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CASE REPORT

PERIPHERAL OSSIFYING FIBROMA: A RARE UNCOMMON GINGIVAL LESION

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ABSTRACT

Gingival growths are one amongst the foremost frequently encountered lesions within the mouth. Most of those lesions aren't offensive, but some do have malignant potential. Gingival fibroma arises from the connective tissue or from the periodontal ligament. Peripheral ossifying fibroma (POF) is one amongst the infrequently occurring gingival lesion occurring frequently within the anterior maxilla with female predilection. This article describes a case report of 45 year old female patient with gingival enlargement in maxillary anterior region. The duration of disease was four years and was diagnosed as peripheral ossifying fibroma based on clinical, radiographic and histological features and was managed by surgical excision.

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INTRODUCTION

Gingival reactive lesions are non-neoplastic nodular enlargement; develop in response to chronic and recurring tissue injury. These lesions include focal fibrous hyperplasia, pyogenic granuloma, peripheral ossifying fibroma and peripheral giant cell granuloma. Clinically, lesions mimic various groups of pathologic processes and present a diagnostic challenge (Eversole, 1972; Shafer, 2012). Peripheral Odontogenic Fibroma, Peripheral Cementifying Fibroma, Calcifying or Ossifying Fibroid Epulis and Peripheral Fibroma with Calcification are other terminology of Peripheral Ossifying Fibroma (Shafer, 2012). Peripheral ossifying fibroma (POF) is a Benign tumor of connective tissue origin and described as solitary, well demarcated growth on the gingiva, thought to arise from the periodontal ligament, most commonly in the interdental papillary area, consisting of fibrous tissue containing variable amounts of mineralized material resembling bone. It is considered to be the soft tissue counterpart to central ossifying fibroma (Nazareth, 2011). The clinical presentation of the lesion is characteristic but not pathognomonic. It is a well-demarcated focal mass of tissue on the gingiva, with a sessile or pedunculated base. It is of the same color as of normal mucosa or slightly reddened. The surface may be intact or ulcerated (Shafer et al., 2012).

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According to Walters *et al*. (2001) 9.6% of gingival lesions account for POFs. It may occur at any age but most commonly seen in second and third decades of life, with a higher female preponderance. There is a slight predilection for the maxillary arch (60%) particularly in the incisor and cuspid region (50%), size being <1.5 cm in diameter (Walters, 2001). Radiographic Features In the overwhelming majority of cases, there is no apparent underlying bone involvement visible on the radiograph. However, on rare occasions, there does appear to be superficial erosion of bone (Shafer, 2012). The histologic appearance of the POF is of a non encapsulated mass of very cellular fibroblastic connective tissue covered by stratified squamous epithelium. The latter tissue is often ulcerated with accompanying inflammation. In other examples, there is a band of relatively acellular fibrous connective tissue separating the cellular connective tissue from the intact epithelium. Randomly distributed calcifications are dispersed throughout the cellular connective tissue. These calcifications are often spheroidal or irregularly shaped and have been considered by some to be cementum (Gardner, 1982). Surgical excision including the periodontal ligament and periosteum at the base of the lesion is the preferred treatment modality in order to cut back the chance of recurrence (8 to20%) (Eversole, 1972).

Case History: A 45-year-old apparently healthy female patient reported to the Department of Periodontology, Darshan Dental College and Hospital with the chief complaint of soft tissue overgrowth near upper front tooth region for the past four years.

