Case reports

Left atrial cardiac hemangioma: a report of two cases

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Cardiac hemangiomas are exceptionally rare tumors with an incidence of 1 to 3% of all detected benign heart neoplasms. We report 2 cases of left atrial hemangioma of which only one associated with clinical symptoms such as dyspnea and palpitations. Two years following surgical excision of the tumors, there was no echocardiographic evidence of recurrence.

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Introduction

Tumors of the heart are rare, and the myxomas represent 70 to 80% of all cardiac neoplasms[1]. Among primary tumors of the heart, hemangiomas account for 5 to 10% of benign tumors[2]. In the review by McAllister[3], of 533 primary tumors and cysts of the heart and pericardium, only 2.8% were hemangiomas. Hemangiomas are usually asymptomatic because the most frequent clinical manifestations depend on the tumor localization; they have been reported to cause arrhythmias and pericardial effusions, effort dyspnea, congestive heart failure, pseudoangina, outflow tract obstruction, and coronary insufficiency[4-6]. Echocardiography is usually diagnostic, and cardiac catheterization may confirm a specific diagnosis for hemangioma thanks to the presence of tumor vascularity[4].

We here report 2 cases of left atrial hemangioma.

Description of cases

Case 1. A 72-year-old female presented at the local hospital because of palpitations due to an episode of paroxysmal supraventricular tachycardia. She had a long-lasting history of hypertension and had a single episode of chest pain 1 year previously. The paroxysmal supraventricular tachycardia was successfully treated with verapamil. After that, an ECG showed evidence of first degree atrioventricular block (PR 0.32 s). Therefore, a DDDR pacemaker was implanted. A surface echocardiogram, obtained after pacemaker implant, demonstrated the presence of a non-mobile round capsulated mass in the left atrium, attached to the interatrial septum (Fig. 1). There was no obstruction to the atrioventricular outflow. The patient was referred to our institution and underwent surgical excision of the mass. The tumor measured 3 cm in diameter. On cut section the tumor showed an irregular brownish surface with hemorrhagic areas. The tumor was a cavernous hemangioma with thick-walled capillaries and large cavernous vascular spaces separated by fibrous septa and partly filled with blood (Fig. 2). Focal hemorrhagic areas and hemosiderin pigments were found. Cell atypia and necrosis were absent.

Case 2. A 73-year-old male with a known history of hypertension and coronary artery disease under pharmacological treatment, was referred by the attendant cardiologist to a local hospital for a stress echocardiogram. A routine basal echocardiogram showed evidence of a left atrial mobile mass attached to the fossa ovalis with a pedicle. The finding was confirmed at transesophageal echo (Fig. 3). The patient was asymptomatic for chest pain, dyspnea or arrhythmias. Chest X-ray was normal and ECG showed only non-specific repolarization abnormalities but no signs of atrioventricular block or arrhythmias. The

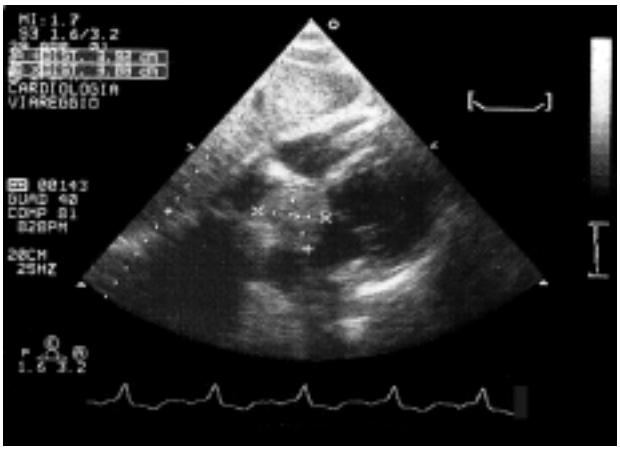

Figure 1. *Case 1. Transthoracic echocardiogram: evidence of a non-mobile round capsulated mass in the left atrium, attached to the interatrial septum.*

