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Case Report

Giant Cell Fibroma of Palate- A Case Report

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ABSTRACT
Giant cell fibroma a variant of oral fibroma, is a rare reactive fibrous connective tissue tumour of the oral cavity. Different forms of fibrous hyperplasia share a similar clinical features, age, site and gender predilection. With a distinctive histopathological feature giant cell fibroma can be distinguished from other fibrous tumour. Here, a case report of 34year old male patient with giant cell fibroma is reported and an update of clinical and histopathological features of the tumour is discussed.
Key words: Giant cell fibroma, fibrous tumour, histopathology.

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INTRODUCTION:

Giant cell fibroma a reactive fibrous lesion of oral cavity was first described by Weathers and Callihan in 1974. [1,2,4,5,6] Different forms of fibrous hyperplasias shares an overlapping clinical findings and a distinct histopathological features. The term giant cell fibroma was given due to the presence of large stellate shaped mononuclear or multinucleated giant cells. [3,4]

Most of the fibrous connective tissue tumours results from chronic injury or irritation. Giant cell fibroma was hypothesised to arise from virus induced, but it was believed to arise as a stimulus, source of which cannot always be determined. [5,6,7] It may be sessile or pedunculated commonly occurring in mandibular gingiva, tongue and palate, commonly seen in first three decades of life. Lesion is painless and often presents itself as lobules or nodules, measuring 1or 2 cm in diameter. [2,4,6,7] Microscopically, numerous stellate shaped fibroblastswith delicate dendritic process with one or multiple nuclei. The stroma consists of loosely arranged fibro vascular connective tissue with numerous spindle shaped fibroblasts. [1,3,4,5,7,8]

CASE REPORT

A 34 years male patient visited the clinic with chief complaint of growth in the upper right back tooth region for past 3 months. No previous medical history was reported. The growth slowly progressed and reached the current size. On intraoral examination a solitary firm nodule of 2×2cm in the palatal aspect of 25,26 regions (FIG.1). The overlying mucosa appears normal. Based on this a provisional diagnosis of fibroma was given. The patient was advised for routine blood investigation and excisional biopsy of the lesion. The haematological findings are in normal limits. Excisional biopsy was performed after obtaining the informed consent from the patient. Histopathological examination of H&E stained section reveals the overlying hyperparakeratotic stratified squamous epithelium with thin and elongated rete ridges. The underlying fibrovascular connective tissue stroma shows numerous fibroblast along with numerous extravasated red blood cells. The fibroblast is stellate shaped exhibiting dendritic process with one or multiple nuclei. Few cells exhibit binucleation. Based on the above features a final diagnosis of giant cell fibroma was made. (FIG 2 &3)

FIG 1: SOLITARY NODULE IN PALATAL REGION

FIG 2: Histopathological examination reveals hyperparakeratotic stratified squamous epithelium with thin and elongated rete ridges. Connective tissue stroma is fibrovascular

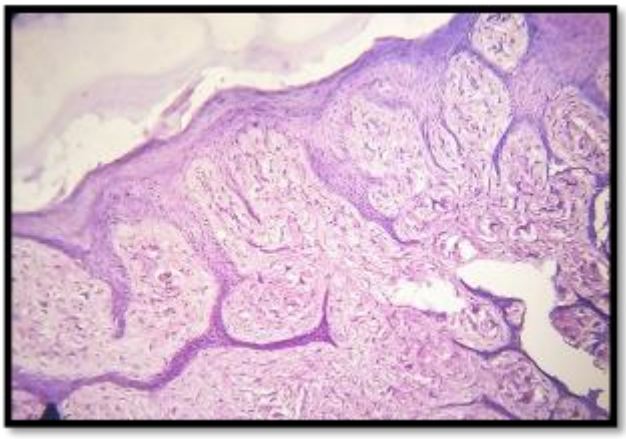
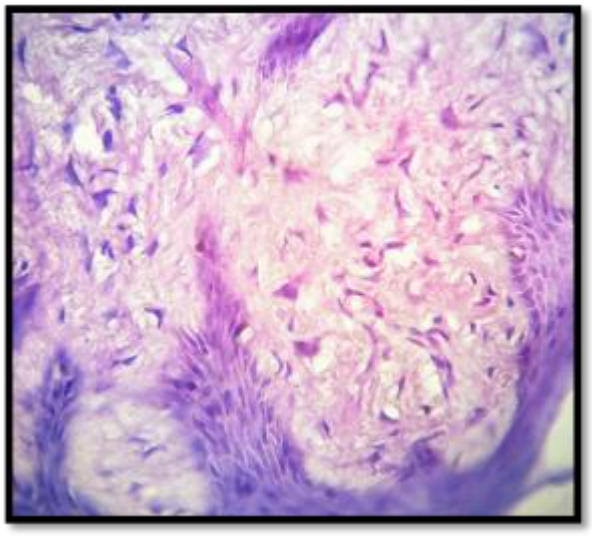


FIG 3: Stellate shaped fibroblast exhibiting dendritic process with one or more nuclei



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DISCUSSION:

Giant cell fibroma is a distinct entity difficult to differentiate from most of the fibrous lesions based on clinical behaviour and epidemiology. Giant cell fibroma represents 2-5% of all fibrous lesions. [10] The aetiology of giant cell fibroma is not associated with chronic irritation and the source still remains unclear. [6,7,] The lesion clinically manifests as sessile or pedunculated measuring 1-2 cm with pebbly surface. It is common among Caucasians and shows slight female preponderance. [6,11,12] The common location includes gingiva followed by tongue, buccal mucosa and palate. The colour of the mucosa is normal unless traumatized by mastication or any oral hygiene procedures. [3,11]

Histological feature of giant cell fibroma is a consistant diagnostic feature of the lesion. The microscopic findings reveal multiple large stellate shaped with one or more nuclei in loosely arranged fibrovascular connective tissue stroma. These pathognomonic cells are never hyperchromatic, as they would be if they were truly dysplastic fibroblasts, and they often have a smudged appearance. [7]

Clinical differential diagnosis based on age, location, etiology and gender predilection includes irritational fibroma, pyogenic granuloma, neurofibroma, papilloma and ossifying fibroma.[5,13]Histologically giant cell fibromas differs significantly by the presence of small bipolar, stellate shaped fibroblast with mononuclear or multinuclear giant cells. Occasionally the fibroblasts are large and more angular. Inflammatory infiltrate is usually absent. [3,7,11,14]

Several immunohistochemical studies revealed positivity of vimentin and prolyl-4-hydrolase suggested that stellate and multinucleate cells in giant cell fibroma has fibroblast phenotype.[3,10,11,13,15] Similar clinical features and histopathological findings present in our case. Based on the location in our case, palate is the least common site for giant cell fibroma.

CONCLUSION:

Giant cell fibroma is rare fibrous tumour occurring in oral cavity, usually less than 1cm and commonly occurring in gingiva. It can also occur in other sites of oral cavity. Hence accurate diagnosis of the lesion is achieved by its unique histopathological findings.

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