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Research Article

CALCIFYING GIANT CELL TUMOR OF TENDON SHEATH MIMICKING AS EPIDERMOID CYST

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Abstract :

Giant cell tumor of tendon sheath usually occurs as a discrete nodule on tendon sheath. However, sometimes variable morbid anatomical changes supervene the primary lesion and destine it to mimic an epidermoid cyst. This study was taken up to work-up the lesion comprehensively. A 51 year old woman presented with a painless, firm to hard, slow growing swelling below the right toe. FNA revealed scattered anucleate squames and occasional multinucleate histiocytic giant cells in a mucinous background. Classical histopathological assessment exhibited large nodular areas comprised of poorly distinct polyhedral synoviocytes cells in nests alongwith heavy calcification & occasional pigmentation. Intervening areas were sclerotic & showed multinucleated giant cells, proliferating fibroblasts & vascular channels.

Keywords: Giant Cell Tumor, calcification

INTRODUCTION

Giant cell tumor of tendon sheath usually occurs as a discrete nodule on tendon sheath arising in the twenties to forties and affects both sexes equally. It is localized and well circumscribed and resembles a small walnut. The tumor cells are polyhedral, moderately sized and resemble synoviocytes. The cells grow in a solid nodular aggregate that may be attached to the synovium by a pedicle. Other frequent findings include hemosiderin deposits, foamy macrophages, multinucleated giant cells and zones of sclerosis. However, sometimes deviating pathogenetic changes may supervene the primary lesion and lead it to mimic epidermoid cyst.

AIM

To meticulously evaluate the lesion with histopathological examination.

MATERIAL AND METHOD

A 51 year old woman presented with a painless, firm to hard, slow growing swelling below the right toe. Fine Needle Aspiration was performed ustilising 23 gauge needle. Microscopy of smears showed scattered anucleate squames and multinucleate histiocytic giant cells in a mucinous background. There was no evidence of any active inflammation.

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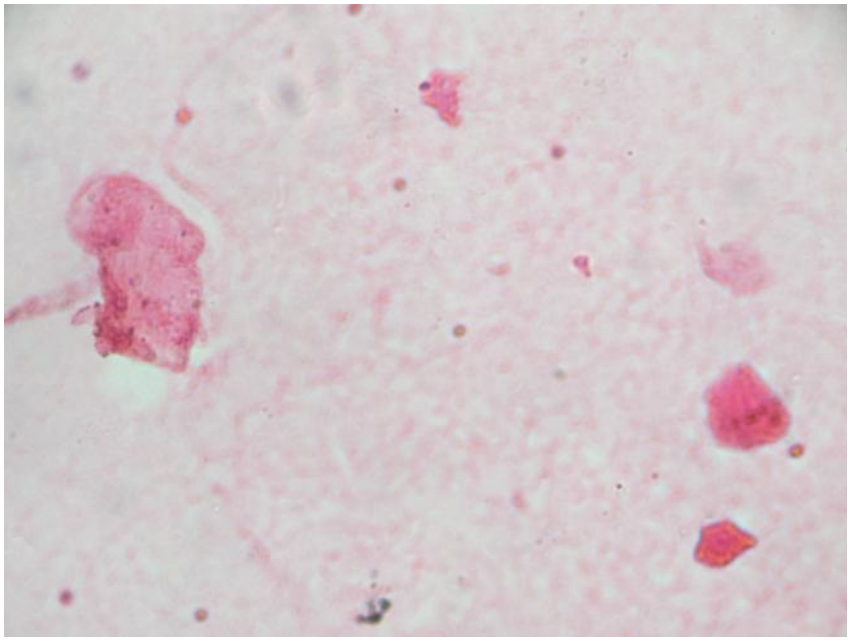

10x. Anucleate squames alongwith multinucleate giant cell (right).

Subsequently, surgical excision was performed. Gross examination of specimen showed a lobular whitish, firm mass measuring 2.5*2*1cm. Cut surface was solid, gray white and shiny. Represtative tissue bits were fixed in 10% formalin solution, processed through graded alcohols, cleared in xylene and embedded in paraffin wax. Later, thin sections were cut by rotary microtome, stained with hematoxylin and eosin and examined under progressive powers of light microscope.

