Scholars Journal of Medical Case Reports **ISSN 2347-6559 (Online)**
Sch J Med Case Rep 2014; 2(9):632-634 **ISSN 2347-9507 (Print)**

(An International Publisher for Academic and Scientific Resources)
www.saspublishers.com DOI: 10.36347/sjmcr.2014.v02i09.017

Peripheral Ossifying Fibroma–A Case Report

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Abstract: Peripheral Ossifying Fibroma is a non–neoplastic enlargement of the gingiva with randomly distributed calcifications, immature bone and osteoid. It is found exclusively on the gingiva and does not arise in other oral mucosal location. Clinically, it resembles a peripheral fibroma, but histopathologic analysis always reveals immature bone and osteoid within the lesion. Its incidence is 0.5% in the older age group. A rare case of Peripheral Ossifying Fibroma in a 30- year old female is reported. Clinical, radiographic and histopathological features along with etiology and differential diagnosis are also discussed.
Keywords: Peripheral ossifying fibroma; Gingiva

INTRODUCTION

Peripheral ossifying fibroma is a common gingival growth usually arising from the interdental papilla. Trauma or local irritants such as dental plaque, calculus, micro-organisms, masticatory forces, ill-fitting dentures and poor quality restorations have been implicated in the etiology of peripheral ossifying fibroma [1]. Peripheral ossifying fibroma appears as a nodular mass, either pedunculated or sessile. The colour ranges from red to pink and the surface is frequently but not always ulcerated. It ismore commonly seen in 1st and 2nd decades oflife and has a female preponderance. There is a slight predilection for the maxillary arch and in the incisor cuspid region [2]. In majority of cases there is no underlying bone involvement visible on the radiograph. However, on rare occasions, there may be superficial erosion of bone. The lesions should be surgically excised and submitted for microscopic examination for confirmation of the diagnosis. The lesion may recur after excision and repeated recurrences are not uncommon. In the series of Cundiff 16% of cases recurred, while in a series of 50 cases reported by Eversole&Rovin, the recurrence rate was 20% [3].

CASE REPORT

A 30-year female patient reported with a complaint of painless swelling in the upper front gum region since 1 month. Patient gives history of swelling since a month which was increasing gradually. There were no associated symptoms such as pain, paraesthesia or numbness. However, the patient had occasional bleeding on provocation. There was no history of trauma or similar growth in the past. The medical, surgical and family histories were non-contributory. Extraoral examination did not reveal any abnormalities. Intra-oral examination revealed a pink, solitary, well defined round shaped gingival growth ranging 10 x 7 mm in size in relation to maxillary first and second premolar extending from the middle aspect of maxillary first premolar to distal aspect of maxillary second premolar. The growth had a smooth surface and appeared to arise from the underlying soft tissue. The swelling was sessile, non-tender, firm in consistency and bled to touch (Fig. 1).

Patient was subjected to routine haematological investigations and Intra oral periapical radiograph was obtained. The complete hemogram was within the normal limits. The radiographic examination was within also normal limits, with no findings pertaining to the maxillary exophytic lesion. Based on the history and clinical findings the following differential diagnoses were considered: irritational fibroma, fibrosed pyogenic granuloma, peripheral

ossifying fibroma, peripheral odontogenic fibroma, solitary fibroma, fibrosed peripheral giant cell granuloma. Under local anesthesia, the lesion was surgically excised.

The excised tissue measured 10 mm ×7mm × 5 mm in size. (Fig 2) Adjacent teeth were scaled to remove any local irritants. The specimen was fixed in formalin and was sentfor routine histopathologic examination. Histopathologic section revealed highly cellular fibrous connective tissue showing collagen fibres and proliferating fibroblasts and focal areas of calcification resembling the bone like material and dense aggregates of chronic inflammatory cell infiltrate. The overlying epithelium exhibited parakeratinized stratified squamous epithelium. (Fig3) Based on clinical, radiographical and histopathologicaly findings, a final diagnosis of POF was given.

