

Left atrial myxoma: A rare case report

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ABSTRACT

Primary cardiac tumors are rare and myxomas of heart alone account for 80% of benign tumors. Extensive sampling of specimen is important not only to study diverse histologic feature of myxoma cells but also to rule out primary malignant tumor with myxomatous differentiation. Resected margin was free from tumor in the present case, thus reducing the chances of recurrence.

Keywords

Myxoma, histology, heart, tumors

INTRODUCTION

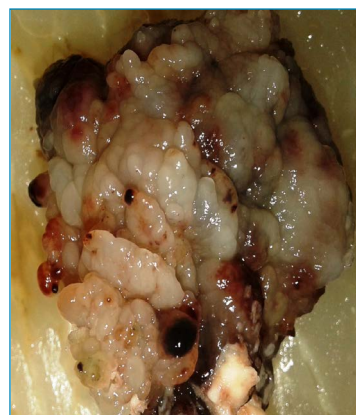
Primary cardiac tumors are rare not only in India but all over the world, with incidence ranging from 0.0017% to 0.33% at autopsy.¹ Myxomas are the most common benign tumors of heart accounting for almost 80% of cases. Most common site of occurrence being left atrium, followed by right atrium and ventricles.²⁻⁴ Myxomas account for 50% of benign cardiac tumors in adults.⁵ Myxomas occurring at sites other than left atrium are frequently associated with Myxoma syndromes and are known for recurrence.⁶ With the advent of non-invasive procedures like echocardiography and MRI,

eventhough clinical diagnosis is made, histopathological diagnosis of excised mass or biopsy remains as gold standard for confirmation. We present this case not only for rarity of lesion, but also to emphasise the diversity in morphology of myxoma cells.

CASE REPORT

We received the resected specimen of a 55 year female with clinical diagnosis of left atrial myxoma to the department of Pathology. Grossly, lesion was a globular mass with papillary surface ms 5.5×3.5×2 cms with a broad base and a short pedicle. Main bulk of tumor

Figure 1(a): shows globular gelatinous mass with papillary surface. **1(b):** shows cut surface of tumor with dark brown hemorrhagic areas



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was soft and friable, while it was firm and pale white in colour at the base (Figure 1a). Cut section of mass was predominantly dark, hemorrhagic admixed with gelatinous mucoid area (Figure 1b). Microscopy showed papillary structures consisting of dispersed cellular component in a myxomatous matrix (Figures 2a). Predominantly myxoma cells were dispersed singly and in small clusters. At places, arranged in layers around the capillaries lined by endothelial cells (Figure 2b). Myxoma cells vary in appearance from elongated, fusiform with pale eosinophilic cytoplasm to stellate shaped, at places myxoma cells are round to polygonal with a myxomatous halo around (Figure 3a). Hemorrhagic areas with thin and thick walled blood vessels present. Foci of fibrinoid necrosis seen and fibromuscular tissue is predominant at the base of lesion (Figure 3b). Through and through sections revealed that resected margins were free of tumor.

Figure 2(a): Scanner view, H&E shows papillary architecture.

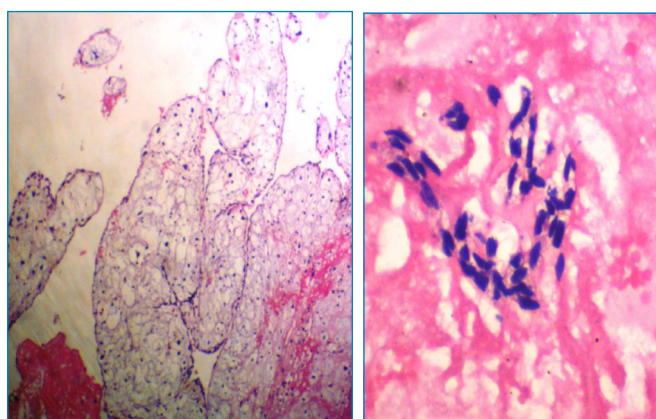
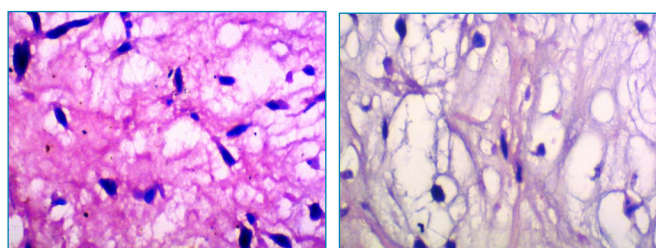


Figure 2(b): High power shows layer of cells around capillaries



DISCUSSION

Cardiac tumor diagnosis including myxomas were considered to be based on autopsy findings in the past. But from 1950 onwards, with the advent of cardiac catheterization and angiography there has been significant increase in the clinical diagnosis of these tumors.⁷ According to Western literature most common benign primary cardiac tumors in pediatric

Figure 3(a): High power view, H&E shows elongated, fusiform cells with scanty eosinophilic cytoplasm in myxoid background