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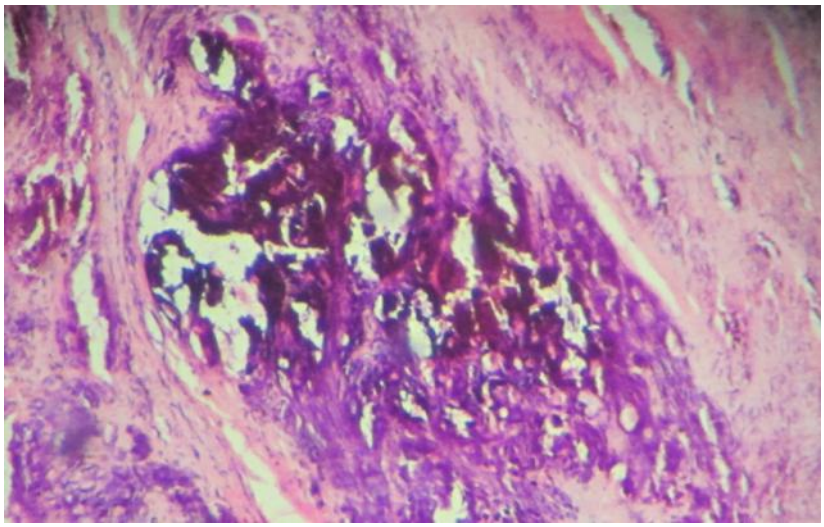
Gross. Lobular white firm mass ms.2.5*2*1 cm.

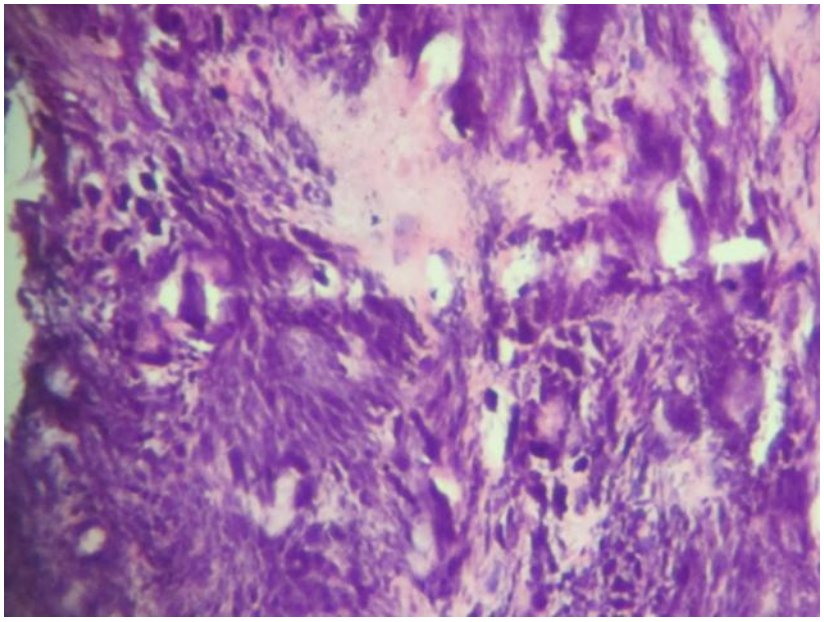
Cut surface. Solid gray white and shiny.

Microscopic Examinaton

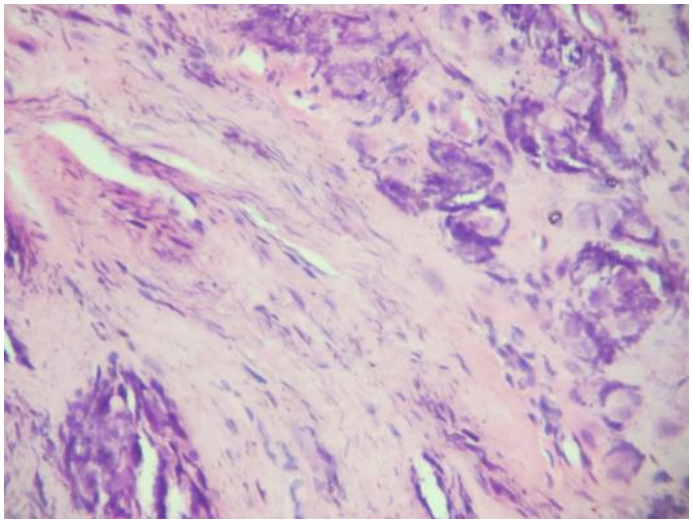
Multiple sections studied revealed large nodular areas comprised of poorly distinct polyhedral synoviocytes cells in nests alongwith heavy calcification & occasional pigmentation. Intervening areas were sclerotic & showed multinucleated giant cells, proliferating fibroblasts & vascular channels. Peripheral area showed encapsulation.