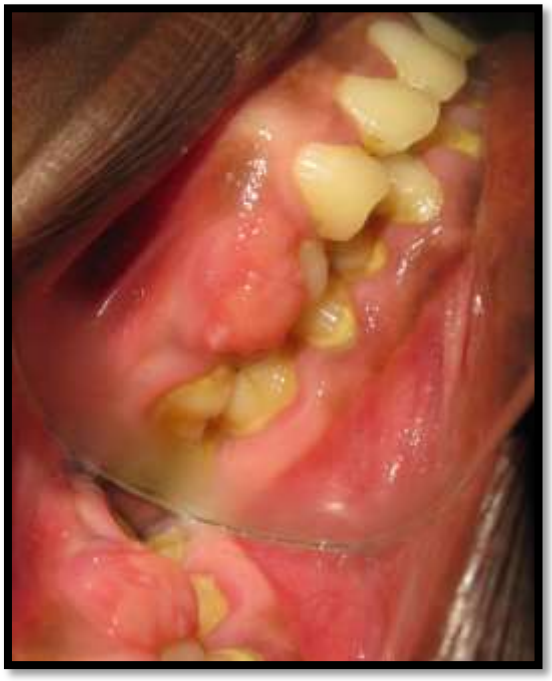

Fig- 1: clinical presentation of lesion

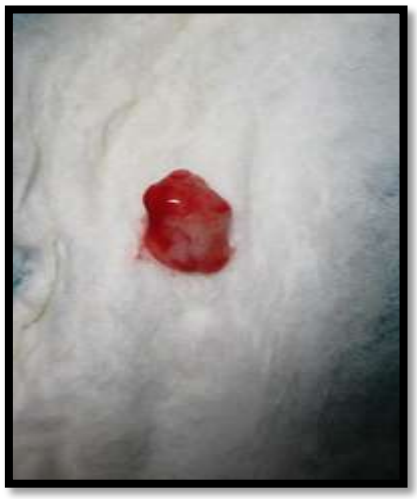

Fig-2: excised lesion

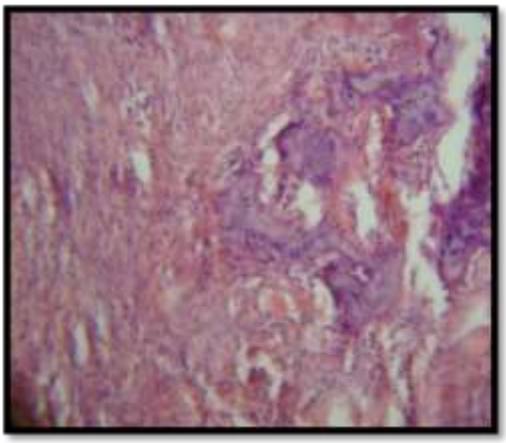

Fig-3: Histopathological picture

DISCUSSION

Peripheral Ossifying fibroma (POF) is a solitary, non-neoplastic gingival growth which arises as a reactive response to local irritations. POF commonly arises from the interdental papillae and thought to arise from the periodontal ligament. POF has been given many synonyms, such as epulis, calcifying fibroblastic granuloma, peripheral cementifying fibroma, peripheral fibroma with cementogenesis, peripheral cementoossifying fibroma, ossifying fibroepithelial polyp and peripheral fibroma with osteogenesis [4,5]. This lesion was initially described by Bhaskar in 1984 as peripheral fibroma with calcification and the term POF was coined by Eversol and Robin[6,7]. The causative factors behind the occurrence ofPOF is unclear; however trauma or local irritantssuch as subgingival plaque and calculus, dentalappliances, poor-quality dental restorations,microorganism, masticatory forces, foodlodgement and iatrogenic factors all influence thedevelopment of the lesion [6]. Due to the clinical and histopathologicalresemblance of POF to pyogenic granuloma, it is sometimes considered to develop secondary to fibrosis of granulation tissue.

Some cases of POF may initially develop as a pyogenic granuloma that undergoes subsequent fibrosis, maturation and calcification [8]. The high female predilection and a peak occurrence in the second decade and declining incidence after third decade of life suggested hormonal influences [9]. POF usually occurs in 2nd and 3rd decades of life with peak prevalencebetween the ages 10 and 19 and almost 2/3rd ofthem occur in female. Clinically POF arises as asolitary nodular mass, either pedunculated orsessile and tend to arise from the interdentalpapillae most commonly seen in maxillary anteriorregion. Radiographically the features of POF tendto vary. Foci of calcifications have been reportedto be scattered in the central area of the lesion, butnot all lesions demonstrate [10]. Histologically, the POF appears to be anonencapsulated mass of cellular fibroblasticconnective tissue of mesenchymal origin, coveredwith stratified squamous epithelium, which isulcerated in 23%–66% of cases [11,12]. POFs contain areas of fibrous connective tissue, endothelial proliferation and mineralization. Endothelial proliferation can be profuse in the areas of ulceration, which can be misleading in clinical diagnosis, as the lesion may appear to be a pyogenic granuloma. Mineralization can vary between cementum-like material, bone (woven and lamellar) and dystrophic calcification [11-13].

CONCLUSION

Peripheral ossifying fibroma is a slowly progressing lesion, the growth of which is generally limited. Many cases will progress for long periods before patient seeks treatment because of the lack of symptoms associated withthe lesion. Differential diagnosis should be donetactfully to prevent unnecessary distress to thepatient and family. Treatment consists of surgicalexcision and scaling of teeth. Without treatmentthey can increase in size and interfere with normalchewing and swallowing. Hence, early diagnosisand prompt treatment is required.

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