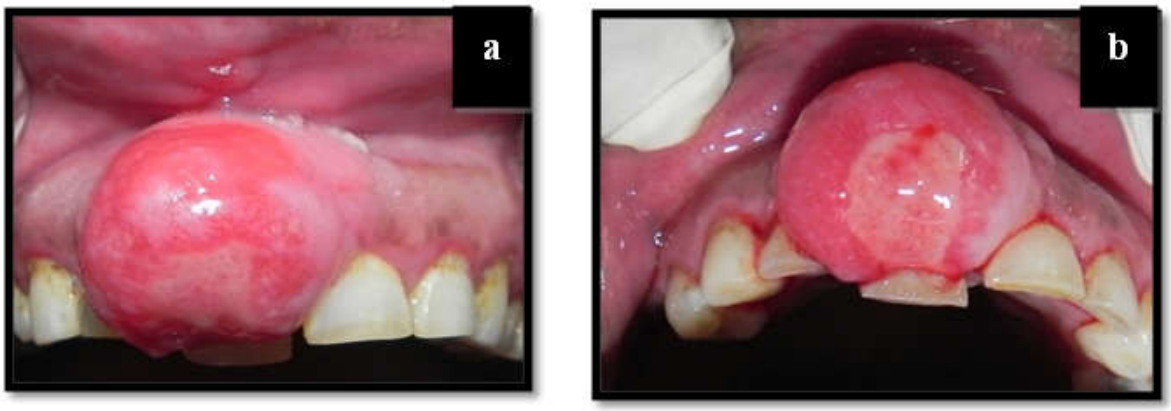

Fig.1: An intraoral solitary growth on facial aspect of maxillary anterior teeth

(a) Facial view (b) Occlusal view

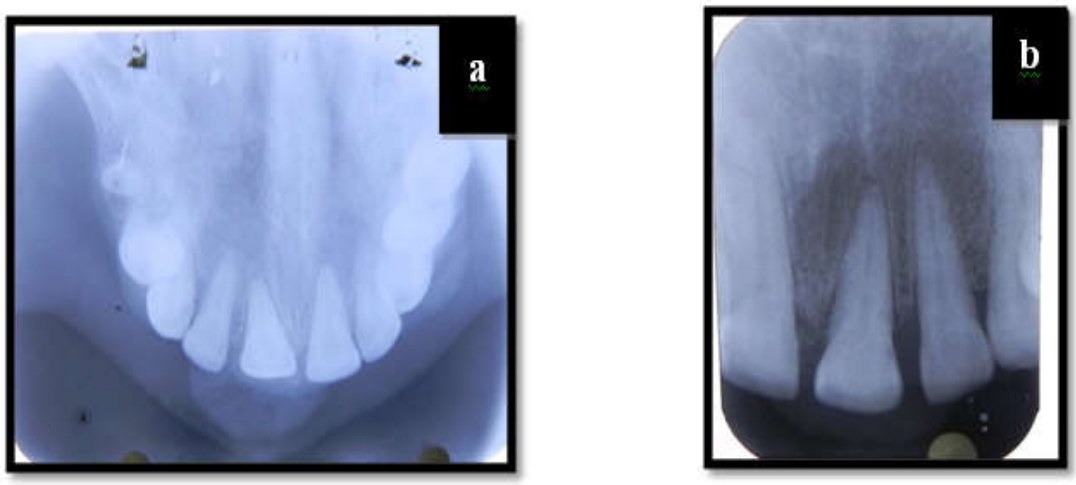

Fig. 2. Radiograph (a) Maxillary Occlusal radiograph reveals soft tissue shadow (b) Intraoral periapical radiograph reveals crestal bone resorption in relation to 11and 21

