

## CASE REPORT

### Giant cell fibroma of maxillary anterior region: A case report

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#### ABSTRACT:

Fibroma or focal fibrous hyperplasia of the oral mucosa is the most common benign neoplasm of the oral cavity. Giant cell fibroma is specifically distinguished by the presence of stellate/giant cells on histological examination. It may be pedunculated or sessile and is found most commonly on the gingival. Hereby; we present the case report of a 13 year old girl who presented with a chief complaint of swelling in the palate in the upper front tooth region for approximately two years. Patient revealed history of trauma in the same region followed by formation of blood clot two years ago. After a few days, she observed a small growth in the same region, which gradually enlarged during the following months and reached the current size. Excision of tissue was done in region of 21,11,12,13 under local anaesthesia with adrenaline. After histopathologic examination, diagnosis of giant cell fibroma was made.

**Key words:** Giant cell fibroma, Maxilla

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#### INTRODUCTION

Fibroma or focal fibrous hyperplasia of the oral mucosa is the most common benign neoplasm of the oral cavity. According to Torres-Domingo et al, out of 300 benign tumors of the oral mucosa, 53% were histologically diagnosed as fibroma, and it is the most frequently found benign tumor of the oral cavity. Fibromas are hyperplasias of fibrous connective tissue in response to local irritation or trauma. Tissue enlargements attributable to injury represent a hyperplastic reaction and are collectively grouped as "reactive proliferations."<sup>1-3</sup>

In 1974, Weathers and Callihan<sup>3-4</sup> identified a distinct entity within previously identified fibroma lesions. This was called the giant cell fibroma, a lesion that is specifically distinguished by the presence of stellate/giant cells on histological examination. They are most often seen in Caucasians.<sup>5</sup> There is no gender predilection for GCF, but it is a lesion of the young; found most commonly in the first three decades of life. It presents clinically as an asymptomatic raised lesion, 1cm or smaller in diameter. It may be pedunculated or sessile and is found most commonly on the gingiva.<sup>6</sup>

#### CASE REPORT

A 13-year-old girl was referred to the Department of Periodontics, Govt. Dental College & Hospital, Patiala. The patient presented with a chief complaint of swelling in the palate in the upper front tooth region for approximately two years. Patient revealed history of trauma in the same region followed by formation of blood clot two years ago. After a few days, she observed a small growth in the same region, which gradually enlarged during the following months and reached the current size. No other relevant medical history was reported. There was no history of pain or discharge from the swelling. On intraoral examination, a pebbly surfaced round to oval shaped mass measuring approximately 1.5cm×1cm in total was seen in 21,11,12,13 region. The lesion was pale pink in colour. On palpation, it was firm, mobile, non-tender mass of rubbery consistency that did not bleed on touch. Though the swelling seemed sessile, yet it was pedunculated, clearly visualized by pulling it. The rest of the oral mucosa was normal. Oral hygiene was fair. Radiographic findings were normal. Based on these findings, the provisional differential diagnosis was traumatic fibroma and pyogenic granuloma. The patient was advised for routine blood investigation and excisional biopsy of the lesion. The haematological findings are in normal limits.

### Operative procedure

Under all aseptic conditions and after obtaining the informed consent from the patient and her guardian, excision of tissue was done in region of 21,11,12,13 under local anaesthesia with adrenaline. After excision of tissue, hemostasis was achieved. Surgical site was covered with periodontal dressing. Post-operative instructions were explained. Medications were prescribed. Patient was recalled after 1 week for re-evaluation.

### Histopathological examination

The H and E stained section shows parakeratinized stratified squamous epithelium with long rete ridges. The underlying connective tissue is composed of collagenous fibrous tissue made of haphazardly arranged dense fiber bundles. Stellate shaped giant cells are seen in the connective tissue immediately below the epithelium with short dendritic processes and large hyperchromatic nuclei. Few multinucleated giant cells are seen in the connective tissue. Features are suggestive of Giant Cell Fibroma.

Recall: Healing was found to be uneventful and patient is still under follow-up.

### DISCUSSION

Giant cell fibroma is an entity which is separate from other fibrous lesions. Although the clinical behaviour and epidemiology of most of the non-neoplastic fibrous growths are similar, their histopathological features help in distinguishing them.<sup>7</sup> The identification of a GCF as a separate entity by Weathers and Callihan in 1974 added a new dimension to the discussion. The surface nodularity, the loose immature fibrous connective tissue particularly the large stellate cells and multinucleated giant cells type

tumor and separate it from the other fibrous lesions. Many reports, suggest GCFs are reactive lesions and that minor trauma can trigger its development. It is characterized by functional changes in fibroblastic cells. Possibility of viral aetiology was also made, but was not justified. Hence, they were believed to arise from a stimulus which was of unexplained origin.<sup>8</sup> It represents about 2-5% of all fibrous proliferations. Clinically, they may be sessile or pedunculated, with a pebbly surface and normal coloration.<sup>9</sup>

Regezi<sup>10</sup> et al found that the presence of stellate cells was dependent on the pattern of collagen in the lamina propria and that stellate cells were most often found in oral lesions presenting on the gingiva or palate, where the sub mucosa consisted mainly of lamina propria. Given the preponderance of lamina propria in the locations of these lesions, they should both have presented with stellate cells, according to Regezi et al, gives further credence to the Weathers and Callihan postulate that GCF is a separate entity.

