

Chest pain and palpitation caused by a left ventricular haemangioma in an adult

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Abstract

Hemangioma in heart chambers is rare, most cases with heart hemangioma without symptom. The case we presented was an extremely left ventricle hemangioma with chest pain and palpitation after exercise. The tumor was resected under cardiopulmonary bypass, histopathological analysis concluded a benign vascular tumor. Examination of the tumor revealed vascular proliferation and mucoid degeneration in matrix. Immunohistochemistry showed strong positive staining with antibodies against CD31 and CD34, which supported the vascular origin of this tumor.

Chest pain and palpitation caused by a left ventricular haemangioma in an adult

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Abstract Hemangioma in heart chambers is rare, most cases with heart hemangioma without symptom. The case we presented was an extremely left ventricle hemangioma with chest pain and palpitation after exercise. The tumor was resected under cardiopulmonary bypass, histopathological analysis concluded a benign vascular tumor. Examination of the tumor revealed vascular proliferation and mucoid degeneration in matrix. Immunohistochemistry showed strong positive staining with antibodies against CD31 and CD34, which supported the vascular origin of this tumor.

A 22-year-old man was presented to the emergency room with chest pain and palpitation after exercise for more than one month[1]. Physical examination showed no positive signs except the heart rates was 112 beats per minute. The patient's history was unremarkable while the body temperature was 37.7 centigrade when he checked in. Laboratory parameters were unremarkable, with no elevation in his levels of high-sensitive cardiac troponin T (4.5 pg/ml, reference <14 pg/ml), N-terminal pro-brain natriuretic peptide (<5 ng/l, reference <88 ng/l). Transesophageal echocardiography during operation revealed a strong echo oval shaped circumscribed mass measured 17×15mm in his left ventricle cavity with great mobility (panels A and B, Supplementary material online, video1 and 2). His cardiac valves and the size and function of left ventricle were normal. Cardiovascular magnetic resonance (CMR) imaging, which revealed a 17×15mm left ventricular

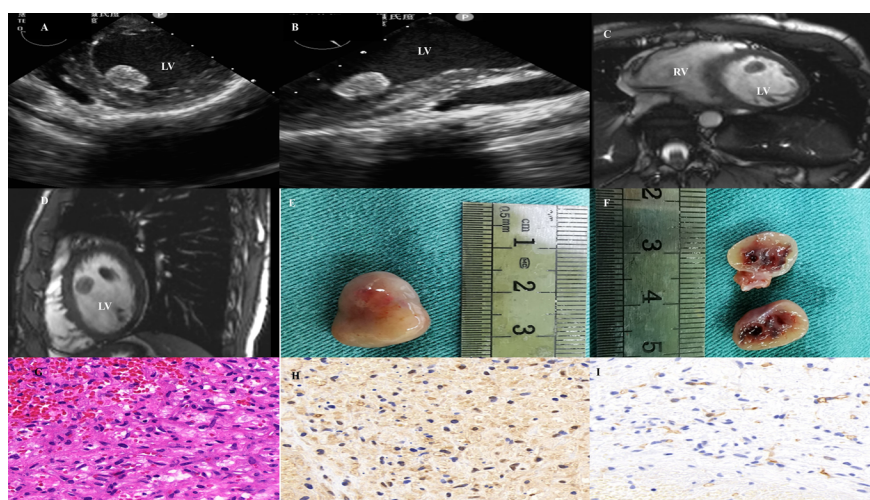
mass that significantly enhanced after injection of gadolinium enhancement (panels C and D, Supplementary material online, video3 and 4). The patient received surgical intervention under the cardiopulmonary bypass, the tumor was identified originating from left ventricle cavity with a pedicle connected to the middle section of interventricular septal. The surface of the tumor was covered by milky white colloidal substances, and red jelly-like stuff in it (panel E and F). Histopathological analysis concluded a benign vascular tumor. Examination of the tumor revealed vascular proliferation and mucoid degeneration in matrix (panel G). Cells showed strong positive staining with antibodies against CD31 (panel H) and CD34 (panel I)[2], which supported the vascular origin of this tumor. The patient recovered uneventfully and discharged 4 days after surgery.

Consent The study were approved by the relevant ethics committees, and oral informed consent was obtained for the participant.

References

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Figure legend Panel A and B: intraoperative transesophageal echocardiography showed a mass in left ventricle cavity, panel C and D: cardiovascular magnetic resonance imaging revealed that the mass significantly enhanced, panel E and F: surface and inner appearance of the mass, panel G: histopathological examination of the tumor, panel H and I: immunohistochemistry analysis of the tumor.



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