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Original Research

A study on cardiac myxoma

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ABSTRACT:
Cardiac myxomas are quiet rare tumors that come knocking on the doors of Pathology Department for a histopathological report from the Department of Cardiothoracic surgery. It has a very low incidence and in literature it is found that around one in two million people anually are affected by this pathology. It is a benign variety but is known to cause serious illness because of secondary thrombo-embolic events. This study was done to find the most common clinical and histopathological findings.
Keywords: Cardiac, Myxoma, tumors, benign, neoplasm.

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INTRODUCTION

Cardiac myxomas are quiet rare but now and then cases are known to knock the doors of Pathology Department for a histopathological report from the Department of Cardiothoracic surgery. It has a very low incidence and in literature it is found that around one in two million people anually are affected by this pathology. It is a benign variety but is known to cause serious illness because of secondary thrombo-embolic events.

It is the the most common primary cardiac tumour, with an estimated incidence of 1 per two million individuals annually. [1] It has been more reported in the third to sixth decade with female predominance [2] Clinically, myxomas may present with a variety of symptoms such as obstructive cardiac, embolic and constitutional. [3] Dyspnoea, thoracic pain, cough, dizziness and heart failure are the usual obstructive cardiac signs and this is due to tumour prolapse into the mitral orifice. [3] Peripheral or pulmonary emboli or stroke are the embolic manifestations. [4] Arthralgia, myalgia, fever, rash, weight loss, cachexia, fatigue, Reynaud's phenomenon are the constitutional symptoms and they are related to the production of IL-6 by tumor cells. [3, 5]. This study was done to find the most common clinical and histopathological features.

AIMS AND OBJECTIVES

To study the clinical and histopathological aspects of cardiac myxomas.

MATERIALS AND METHODS

This study was done in department of Pathology in a tertiary care institute and retrospectively data was collected from October 2016 to April 2019 from the departmental archives and medical records department after obtaining the institutional ethical committee clearance. All cases with history of intracardiac mass was included in the study and all 3 were biopsy confirmed cases of cardiac myxoma. The findings from transthoracic echocardiography was noted. The signs and the symptoms in all 3 histopathologicaly confirmed cases were noted.

RESULTS

The specimen was lobulated in all the three cases. Largest measured 3.3x2.5cms in size. Microscopically, the specimen in all the three was covered by endothelium and was very rich in mucoid matrix along with scattered round and polygonal cells with irregular nuclei. Refer to Fig a.

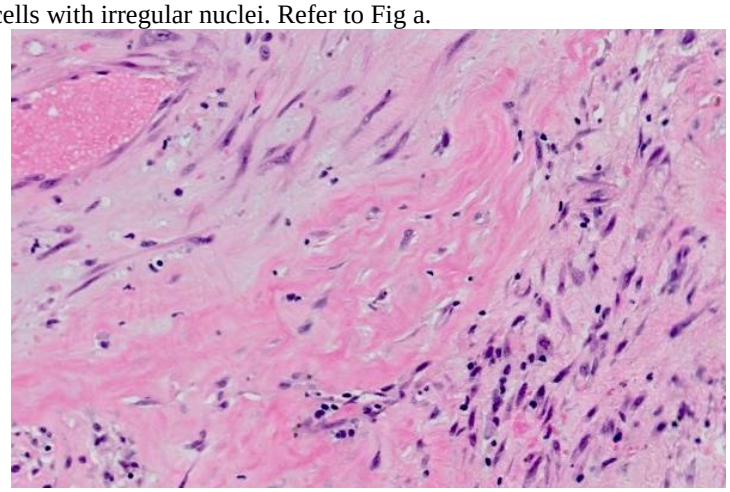

Figure a- High power view of cadiac myxoma, H&E stain.

