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Research Paper

Giant Cell Fibroma- A Case Report

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ABSTRACT:
Giant cell fibroma is an distinctive fibrous lesion of the oral mucosa affecting commonly young adults, it is uncommon in pediatric age group. Here we are presenting a case report of 13 year old male patient reported with the painless growth in the palatal aspect in relation to 11 and 21 with a clinical behaviour similar to that of the pyogenic granuloma. By considering its size an excisional biopsy was done and sent for the histopathological examination.

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I. INTRODUCTION:

Giant cell fibroma is a benign lesion of the fibrous connective tissue origin. This lesion was first described in 1974 by Weathers and Calliham[1]. Clinically Giant cell fibroma appears as asymptomatic, pedunculated or sessile nodule which measures approximately less than 1 cm in size. The giant cell fibromas represents about 2-5% of all the fibrous lesions and 0.4-1% of total biopsies submitted. Common site of occurrence of giant cell fibromas are the gingiva, followed by tongue and buccal mucosa. Mandibular gingiva is most commonly affected than the maxillary gingiva. The unique histological features of the giant cell fibroma is the presence of the large spindle-shaped or stellate shaped mononuclear or multinucleated fibroblasts within the fibrous connective tissue stroma. Commonly seen in the young individuals in the second and third decades of life with female predominance, it is rarely seen in the children. [2,3]. The present report is intended to present a case of Giant cell fibroma in a 13 year old male which is same in their age group.

II. CASE REPORT:

A-13-year old male reported with a chief complaint of the growth in the gingival tissue on the palatal aspect of anterior teeth region since one year, which was interrupting the mastication. The lesion started as a painless growth which gradually increased in its size to attain the present size of approximately 1x 1 cm. Clinical examination showed a pedunculated growth present in the palatal aspect of interdental gingiva in relation with both central incisors(fig: 1). On palpation it was non-tender, soft in consistency, bleeding was seen. Considering its clinical presentation, it was provisionally diagnosed as a pyogenic granuloma. An excisional biopsy was performed under local anaesthesia and the specimen was sent for the histopathological analysis (fig: 3).

Histopathological examination showed orthokeratinised stratified squamous epithelium covering the connective tissue with intercellular edema and thin elongated rete pegs. The underlying connective tissue comprised dense collagen fibres arranged haphazardly, uninucealted stellate shaped giant fibroblasts, few endothelial lined blood vessels and mild inflammatory infiltrate of lymphocytes were seen. Based on these histopathological features it was GIANT CELL FIBROMA (fig:3).

III. DISCUSSION:

Giant cell fibroma is a benign neoplasm which is clinically and microscopically distinct from fibroma. In 1974 Weathers and Callihan coined the term giant cell fibroma to describe a benign fibrous tumor that has been diagnosed in the past as fibroma, pyogenic granuloma, fibrous hyperplasia or fibroepithelial polyp. According to these authors sufficient distinctive clinical and histologic features were present to separate and reclassify it as a Giant cell fibroma [4].

Giant cell fibroma accounts about 1% of oral biopsies and 5% of all oral mucosal fibrous lesions. Giant cell fibroma occurs in the first three decades of life with peak incidence in the second decade. Lesions in older patients are usually found to be persisted for many years. These lesions are found more commonly in Caucasian females. The female to male ratio of 1.2: 1. The present case is seen in a 13- year-old male. These lesions are most commonly seen on the mandibular gingiva, followed by the maxillary gingiva, tongue, palate, buccal

mucosa, lips and floor of the mouth. But here in this case lesion was present in the palatal interdental gingiva in relation to 11 and 12 which is second most common site of occurrence. The majority of the lesions are less than 1 cm in diameter with an average size under 0.5cm. In the present case the size of the lesion was about 1x1 cm in size which is larger than the average size of the lesion reported. This lesion is most often portrayed as asymptomatic, small raised, pedunculated or papillary growth, often misdiagnosed as papilloma[5, 6]. The present case was asymptomatic, non-tender and painless, pedunculated growth.

