CASE REPORT

RIGHT VENTRICULAR MYXOMA IN AN ASYMPTOMATIC PATIENT

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Abstract

Myxomas are the most common cardiac tumors; however right ventricular myxomas are very rare. We present the case of an asymptomatic 74 year old female with a right ventricular myxoma originating from the interventricular septum diagnosed during a routine echocardiographic examination.

Initially the patient refused surgery due to being asymptomatic, but agreed to be operated two months later. Surgical removal was uneventful, as was the postoperative course.

Histopathological analysis confirmed the suspected diagnosis of cardiac myxoma.

Keywords: *Cardiac tumor, Myxoma.*

INTRODUCTION

Cardiac myxomas are the most common tumors of the heart, accounting for 75-80% of all cardiac tumors, and 90% of the patients are aged 30 – 60 years when diagnosed.[1] In more than 90% of cases myxomas are located in the left atrium, followed by right atrial and left ventricular locations.[2] Ventricular myxomas are rare and among those right ventricular (RV) myxomas are reported with an incidence of only 1,7 % of all cardiac myxomas.[3] Associated syndromes such as Carney's complex and family history should always be considered.[4] Symptoms can be related to embolism which occurs in 30-40% of all cases[5] or to right ventricular outflow tract (RVOT) obstruction and include syncope, dyspnea or peripheral edemas. Surgical resection is indicated and should not be delayed.

CASE REPORT

We present the case of an asymptomatic 74 year old female, when a 43 x 25 mm right ventricular, mobile mass originating from the interventricular septum and protruding through the pulmonary valve in systole was diagnosed during a first time performed routine echocardiography. The patient had neither family history for cardiac tumors nor any associated comorbidities. For further diagnostic purposes a magnetic resonance tomography was performed (Figure 1).

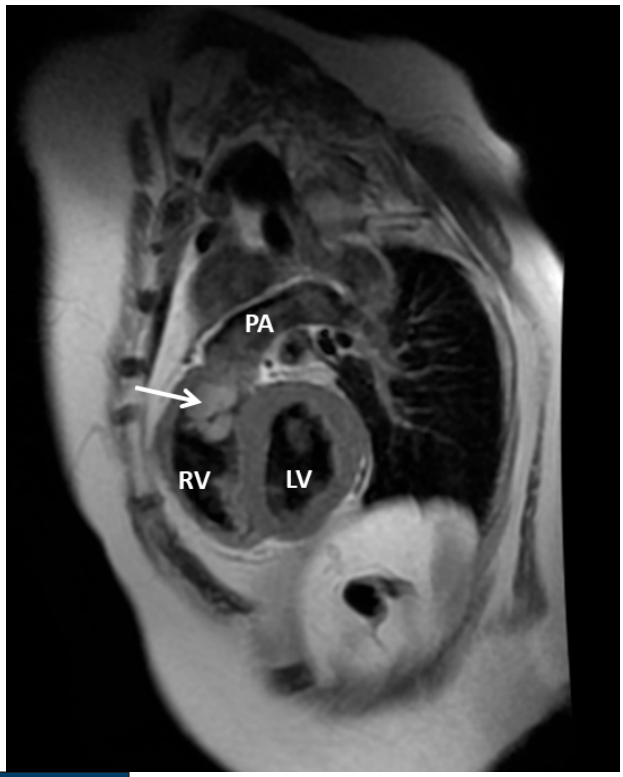

Figure 1 *Preoperative Magnetic Resonance Tomography showing a right ventricular (RV) mass (white arrow) protruding into the right ventricular outflow tract. PA = Pulmonary artery; LV = Left ventricle.*

The patient initially refused surgery due to her asymptomatic status, but two months later, after reconsidering during follow up consultation, she accepted surgical removal of the RV mass.

The routine preoperative laboratory analysis was normal, as was the coronary angiogram.

The surgical procedure was performed through a median sternotomy and cardiopulmonary bypass (CPB) with central aortic and bicaval cannulation. After aortic cross clamping and administration of antegrade cardioplegic blood solution, the RV was opened through a longitudinal ventriculotomy and the RVOT, interventricular septum and tricuspid valve were inspected (Figure 2 A). A mass was detected in the RVOT extending from the interventricular septum to the RVOT. A complete mass resection was performed using scissors and electrocautery (Figure 2 B). The right ventriculotomy was closed with a double prolene 4/0 suture. The postoperative course was uneventful and the pre discharge echocardiography was normal.

Histopathological analysis of the mass revealed a cardiac myxoma with cells positive for CD 31 and CD 34 (Figure 2 C).

The patient was discharged at postoperative day eight. During regular postoperative consultations the patient kept asymptomatic and the one year postoperative echocardiography showed no signs of tumor recurrence.