Savage and Monsour<sup>11</sup> retrospectively reviewed the histologic features of all lesions designated as fibrous or fibro epithelial polyps over a 10-year period. They concluded that the histologic features were not sufficiently unusual or characteristic in normal or pathologic tissues, to warrant grouping of the lesions as a separate and distinct entity.

GCF resembles irritation fibroma, neurofibroma, papilloma and pyogenic granuloma, because there are no specific clinic features of it. The other differential diagnosis include peripheral ossifying fibroma, focal fibrous hyperplasia, peripheral odontogenic fibroma and odontogenic hamartoma.<sup>8-11</sup>

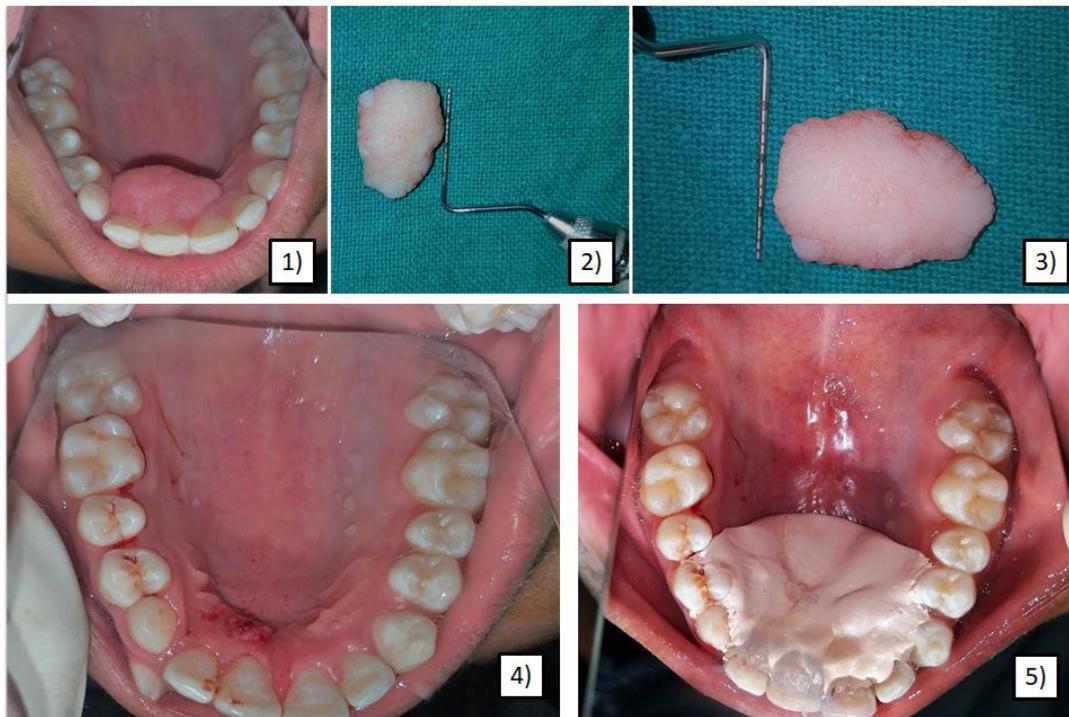
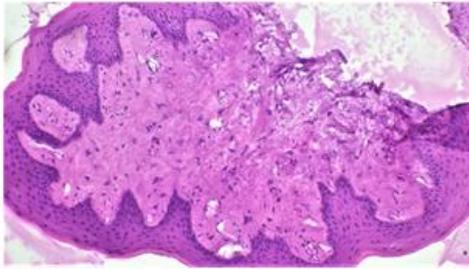


Figure I: 1) Preoperative view, 2), 3) Macroscopic view, 4) Postoperative view, 5) Postoperative pack



**Figure II:** 15 day postoperative



**Figure III:** Histopathology picture

The treatment of choice for GCF is conservative surgical excision which is usually curative, and its findings are diagnostic. Electrosurgery, Laser therapy with CO<sub>2</sub>, Nd:YAG, Diode, erbium lasers is another option. The prognosis of GCF is good however periodic long term follow-up is required. Recurrences have been reported only in solitary cases. If the lesion is left untreated it may continue to proliferate but its benign nature certifies limited growth potential.<sup>8,9</sup>

### CONCLUSION

Enormous fibrous lesions are encountered in routine dental practice. Though they are rare lesions, they should be considered in the differential diagnosis of gingival enlargements. Extensive work up and thorough investigations are mandatory for making an accurate diagnosis and for proper treatment planning, for a better outcome.

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