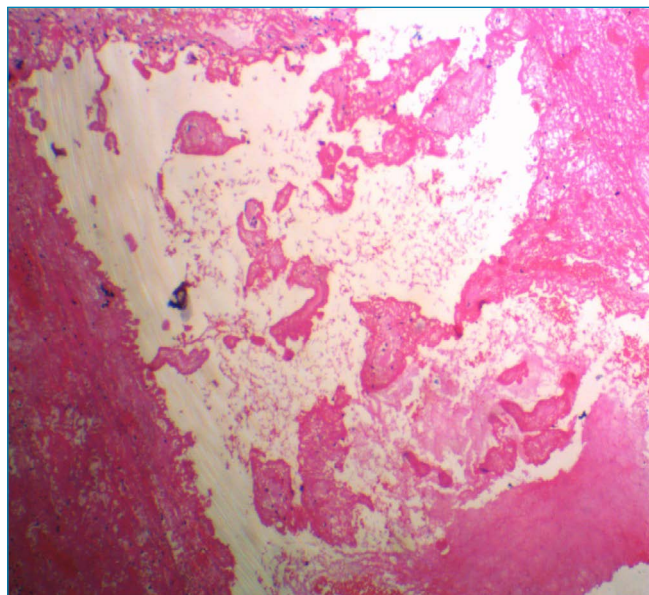
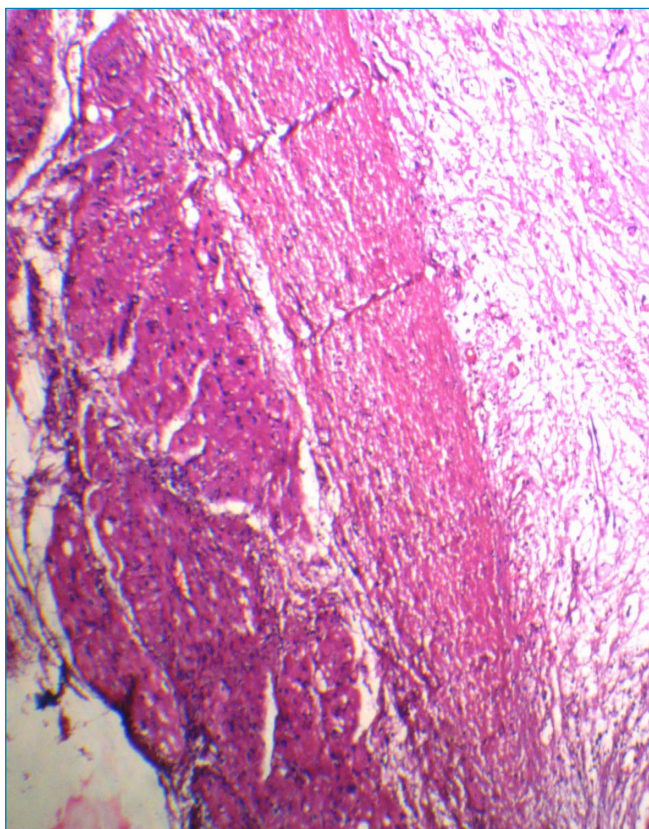


Figure 3(b): Low power, H&E shows thick fibrous wall at the base of the lesion



population are rhabdomyomas. But in contrast a study done at AIIMS, New Delhi revealed myxomas were common in Indian pediatric population.⁸ But most of these studies have focussed on the clinical presentation,

various pre-operative diagnostic methods and treatment aspects. There was only one study that highlighted the morphologic features and revealed that morphologic features do not correlate with clinical presentation.⁹ Grossly myxomas can be solid or papillary type. According to Wang et al., most of the myxomas had a broad base with pedicle and external surface showed multiple papillary finger like projections as in our case. Microscopically myxomas can be classified based on the predominant cell type into single cell predominant, cell cord predominant and vasoformative ring subtypes. In our case we had a mixture of single cell and cell cord pattern. Most of the papillary myxomas had single cell predominant pattern in the study done by Wang et al. and our case also showed similar features. Myxomas are known to recur and it has been correlated with young age, family history, intra operative implantation, multicentric growth and inadequate resection.^{10,11} Through and through sections showed clearance of the surgical margins in our case. Due to the wide diversity in the morphology of myxoma cells within same tumor, it is important to take sections from multiple areas to get overall impression of histopathological features, in order to arrive at correct diagnosis. Only differential being primary malignant tumor with myxomatous features, it is important to rule out malignancy. Mitosis was rare in the present case. The origin of myxoma cell is controversial. However, immunohistochemical studies showed diffuse positive expression for Vimentin and focal expression for CD34, CD68 and SMA, thereby supporting the hypothesis that myxoma originated from multipotential mesenchymal cells.⁹ Mucous glands when present represent rests of entrapped embryonic foregut.

CONCLUSION

In spite of the fact that histopathological classification of cardiac myxomas is not significant for clinical practice, it is important to study them in detail not only to rule out chances of recurrence due to residual cells but also to rule out malignancy which can be easily mistaken due to wide diversity in the morphology of myxoma cells.

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FDA approves novel preventive treatment for migraine

US FDA approved Aimovig (erenumab-aooe) for the preventive treatment of migraine in adults. The treatment is given by once-monthly self-injections. It works by blocking the activity of calcitonin gene-related peptide, a molecule that is involved in migraine attacks. The effectiveness of Aimovig for the preventive treatment of migraine was evaluated in three clinical trials. The first study included 955 participants with a history of episodic migraine and compared Aimovig to placebo. Over the course of six months, Aimovig-treated patients experienced, on average, one to two fewer monthly migraine days than those on placebo. The second study included 577 patients with a history of episodic migraine and compared Aimovig to placebo. Over the course of three months, Aimovig-treated patients experienced, on average, one fewer migraine day per month than those on placebo. The third study evaluated 667 patients with a history of chronic migraine and compared Aimovig to placebo. In that study, over the course of three months, patients treated with Aimovig experienced, on average, 2 ½ fewer monthly migraine days than those receiving placebo. The most common side effects that patients in the clinical trials reported were injection site reactions and constipation.

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