DISCUSSION

Right ventricular myxomas are uncommon benign cardiac tumors, which usually present with typical RVOT obstruction-related symptoms. In our case the patient was asymptomatic and the diagnosed right ventricular mass a coincidental find on a routine echocardiographic examination.

Due to the lack of symptoms the patient initially refused surgery. Previous publications have underlined that myxomas have a high documented embolization rate, which can lead to further complications when surgery is delayed.

Recurrence rate of RV myxomas is not well documented in the literature due to its rarity, but cardiac myxomas in general have an overall recurrence rate of less than 3%, but can be as high as 22% in familial cases.[5]

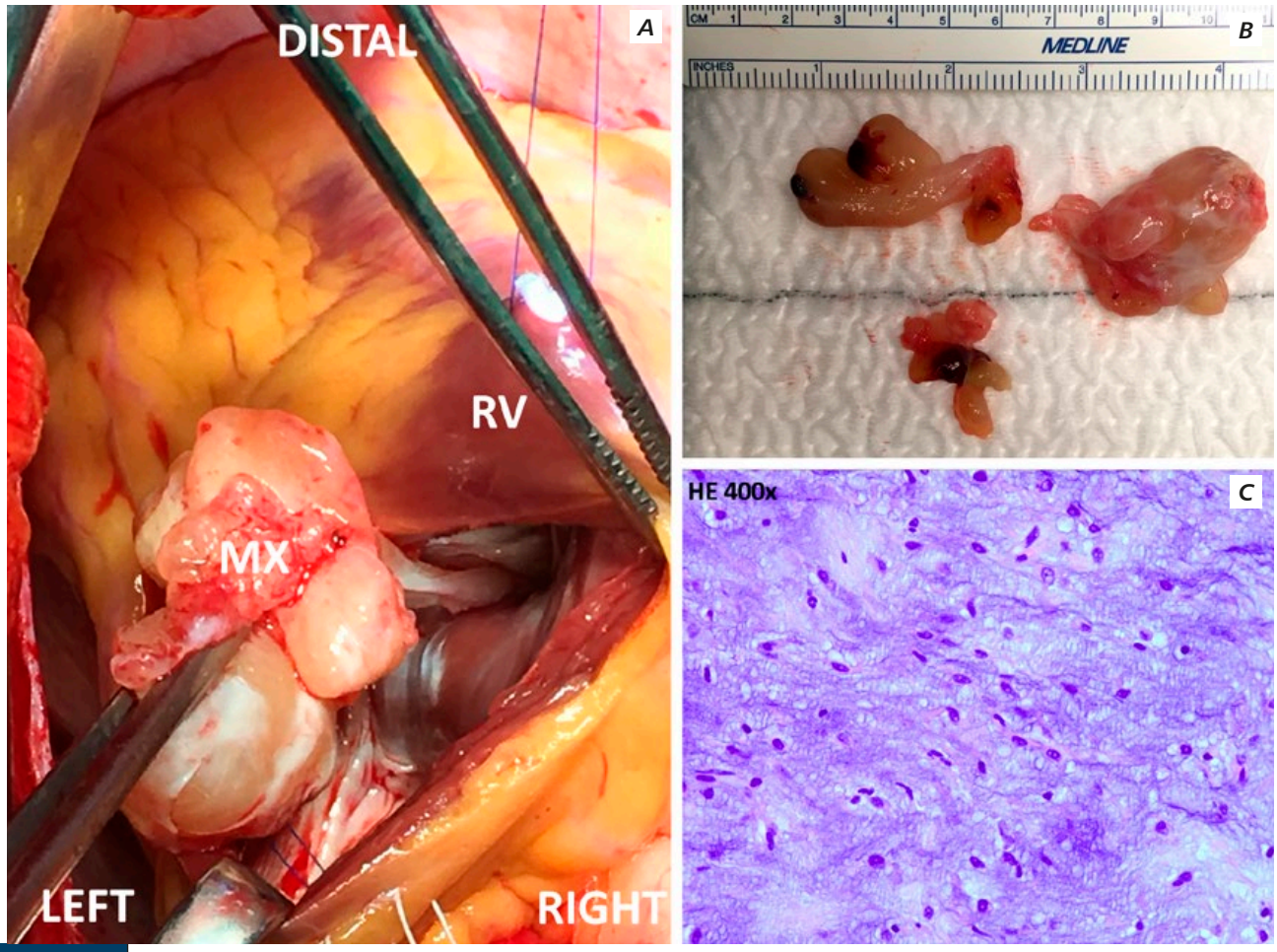

Figure 2 *A - Intraoperative image showing the opened Right ventricle (RV) with the mass formation (MX); B - Completely resected right ventricular mass; C - Hematoxylin and eosin stain study of the RV myxoma.*

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