Table 1: Age Distribution

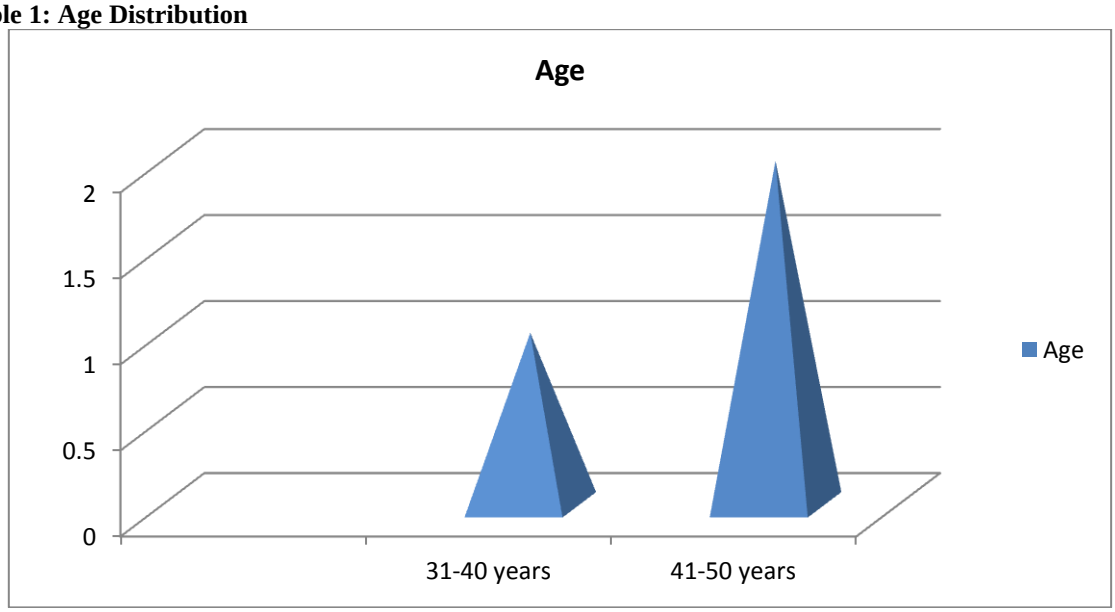

Table 2: Sex Distribution

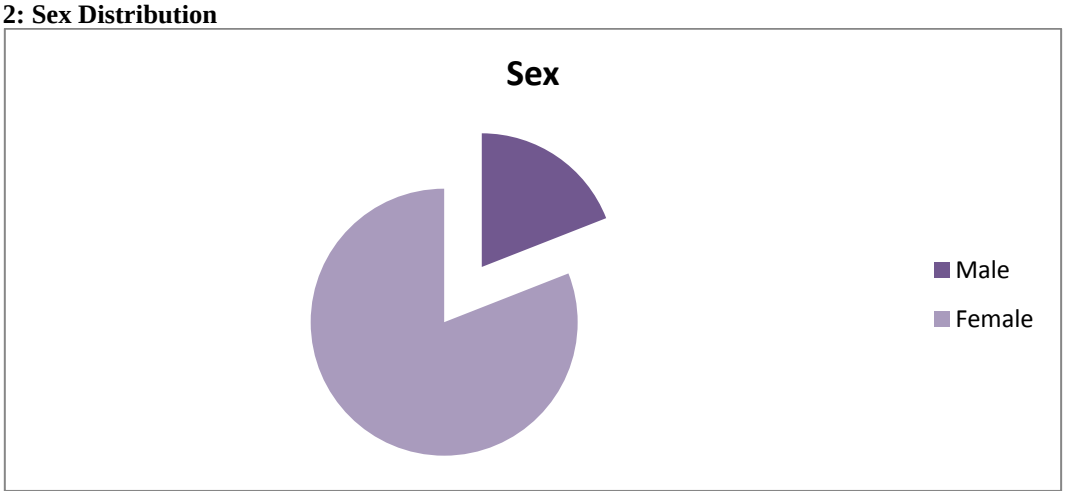

Table 3: Signs and symptoms

Patient signs and symptoms	No of Patients
Dyspnoea on Exertion	02
Palpitations with or without Dyspnoea on Exertion / Syncope / CV Accidents	01
History of Dizziness / Syncope	01
CV Accidents	01

Table 4: Location

Right Atrium	01
Left Atrium	02

DISCUSSION

Over 72% of primary cardiac tumours are benign and myxomas account for 80% of all cardiac tumours. [6] Myxomas are composed of cells, primitive capillaries, and foci of extramedullary haematopoiesis within a myxoid matrix of acid mucopolysaccharide. They are considered to arise from multipotential mesenchymal cells capable of differentiating into various types of cells, a view supported by the finding of bone and bone marrow tissue in myxomas. [7] Although therapy as well as the antemortem diagnosis of this pathological entity seems to be very successful, the underlying cause still remains unclear. The interleukin-6 and endothelial growth factor have been identified as markers of these tumours. [8, 9]. About 10% of cardiac myxoma is familial and almost all are related to the Swiss-Carney syndrome. This is a multiple neoplasia and lentiginosis syndrome. The sporadic tumours that represent the majority of this pathology and thee tumour lack a clearly defined pathological cause. [10] Myxoma occur in older adults and are two to three times more common in women than in men.[11] They are rare in children and have not yet been described in infants. [12]

CONCLUSION

The most common type of cardiac tumor was found to be cardiac myxomas. The endothelium covering with mucoid stroma is the pathognomic histopathological feature of the cardiac myxomas.

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