Giant Cell Soft Tissue Tumour of Maxilla

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ABSTRACT

Giant cell fibroma (GCF) is a distinct soft tissue overgrowth that may mimic fibroma of the gingiva, but has a distinctive histopathological difference. Most often seen in the third decade of life, this lesion is often asymptomatic but is not aesthetic when present in the anterior region of the jaw having a distinct histopathological appearance. GCF contains cells with large, stellate shaped fibroblasts, near the surface of the fibrous mass, beneath the overlying epithelium. This case report presents a case of GCF of maxillary gingiva seen in a middle aged male patient. Surgical excision of the lesion was performed and no recurrence was seen till six months of follow up examination. However, long term follow-up is required to rule out any recurrence.

Keywords: *Giant Cell Fibroma, Stellate Fibroblasts, Excision, Gingival overgrowth.*

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INTRODUCTION

Weathers and Callihan [1] first reported GCF as a benign tumour in 1974. Unlike traumatic fibroma it is a lesion of oral mucosa having distinctive clinico-pathologic features [2]. The name GCF stems from the histological picture where the presence of large multinucleated fibroblasts are seen in close proximity to the overlying epithelium. In the literature various explanations about the origin of GCF have been given; ranging from being viral induced to arising due to unexplained stimulus. [3] However, the origin of this lesion is controversial as very few cases of this tumour have been reported. Clinically, they may be sessile or pedunculated, occurring mostly in mandibular region of gingiva. [4] Here, we are reporting a case of GCF of maxillary gingiva with a brief literature review. [5]

CASE REPORT

A 36-year-old male patient reported to the department of Periodontology, Subharti Dental College and Hospital, Meerut, with a chief complaint of swelling over the upper central teeth region. Patient had noticed the growth over the gingiva 1 year back but did not seek any medical assistance. The growth slowly progressed and attained the current size. The patient was a non-smoker and non-alcoholic and his family history, medical and dental history was non-contributory.

Intraoral examination revealed an isolated, pink gingival overgrowth on the labial gingiva of maxillary left central incisor. The size of the growth was 12 x15 mm and was seen to extend between the mesial aspect of left central incisor and the mesial aspect of the left lateral incisor. The lesion had a sessile base which was attached to the marginal and the attached gingiva. The lesion was firm in consistency with smooth surface. Based on its clinical presentation, a provisional diagnosis of peripheral ossifying fibroma was established. The treatment procedure was then explained to the patient and informed consent obtained. The patient was advised for routine blood investigation and excisional biopsy. The blood investigation results were within the normal limits. An excisional biopsy was performed with electrosurgery under local anaesthesia after phase I therapy. The soft tissue mass was excised along with borders of healthy gingival tissue. A thorough debridement was done along with scaling and root planing of adjacent teeth. The area was thoroughly irrigated with normal saline. Antibiotics and analgesics were prescribed and the patient was discharged after giving post-operative instructions. The patient was recalled after one week to evaluate healing which was found to be uneventful. The excised specimen was sent for routine histopathological examination. The histopathological report revealed parakeratinized squamous epithelium with an underlying fibrous connective tissue stroma. The stroma shows dense bundles of collagen fibres, numerous plump and stellate fibroblasts in superficial areas and numerous blood capillaries. Considering the history, clinical features and microscopic findings, the lesion was diagnosed as "giant cell fibroma." The patient was followed up for six months and no signs of recurrence were found.