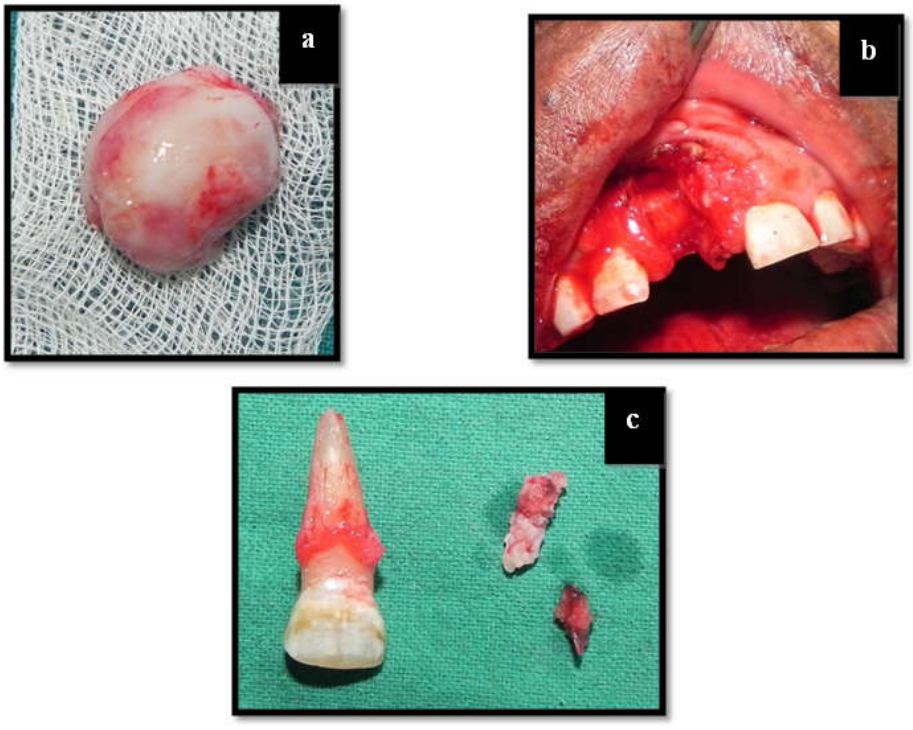

Fig.3 (a) Excised lesion (b) and (c) Extraction site and tooth

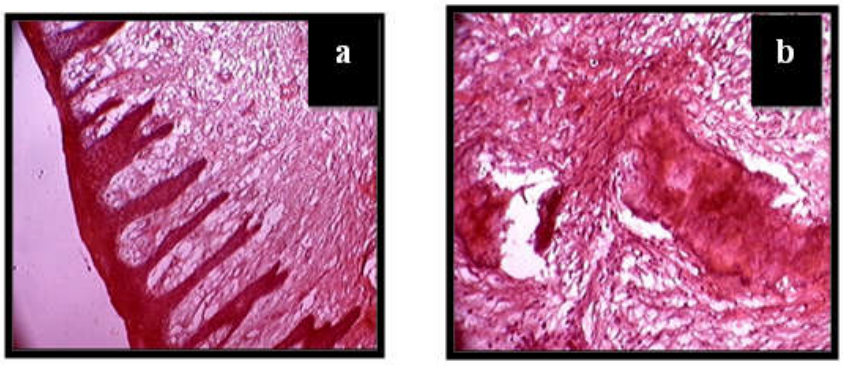

Fig.4 (a) Low power view- stratified squamous parakeratinized epithelium with dense fibrocellular stroma and dystrophic calcification (b) High power view- Numerous plump shape fibroblast and chronic inflammatory cell

