial adhesions were observed. The endocardium was cut and a several clots were spread out from a non-capsulated cavity delimited by gray, fibrous, and atrophic tissue. The histopathological examination showed that the mass consisted of fibrin, erythrocytes, and scattered leukocytes.

The postoperative course was uneventful and the patient was discharged on the seventh day. Repeat echocardiography over the following months showed normal LA without residual hematoma or dissection and residual mild mitral insufficiency.

Spontaneous hematoma is a very rare1,2 and challenging entity to diagnose even when the best imaging techniques are applied. Only surgical exploration can clarify the nature of the mass.

References
A, Transesophageal echocardiography showing an inhomogeneous mass at the posterolateral wall of the LA. B, Computed tomography showing an oval mass not dissociable from the posterior wall without significant enhancement after contrast injection (asterisk). During late phases, a hyperdense posterior ring is evident (arrow heads). C, Contrast-enhanced cardiac magnetic resonance, fast-spin echo sequence, vertical long axis image showing a hypointense, fixed, oval mass that is not dissociable from the atrial wall without contrast enhancement (asterisk), with only a thin hyperintense posterior band (arrow heads). D and E, Histology. The mass (5 cm × 3 cm) consists of a clot (D, bottom right); the atrial wall at the base of the mass shows subendocardial fibrosis, inflammation, and hemorrhage, together with intramural fibrosis and regressive changes of myocytes (D, left, and E) (hematoxylin and eosin staining). D, ×20; E, ×100.
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