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Multiple Cardiac Myxomas-Unusual Locations-Flowers in the Cardia

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Authors' contributions

This work was carried out in collaboration between all authors. Author PKA designed the study, wrote the protocol, and wrote the first draft of the manuscript. Author BB managed the literature searches. All authors read and approved the final manuscript.

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Case Study

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ABSTRACT

Myxomas represent the most frequent benign tumor in adult population. It accounts for 25% of all cardiac tumors. Multiple myxomas within the cardia at unusual sites is very rare. We report a 60 year old lady who presented with myxomas in left atrium, right atrium, and pulmonary artery. Myxomas in the pulmonary artery is a very rare entity.

Keywords: Cardiac tumors; myxomas; multiple masses.

1. INTRODUCTION

Cardiac tumors represent a relatively rare, yet challenging diagnosis. Secondary tumors are far more frequent than primary tumors. Multiple cardiac myxomas are very rare, occurring mostly in familial syndromes. Here, we describe a case of non familial multiple myxomas at unusual sites.

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2. CASE REPORT

A 60 year old lady presented with recent onset of fatigue and dyspnea on exertion NYHA class II for 2 months duration along with low grade intermittent fever and myalgia. She had no past history of diabetes, hypertension, coronary artery disease, hypothyroidism. Clinical cardiac examination was unremarkable except for a tumor plop which was audible at certain postures. Her electrocardiogram (ECG), chest xray was normal. 2D Echocardiogram showed multiple pedunculated masses in the right atrium attached to interatrial septum (Fig. 1) and flipping into inferior vena cava (IVC) (Fig. 2), left atrium (Fig. 1), pulmonary artery (Fig. 2). She underwent surgery successfully. Gross specimen revealed a sessile pedunculated mass without calcification (Fig. 3) and histopathological evidence of masses from LA,RA and pulmonary artery suggested satellite myxoma cells (Fig. 4), inflammatory cells, suggestive of myxoma. This case is presented because of the very unusual sites of occurance of cardiac myxomas. Other close differential diagnosis of such masses include cardiac tuberculosis, secondary metastasis, thrombus.

3. DISCUSSION

Myxoma is the most common intracardiac tumor. It accounts for 25% of all cardiac tumors and it affects mostly women of age groups 30 to 60 years.75% of myxomas are located in the left atrium (arising from the fossa ovalis of the interatrial septum), 20% in the right atrium and the remaining 5% in the ventricles [1,2]. Myxomas usually have a narrow base of attachment (pedicle) to the cardiac wall and their composition is heterogeneous, consisting of areas with hemorrhage, necrosis, cyst formation, fibrosis, and calcification. Rarely myxomas could be found in the aorta, pulmonary artery, ventricles, vena cava, or even other organs [3]. Multiple intracardiac myxomas account for less than 5% and the biatrial myxomas is fewer than 2.5% [4]. Transthoracic echocardiography (TTE) can depict the shape, the size, the extent, and the mobility of the tumor, as well as its location. Contrast echocardiography helps in the differential diagnosis between tumor and thrombus by examining tissue perfusion [5]. In contrast to thrombi, malignant tumors or tumors rich in vascularity, in general, appear with an intense enhancement of the echocardiographic image when contrast medium is administered. Benign cardiac tumors exhibit sparse vascularity, and echocardiographic signals appear sometimes even lower to that of proximal myocardium. Therefore, because of their sparse vascularity, the differential diagnosis between myxomas and thrombi, with the use of contrast echocardiography may be difficult.

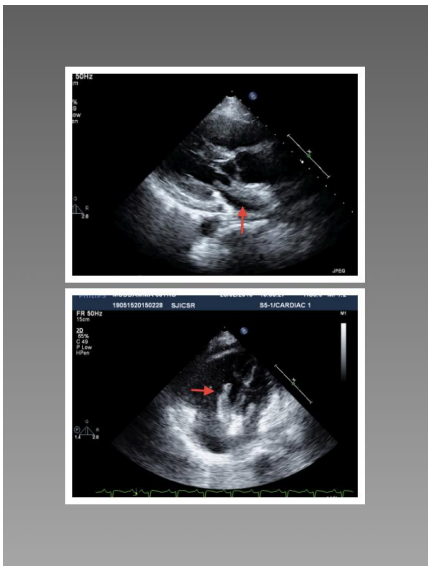

Fig. 1. Apical 4 chamber view showing a sessile mass attached to interatrial septum on RA and LA side; parasternal long axis (plax) view showing LA myxoma protruding into LV cavity

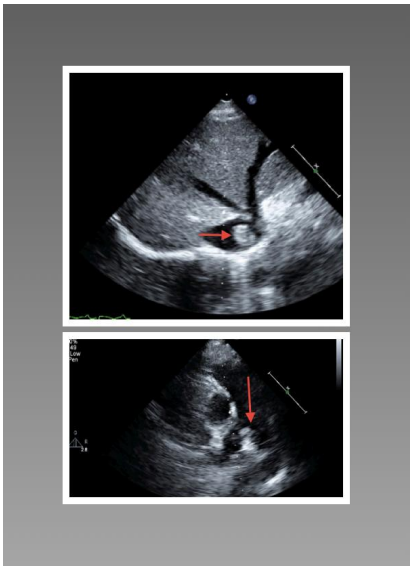

Fig. 2. Subcostal view showing RA myxoma flipping into inferior vena cava&myxoma in the pulmonary artery bifurcation