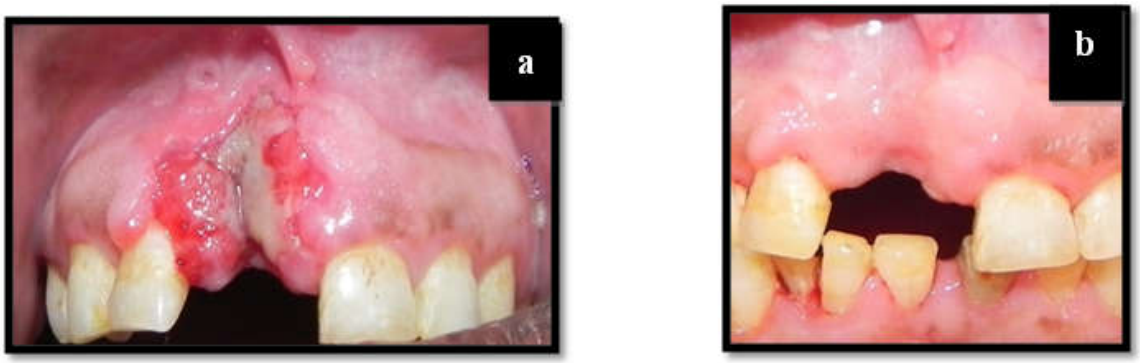

Fig 5 (a) 10 days postoperative (b) 3 months postoperative

The swelling started as small nodule, patient gave history of trauma in road traffic accident two months back after which swelling gradually increased. Patient also gave history of localized gingival enlargement at same site 15 years back for which lesion was excised two times at local hospital. Last excision was done six years back without any histopathological investigation. There was no relevant family and medical history. Extraoral examination showed bilateral facial symmetry and overlying skin showed no signs of inflammation. The regional lymph nodes were non palpable. On intra oral examination, A well-defined localized spherical growth was present in relation to 12, 11 and 21 measuring about 3 cm × 3 cm in diameter extending from distal aspect of 12 to mesial aspect of 21 involving attached gingiva and alveolar mucosa and coronally extends to cover incisal edge of tooth 11 and 12 (Fig1). It was pale white in centre surrounded by red zone and in periphery it was same as of gingival color. Surface was rough with sessile base and purulent discharge seen in central area. It was non tender and firm on palpation and assosciated tooth 11 was displaced palatally and had Grade II mobility. Radiographic examination of intraoral periapical and occlusal radiograph showed soft tissue shadow, increased space between tooth 12, 11 and 21 and crestal bone resorption. (Fig 2). Based on the history, clinical examination and investigations, the case was provisionally diagnosed as POF. The differential diagnosis considered were Pyogenic granuloma and Peripheral Giant Cell Granuloma. The treatment plan included scaling and root planing and excisional biopsy. After ensuring hemogram of patient within normal limits, Consent for the surgical procedure was obtained from the patient after proper counselling. Under aseptic condition and after giving adequate local anaesthesia sulcular incision was placed, lesion was elevated and slowly detached from base.

As there was profuse bleeding haemostasis was achieved using Electrocautery. After excision labial plate was destroyed in respect to tooth 11 and it had grade two mobility and had poor prognosis, extraction was carried out, irregular roughened bone were removed. Suturing of adjacent tissue was done with silk suture and extraction socket was allowed to be healed with secondary intention as approximation was not achieved (Fig 3). Radio Visio Graph of excised tissue taken at low voltage Kvp reveals Radio opaque foci**.** Patient was admitted in hospital and kept under observation for one day and tissue was sent for Histopathological analysis. Gross Examination reveals gray white firm tissue measuring 3 x 3 x 3 cms. Cut section shows gray white whorled surface with bony grits. Histological Examination shows mild squamous hyperplasia**.** Subepithelium shows fibrocollagenous stroma with moderate mononuclear infiltrate and foci of bone spicules. There was no evidence of dysplastic / malignant changes (Fig 4). Based on the clinical and histopathological findings, a final diagnosis of Peripheral ossifying fibroma was established. The patient presented for follow-up examination at 10 days, 1 month and 3 months. The surgical site had healed well. There was no evidence of recurrence of the lesion. The patient had no complaints pertaining to the site of lesion. Replacement of teeth was planned but could not be performed as patient not reported for follow up. (Fig 5)

DISCUSSION

In 1982, Gardner coined the term Peripheral Ossifying Fibroma for a lesion that is reactive in nature and is not the extraosseous counterpart of a Central Ossifying Fibroma of the maxilla and mandible. The definitive diagnosis is based on histological examination with the identification of cellular connective tissue and the focal presence of bone, cementum, or

irregular amounts of dystrophic calcification. (Shafer *et al.1983)*. In our case, Patient reported late due to painless, slow growing and localized lesion which aggravated after trauma during road traffic accident. Patient seeks late treatment due to asymptomatic nature of lesion, lack of awareness and lack of skilled specialist at local area. If patient reported in early stage then tooth could be saved with minimum soft tissue and bone loss.

Conclusion

It is important to formulate an appropriate and early diagnosis of gingival overgrowth for its management. Clinically it is difficult to differentiate between most of the reactive gingival lesions particularly in the initial stages. Regardless of the surgical technique employed, it is important to eliminate the etiological factors and the tissue has to be histologically examined for confirmation.

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