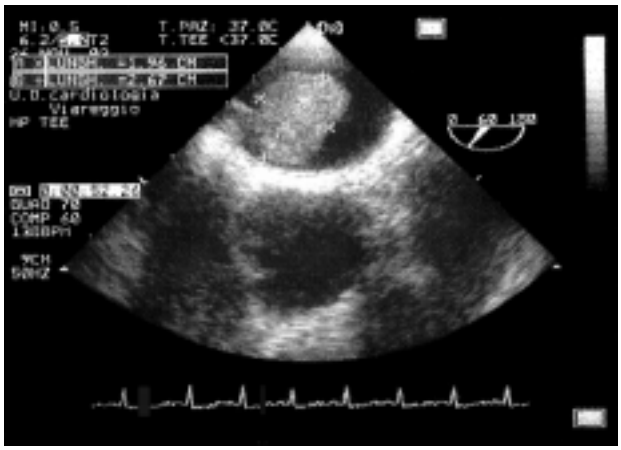

Figure 3. *Case 2. Transesophageal echocardiogram: evidence of a left atrial mobile mass attached to the fossa ovalis with a pedicle.*

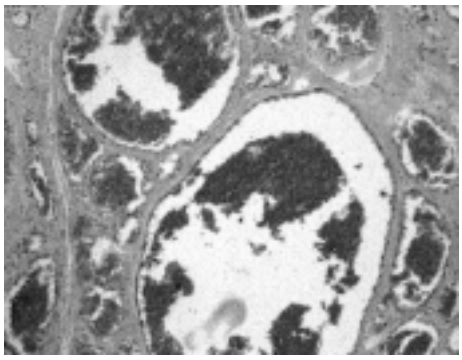

Figure 2. *Case 1. Microscopy: cavernous hemangioma with thick-walled capillaries and large cavernous vascular spaces separated by fibrous septa and partly filled with blood. Focal hemorrhagic areas and hemosiderin pigments are present (hematoxylin-eosin, 100×).*

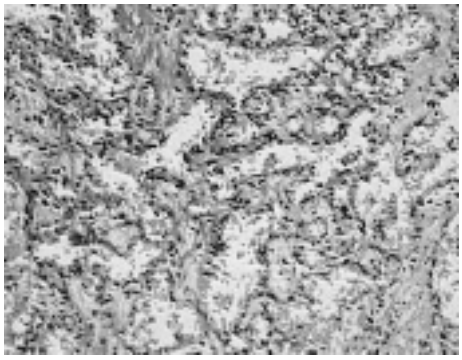

Figure 4. *Case 2. Microscopy: cavernous hemangioma with thin and thick-walled capillaries and venules, blood filled and lined by a flattened typical endothelium (hematoxylin-eosin, 100×).*

patient was referred to our institution and underwent surgical excision of the mass. Grossly, the tumor was 2 cm in diameter, reddish-blue in color and with a rounded surface. On cross section focal hemorrhagic areas were observed. The tumor was a cavernous hemangioma with thin and thick-walled capillaries and venules, blood filled and lined by a flattened typical endothelium (Fig. 4).

Discussion

Primary cardiac tumors have an estimated incidence ranging between 0.001 and 0.03% at autopsy[2]. Cardiac hemangiomas are even less frequent, accounting for 5 to 10% of benign cardiac tumors in surgical series. Histologically, hemangiomas are classified as capillary, cavernous, or arteriovenous, often having combined features and containing fibrous tissue and fat. Hemangiomas may involve any area of the heart. Depending on their location, the tumors may result in compression of cardiac structures, outflow tract obstruction, pericardial effusion, congestive heart failure, coronary insufficiency, and occasionally sudden death (due to arrhythmias and pericardial effusion). These tumors have an unpredictable outcome and may resolve, stop growing, or proliferate indefinitely[7]. Therefore, prompt surgical excision is mandatory. The availability of new non-invasive imaging techniques has determined an increasing number of diagnoses of cardiac hemangiomas during life. Extended surgical excision by resecting the tissue widely around the tumor is considered curative with resolution of symptoms. Periodic echocardiographic evaluation is needed to monitor the recurrence of hemangiomas after resection[8].

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