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Case Report

Primary cardiac malignant fibrous histiocytoma with abdominal wall metastasis

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ABSTRACT

We present a rare case of cardiac malignant fibrous histiocytoma (MFH; undifferentiated pleomorphic sarcoma); to date, fewer than 100 cases of cardiac MFH have been reported. In this case, transthoracic echocardiography revealed cardiac tumors in the left atrium (LA) of a 53-year-old woman with a 3-month history of worsening dyspnea; the largest tumor was found to protrude through the mitral valve in diastole, causing stenosis. Three of the four tumors were resected during emergency surgery; however, the residual tumor extension into the left pulmonary vein could not be removed. Histological findings of the resected tumors, such as organized thrombus and myxomatous tissue changes, indicated that the tumors were benign. After 3 months, the patient underwent total resection for a small mass that developed on her right abdominal wall, which was revealed histologically to be MFH; additionally, the residual mass in the LA had enlarged progressively. After undergoing radiation therapy without further surgery, she died of cerebral bleeding 6 months after cardiac surgery. Postmortem examination revealed that the tumor in the LA was an MFH. Thus, cardiac MFH should be considered as a differential diagnosis for tumors on the posterior wall of the LA.

<**Learning objective:** Primary cardiac malignant fibrous histiocytoma (MFH), which is easily mistaken for atrial myxoma, is a rare type of cardiac sarcoma. MFH occurs most commonly on the posterior wall of the left atrium (LA), and total resection is currently the only effective therapy; however, the prognosis is poor. Therefore, a high level of suspicion is required to facilitate early diagnosis. Cardiac MFH should be considered as a differential diagnosis for tumors on the posterior wall of the LA.>

Introduction

Malignant fibrous histiocytoma (MFH; undifferentiated pleomorphic sarcoma) was initially described by O'Brien and Stout in 1964 [1] and is currently regarded as the most common type of soft-tissue sarcoma in adults. MFH arises commonly in the extremities and trunk, and the likelihood of local recurrence and metastasis is high. In contrast, primary cardiac MFH is rare. In 2001, Okamoto et al. reported 1 case of cardiac MFH and reviewed the 46 previously described cases [2]. Total tumor resection is the only effective therapy for this presentation of MFH, and the prognosis is poor. We present herein a case of acute heart failure consequent to cardiac MFH and discuss the features of this tumor.

Case report

A 53-year-old woman was hospitalized because of increasing dyspnea; she additionally reported a continuous dry cough of 3 months' duration, with a history of cerebral hemorrhage 10 years earlier. On admission, her pulse rate was 100 regular beats/min

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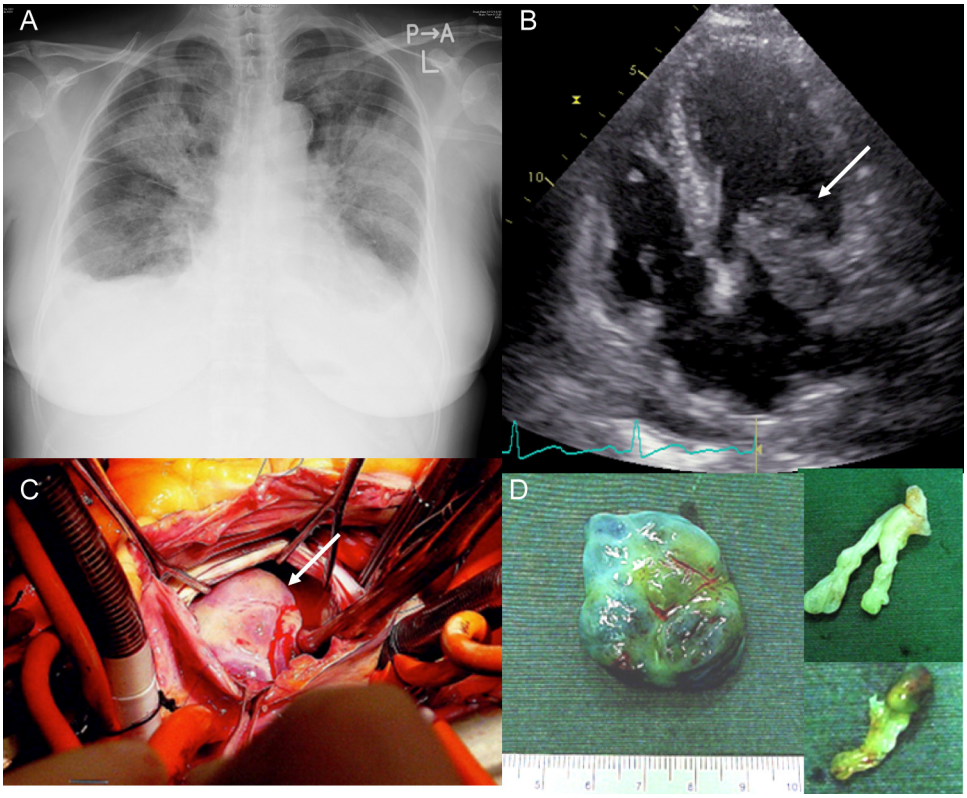

