

PERIPHERAL OSSIFYING FIBROMA — A CASE REPORT

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ABSTRACT

Gingiva is often the site for localized growth that are considered to be reactive rather than neoplastic in nature. Because the clinical appearance of these lesions can be remarkably similar, classification is based on the distinct histologic differences. Peripheral Ossifying Fibroma is one such reactive lesion, for which the etiology is unclear. POFs are frequently associated with irritants like calculus, plaque, dental appliances, ill fitting crowns and rough restorations. There is a definite female predilection, with a peak incidence in young and teenaged females. A clinical report of a 14 year old girl with a POF in the mandibular gingiva is presented.

Key Words: *Peripheral Ossifying Fibroma, Cemento Ossifying Fibroma, Gingival Growth, Cementum like Calcifications.*

INTRODUCTION

Peripheral ossifying fibroma (POF) is one of the several common reactive hyperplastic inflammatory lesions of the gingiva. It usually arises from the interdental papillae¹ and represents upto 2% of all lesions that are biopsied. Other terms used to describe this lesion include peripheral cementifying fibroma, peripheral fibroma with calcifications, calcified or ossified fibrous epulis and calcified fibroblastic granuloma.² All terminologies are appropriate for the tumour as they might contain a variety of calcified material. It has also been reported that it represents a maturation of a pre existing pyogenic granuloma or peripheral giant cell granuloma.³

CLINICAL REPORT

A 14 year old girl reported to the outpatient department for evaluation of localized gingival enlargement in the mandibular lateral incisor canine area. Patient was concerned about it's gradually increasing

size. Examination revealed 2.0 x1.5 cm pedunculated, pinkish red growth that was non tender, non-fluctuant, non-pulsatile, did not blanch with pressure and had a firm to hard consistency. Mild displacement of the lateral incisor was also noted. (Fig 1). Patient was undergoing orthodontic treatment since last one and a half year, but the appliance from the mandibular arch was removed due to the presence of the growth. Radiographic examination revealed no significant findings pertaining to growth. The patient's past medical histories were non-contributory. A provisional diagnosis of irritation fibroma was made. The differential diagnosis included peripheral giant cell granuloma, pyogenic granuloma and ossifying fibroma.

After routine blood examination excisional biopsy of the growth was done under antibiotic coverage and thorough curettage of adjacent periodontal ligament was carried out to prevent recurrence. The tissue was submitted to the Oral Pathology division for histopathologic diagnosis. The histologic picture revealed evidence of calcification in the hypercellular fibroblastic stroma, (Fig 2) confirming the lesion as peripheral ossifying fibroma. Follow up of the patient showed absolutely normal healing of the area. Some correction in the position of lateral incisor was also seen. (Fig 3)

DISCUSSION

In the oral cavity periodontium can show different types of focal overgrowths. These lesions arise due to overgrowth and proliferation of different components

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Received for Publication: May 31, 2014

Revision Accepted: Aug 25, 2014



Fig 1

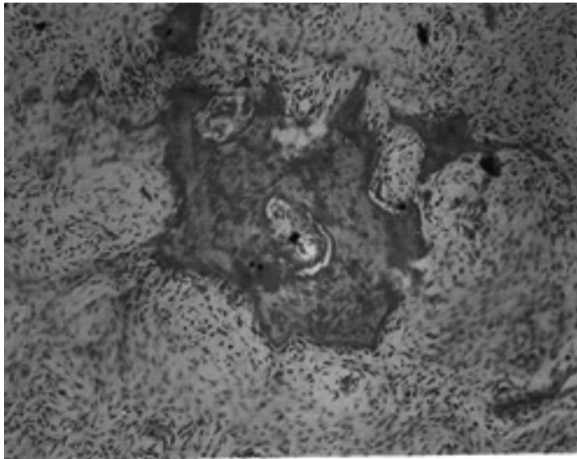


Fig 2

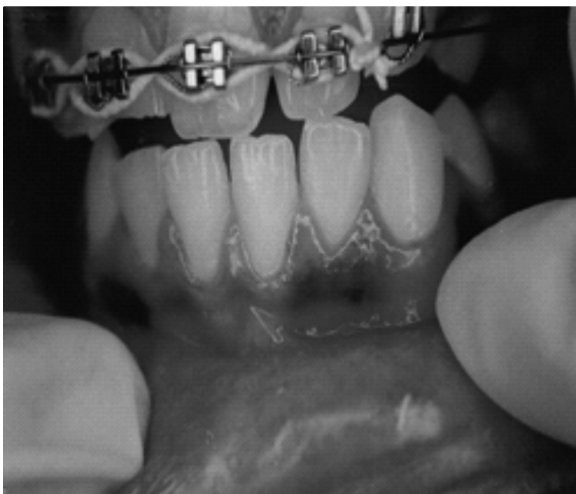


Fig 3

of connective tissue in the periodontium i.e the fibers, bone, cementum, blood vessels or any particular type of cell. Most of these lesions are reactive chronic inflammatory hyperplasia with minor trauma or chronic irritation being the etiologic factor.

POF has also been described by various synonyms such as peripheral cemento ossifying fibroma, peripheral fibroma with osteogenesis, peripheral odontogenic fibroma with cementogenesis, fibrous epulis etc.^{3,4} The lesion is most common in the second decade of life affecting mainly females.⁵ Cundiff reported that the lesion is prevalent between ages of 5 and 25 years with a peak incidence at 13 years of age. Female to male ratio may vary from 2:1 to 3:2. The site of occurrence of POF is usually anterior to molars in both maxilla and mandible equally⁶, and in more than 50% of the cases, in the incisor and cuspid region.⁷ Dental calculus, plaque microorganisms, dental appliances and restorations are considered to be the irritants triggering the lesion.⁸ The case presented here is of a female patient aged 14 years with a gingival overgrowth in the lateral incisor-cuspid area and undergoing orthodontic treatment.

Ossifying fibromas elaborate bone, cementum and spheroidal calcifications, which has given rise to various terms for these fibro osseous neoplasms. When bone predominates 'ossifying' is the appellation, while the term 'cementifying' has been assigned when curvilinear trabeculae or spheroidal calcifications are encountered.⁹ When both bone and cementum like tissues are observed, the lesion has been referred to as cemento ossifying fibroma. Cementifying fibromas may be clinically and radiographically impossible to separate from ossifying fibromas.¹⁰

A confirmatory diagnosis of POF is made by histopathologic evaluation of biopsy specimens. The following features are observed during microscopic examination which were seen in this case also,

- 1 Intact or ulcerated stratified squamous surface epithelium.
- 2 Benign fibrous connective tissue with varying number of fibroblasts.
- 3 Sparse or profuse endothelial proliferation.
- 4 Mineralized material consisting of mature lamellar or woven osteoid, cementum like material.
- 5 Acute or chronic inflammatory cells in the lesion.

Treatment requires proper surgical intervention that ensures deep excision of the lesion including periosteum and affected periodontal involvement. Thorough scaling and/or removal of other sources of irritants should be accomplished.^{1,9} Teeth associated with POF are generally not mobile, though there have been reports of migration secondary to bone loss.^{1,9} Early recognition and definitive surgical intervention result in less risk of tooth and bone loss.¹² The rate of recurrence has been reported to vary from 8.9 to 20%.^{9,12} It probably occurs

due to incomplete initial removal, repeated injury or persistence of local irritants.

In conclusion, clinically it is difficult to differentiate between most of the reactive gingival lesions particularly in the initial stages. Therefore it becomes important to eliminate the etiological factors and the tissue has to be histologically examined for confirmation.

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