The microscopic features seen are fibrous connective tissue which is loosely arranged with a prominent vascular element, especially in the sub-epithelial zone, inflammation is rarely seen. The most characteristic feature is the presence of large spindle shaped and more often stellate shaped cells. These cells are more often mononuclear, but in some cases multinucleated cells may also be seen. These cells are more prominent underneath the epithelium and are less common or absent in the central portion.

The most widely accepted hypothesis for the origin of giant cell fibroma is a response to trauma or due to a recurrent chronic inflammation which is characterized by the functional changes in the fibroblastic cells, while other cells would take over the collagen synthesis [7]. The ultrastructural feature of the giant fibroblasts are it is stellate shaped cell with the large hyperchromatic nucleus and well defined cytoplasm and occasionally shows the dendritic-like processes[8]. Giant fibroblasts show positivity for vimentin and PCNA[9].

The similar histopathological features seen in other type of lesions such as the fibrous papule of the nose, ungual fibroma, acral fibrokeratoma, acral angiofibroma and desmoplastic fibroblastoma. But the difference between these cutaneous lesions and oral mucosal lesions is that the skin lesions have not been associated with oral lesions and they do not show same frequency of occurrence and age distribution. Other mucous membrane lesions with histology similar to the giant cell fibroma are retrocuspid papillae and symmetrical gingival fibromatosis[1] .

Treatment of choice of this lesion is conservative surgical excision. Recurrences are rarely seen. The recurrence if reported in few incidences is due to incomplete removal of the lesion

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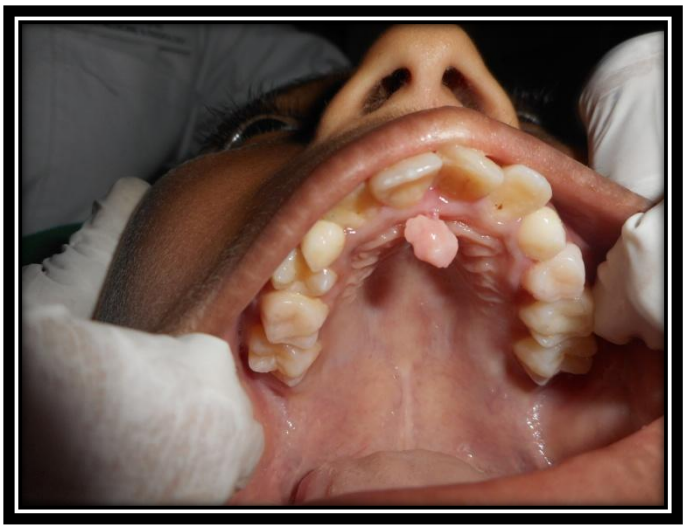

Fig: 1 Pedunculated lesion seen on the palatal aspect of incisors.

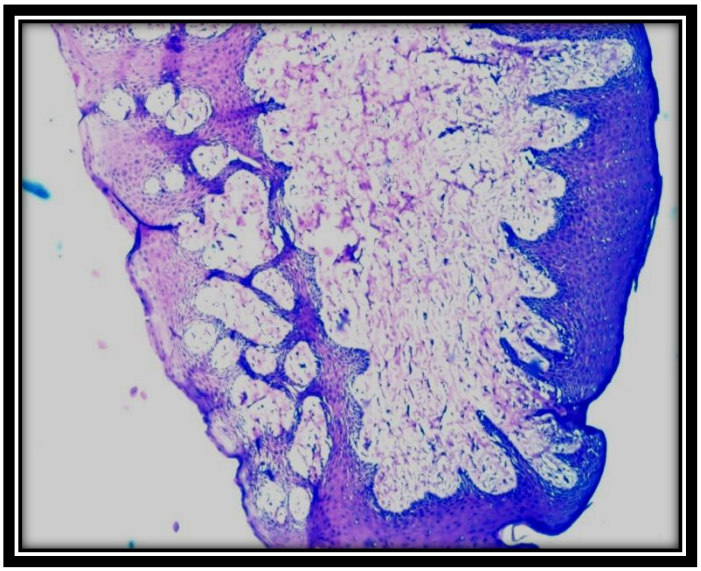

Fig: 2 orthokeratinized stratified squamous epithelium with intercellular edema and long thin elongated confluent retepeg formation.