Fig. 1. (A) A chest radiograph showing pleural effusion and pulmonary edema. (B) A transthoracic echocardiogram showing a movable mass (28 mm × 26 mm) attached to the posterior wall (arrow). (C) The surgical view showing the movable mass during its excision from the wall of the left atrium (arrow). (D) Gross examination of the 3 resected tumors.

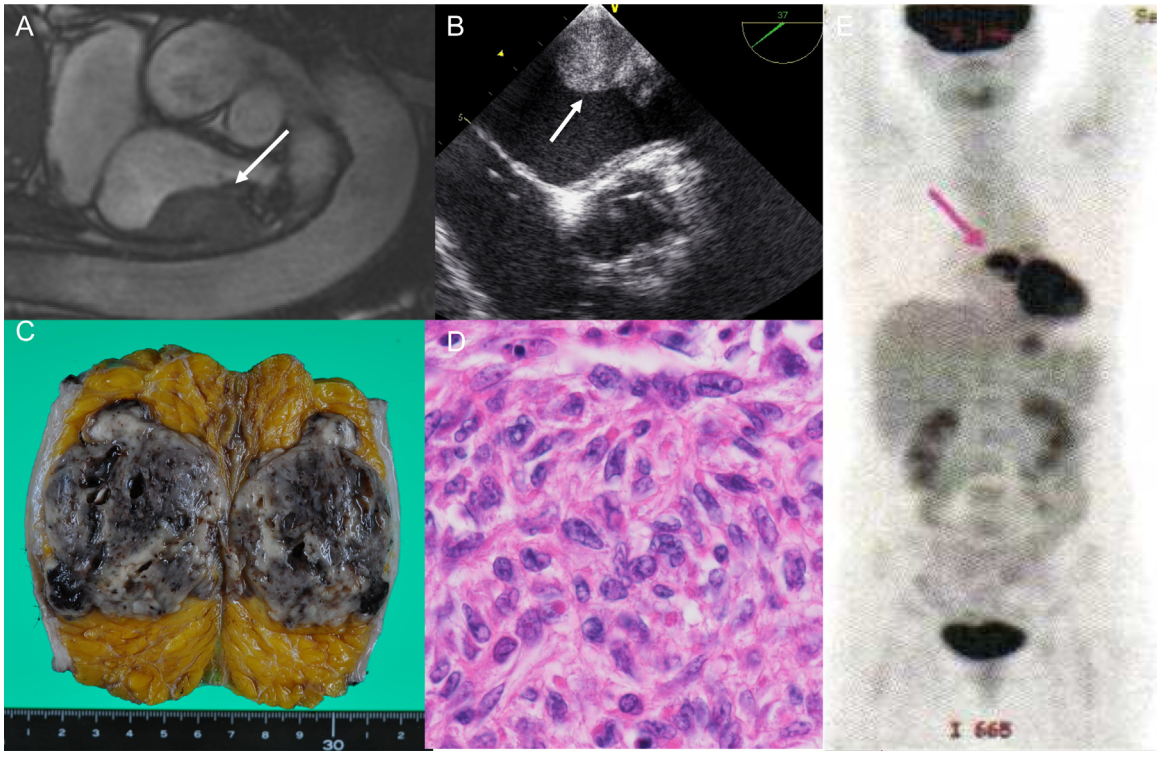

Fig. 2. (A) A cardiac magnetic resonance imaging scan showing a residual mass on the wall of the left atrium (LA) (arrow). (B) A transesophageal echocardiogram also showing the mass in the LA (arrow). (C) Gross cut surface of the subcutaneous abdominal tumor. (D) A photomicrograph of the abdominal tumor (hematoxylin–eosin staining), showing the sarcomatous pattern of immature spindle cells. (E) An 18F-fluorodeoxyglucose-positron emission tomography/computed tomography scan showing the mass in the LA (arrow), but no additional metastases are observed.