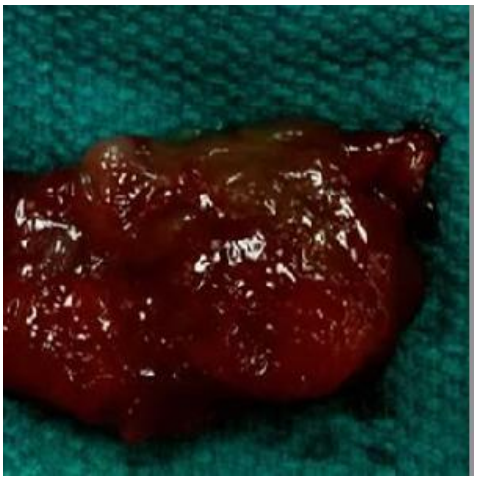

Fig. 3. Gross specimen of myxoma from LA

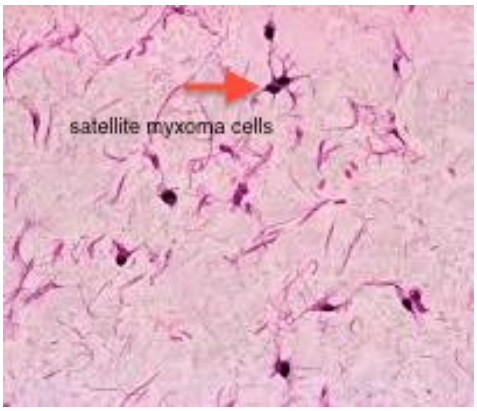

Fig. 4. Histopathology showing satellite myxoma cells

The systemic symptoms and laboratory findings may resemble those of vasculitis and connective tissue diseases and may mislead from the correct diagnosis. Fever may be present, as well as fatigue, arthralgia, rash, and raynaud phenomenon. Cardiac tumors may be the cause of pulmonary embolism or peripheral embolism due to the embolism of tumor cells. Tumour recurrence is higher in younger patients, in familial forms of myxomaand in multilocular myxomas.

4. CONCLUSION

Cardiac myxomas, although usually solitary, can occur at multiple sites. Unusual sites of occurance like pulmonary artery [6-10] should also be kept in mind, like in our case, since it carries prognostic importance. With complete resection the recurrence rate is less than 5%, except in familial myxomas. Patients should be followed up with serial echocardiography for recurrence.

CONSENT

All authors declare that 'written informed consent was obtained from the patient for publication of this case report and accompanying images.

ETHICAL APPROVAL

It is not applicable.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Vale MDP, Sobrinho AF, Sales MV, Teixeira MM, Cabral KC. Giant myxoma in the left atrium: Case report. Rev Bras Cir Cardiovasc. 2008;23(2):276–278.
2. Diaz A, Di Salvo C, Lawrence D, Hayward M. Left atrial and right ventricular myxoma: an uncommon presentation of a rare tumour. Interact Cardiovasc Thorac Surg. 2011;12(4):622–623.
3. Croti UA, Braile DM, Souza AS, Cury PM. Right ventricle and tricuspid valve myxoma. Rev Bras Cir Cardiovasc. 2008; 23(1):142–144.
4. JPeachell L, Mullen JC, Bentley MJ, Taylor DA. Biatrialmyxoma: A rare cardiac tumor. Ann Cardiothorac Surg. 1998;65(6):1768–1769.
5. Mulvagh SL, Rakowski H, Vannan MA, et al. American society of echocardiography consensus statement on the clinical applications of ultrasonic contrast agents in echocardiography. J Am Soc Echocardiogr. 2008;21(11):1179–1201.
6. Turkan Tansel MD, Helin El MD, Emre Gok MD. Primary Myxoma of the Pulmonary Artery. J Card Surg. 2011;26(3):286-7.
7. Xiao-Li Mai, Hai-Jian Fan, Bao-Xin Li, Bin Zhu. Primary pulmonary artery myxoma: A rare case. Clinimag. 2013;37(1):159–162.

8. Huang SC, Lee ML, Chen SJ, Wu MZ, Chang CI. Pulmonary artery myxoma as a rare cause of dyspnea for a young female patient. J Thorac Cardiovasc Surg. 2006;131(5):1179-80.
9. Koichi Sughimoto, Akira Shiikawa, Akihiko Ohkado, Miwa Nanaumi. Multiple cardiac myxomas with pulmonary arterial obstruction and acute right heart failure. The Japanese Journal of Thoracic and Cardiovascular Surgery. 2004;52(11):530-3.
10. Ioannis A Paraskevaidis, Konstantinos Triantafilou, Dimitrios Karatzas, Dimitrios Th Kremastinos. Right ventricular multiple myxomas obstructing right ventricular outflow tract. Journal of Thoracic and Cardiovascular Surgery. 2003;126(3):913-4.

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