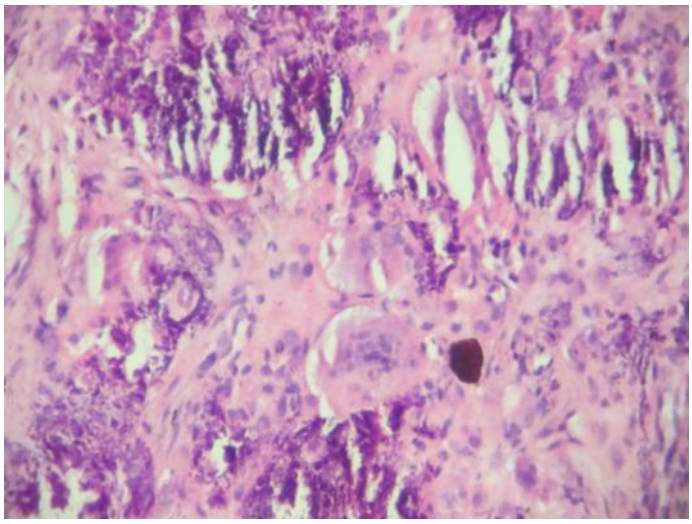
10x. Nodular area of polyhedral cells with heavy calcification.



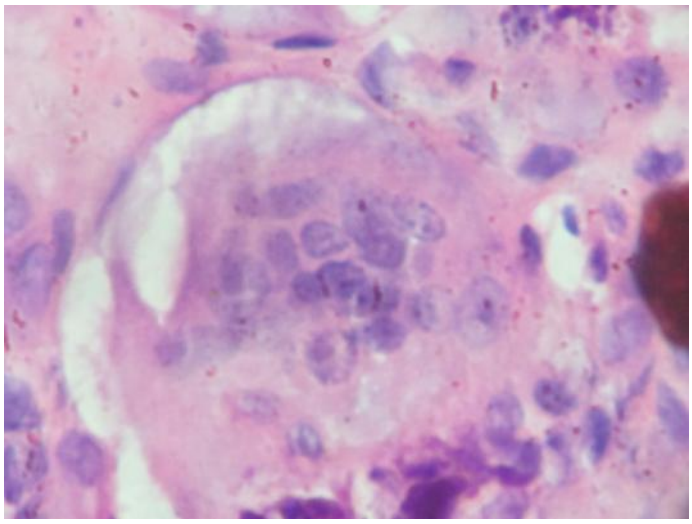
40x. Nodule showing calcifying synoviocytes.



10x. Intervening sclerotic area and vascular channels.



10x. Multinucleate giant cells in the intervening area.



40x. Close up view of multinucleate giant cell.

DISCUSSION

This Giant Cell Tumor of tendon sheath arouse below the right toe and was probably subjected to extensive pressure and friction leading to secondary calcification. Overlying soft tissue and skin were cystically degenerated and accumulated anucleate squames, mucinous material and histiocytic multinucleate giant cells. This resulted in the false interpretation of the tumor as epidermoid cyst on Fine Needle Aspiration Cytology wherein the needle tip explored the superficial area of the lesion and did not enter the firm, central calcified area.

CONCLUSION

Giant Cell Tumor arising below toe may be heavily calcified, lead to epidermoid cyst formation and misinterpretation in the Fine Needle Aspiration Cytology. Hence, a thorough and meticulous evaluation of the tumor by gross and histopathological examination is utmost essential for a comprehensive diagnosis.

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