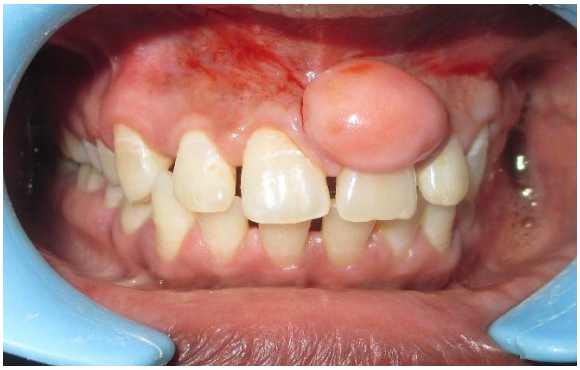

Fig 1: Pre-operative photograph of the patient

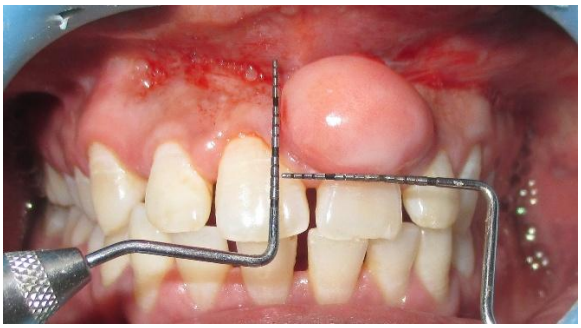

Fig 2: Photograph showing the size of the overgrowth

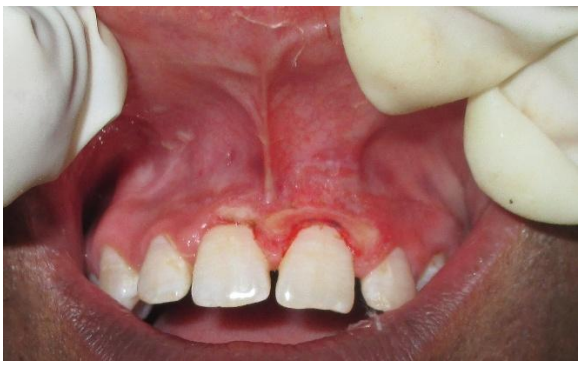

Fig 3: Photograph immediately after the excision of overgrowth

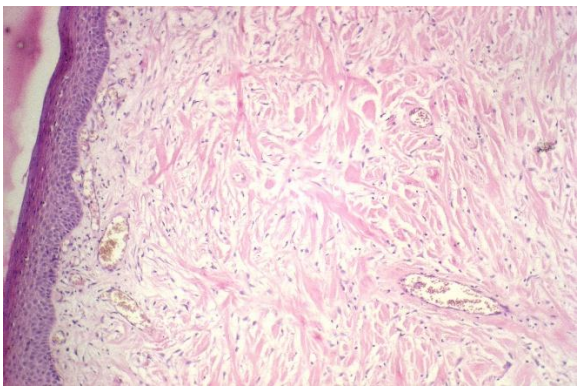

Fig 4: Photograph showing the histopathological findings

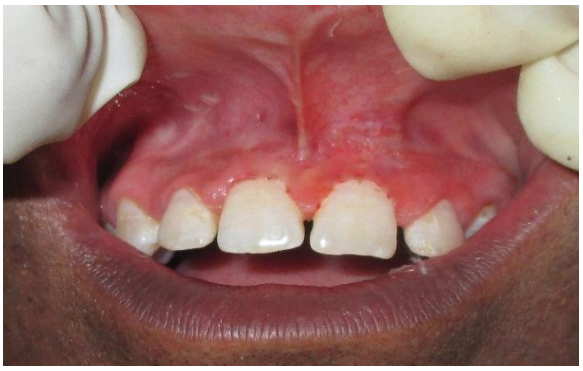

Fig 5: Post-operative photograph of 15 days

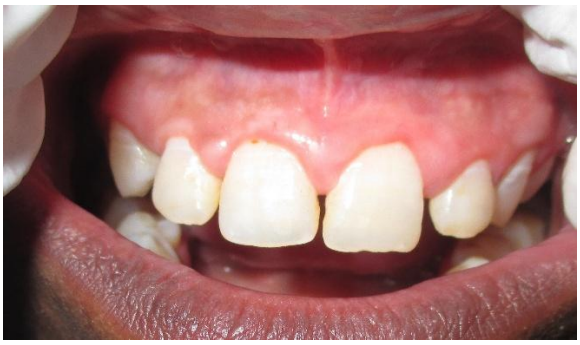

Fig 6: Post-operative photograph of 6 months

DISCUSSION

GCF previously diagnosed as fibroma, fibrous hyperplasia or fibroepithelial polyp has been described as a separate entity among fibrous hyperplastic soft tissue lesions by Weathers and Callihan [1]. It is a reactive lesion that occurs in the first 3 decades of life with peak incidence in the second decade. There is a marked predilection for its occurrence in females and among the races, Caucasians are more commonly affected. The etiology is mostly attributed to chronic irritation.[6] The lesions are less than 1 cm in diameter having an average size more frequently under 0.5cm. However, in the present case report, it occurred in a 36 year old male and attained a size of about 12 x 15 mm extending between the mesial aspect of central incisor and the mesial aspect of the lateral incisor. It usually appears as asymptomatic, small raised, pedunculated and papillary growth, which in the present case was sessile and relatively large. The differential diagnosis of GCF include pyogenic granuloma, peripheral ossifying fibroma, hemangiomas, epulis, and irritative fibroma [7,8,9,10].

As GCF is a relatively rare fibrous hyperplastic lesion, hence, it can only be diagnosed by histopathological examination which is characterized by functional changes in fibroblastic cells. Microscopically, it appears as a loosely arranged fibrous connective tissue which has a prominent vascular element, especially in the subepithelial zone. Inflammation is rarely seen. The most important characteristic feature is the presence of large spindle shaped or more often stellate shaped cells

[11]. These cells are more often mononuclear, but multinucleated cells may also be present. These cells are more prominent just beneath the epithelium and are less common or absent in the central portion [12]. The origin and nature of these cells has been a subject of much debate. Erica Campos [13] and Weathers and Campbell[14] suggested that the stellate and multinucleate cells of giant cell fibroma have a fibroblast phenotype and are large atypical fibroblasts. Electrosurgery which was used for excising the lesion in the present case has an advantage of being relatively quicker and bloodless technique.[15] Recurrences are considered rare, although few incidences have been reported and are found to be due to incomplete removal of the lesion. The patient was under review for 6 months and no recurrence was seen.

CONCLUSION

The giant cell fibroma is separated from the usual fibrous hyperplasias of the oral mucosa due to its characteristic location, age distribution, size, surface characteristics, and histological appearance. However, all the authorities do not believe that the giant cell fibroma should be classified as a separate entity as they believe histology of this lesion is not sufficiently characteristic. Hence, further studies are necessary to comment, whether the giant cell fibroma should be regarded as a distinct clinical and histologic entity.

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