

Case report:

Title: Management of a Peripheral Ossifying Fibroma in a Male Patient

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Abstract

Peripheral ossifying fibroma is a solitary, benign, reactive gingival overgrowth frequently arising from the interdental papilla. It is commonly seen in second decade in females. It is usually painless and slow growing, commonly seen in the anterior aspects of the jaws. The etiopathogenesis of the peripheral ossifying fibroma is not clearly established and the treatment of the lesion includes complete surgical removal along with the removal of causative factors to prevent recurrence. We report a case of peripheral ossifying fibroma in a young male patient.

Keywords: Gingiva, swelling, non-neoplastic, ossifying fibroma, reactive gingival growth

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Introduction

The gingiva is often the site of localized growths that are considered to be reactive rather than neoplastic in nature.¹ Peripheral ossifying fibroma (POF) is a focal, reactive, non-neoplastic soft tissue growth that is usually seen on the gingiva. POF is seen as nodular mass either pedunculated or having a broad base originating from interdental papilla.² The surface of POF is usually smooth and the colour of the lesion varies from pale pink to red in colour. It is known to occur frequently in the maxilla and mostly occur anterior to molars.^{2,3} The lesion is most commonly observed in the second decade of life and females are known to be affected commonly than males by a ratio ranging from 2:1 to 3:2.⁴ The etiopathogenesis of the POF is not clearly established however, trauma or local irritants such as dental plaque and calculus, ill fitting appliances, microbes, poor quality dental restorations, masticatory forces, food lodgements and iatrogenic factors are regarded as possible etiological factors in the development of POF.⁵ A

case of POF in the mandibular gingiva of a 24 year old healthy male patient is described in this report.

Case report

A 24-year-old male reported to Jodhpur Dental College General Hospital with the chief complaint of soft tissue swelling in the lower jaw and displacement of his teeth. Intraoral examination revealed a painless pedunculated, solitary, rubbery mass extending from mandibular left central incisor to the left premolars. The lesion was measuring about 2 cms mesio-distally and 2.5 cms bucco-lingually and the colour of the swelling varied from light to dark pink in certain areas. The mandibular left central and lateral incisors were lingually displaced (Figure 1). Patient revealed that the swelling was smaller in size when he initially noticed but is slowly increasing in size. It was not associated with pain and sometimes interfered with mastication.

The medical and familial history of the patient was not contributory. Mandibular occlusal radiograph

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revealed a well-defined radiopacity labial to mandibular left incisor region and displacement of mandibular left central and lateral incisors (Figure 2). After haematological examinations, excisional biopsy of the mass was carried out under local anaesthesia and thorough curettage of the adjacent teeth, was carried out to prevent the recurrence. Histological section revealed a predominantly fibroblastic stroma. Calcifications in this hypercellular fibroblastic stroma resembled cementum and also bone-like ossifying areas were noticed (Figure 3). Clinical findings and histopathologic features confirmed the diagnosis as POF. We did not observe any post-operative complications and the healing was normal (Figure 4). The patient was further treated with fixed orthodontic therapy for the alignment of teeth (Figure 5) and is currently under periodic follow-up.

Discussion

POF has also been described by various synonyms such as peripheral cemento-ossifying fibroma, ossifying fibro-epithelial polyp, peripheral fibroma with osteogenesis, peripheral fibroma with calcification, calcifying or ossifying fibrous epulis and calcifying fibroblastic granuloma.²

POF is known to represent 3.1% of all oral tumors and 9.6% of the lesions affecting the gingiva. This condition is known to affect the whites more frequently than the blacks. POF is a slowly progressing lesion, with limited growth, it rarely exceed beyond 1.5 cm in diameter, but lesions measuring 6 cm and 9 cm diameters have also been observed in the literature.^{6,7} POF is known to cause erosion of bone, tooth separation, delayed eruption of teeth and migration of teeth and in accordance to this, the displacement of teeth was noted in the present case.⁸

Radiographically, POF may demonstrate diffuse

radiopaque calcification but this feature may not be seen in all the lesions. In the present case, radiopacity was very well appreciated in the occlusal radiograph. Uncommonly POF is known to be associated with localized bone destruction but in the present case no definite destruction of the bone was observed.⁹

The final diagnosis of POF is established by histopathological examination. The histopathological section commonly shows hyperplastic parakeratinized epithelium and benign fibrous connective tissue with abundant fibroblast, myofibroblast and collagen with varying amount of endothelial proliferation along with cementum, bone like material, or rarely dystrophic calcifications. In some cases, it may be associated with acute or chronic inflammatory cell infiltrate.¹⁰

The ideal treatment of POF is complete surgical excision of the mass with peripheral and deep margins along with the removal of the irritating factors, for example scaling and curettage of adjacent teeth. The recurrence rate of POF is known to vary from 8%-20% because of incomplete removal of the lesion or due to failure of complete elimination of etiological factors, hence a thorough treatment and regular post-operative monitoring is required.^{5,6}

Conclusion

Peripheral ossifying fibroma is a benign gingival lesion characterized by increased cellularity, formation of the bone and sometimes seen with cementum-like material or rarely with features of dystrophic calcification. Thorough surgical removal of the POF along with complete elimination of the etiological factors must be carried to prevent recurrence of the lesion.



Figure 1: Solitary well defined mass in lower jaw



Figure 2: Occlusal radiograph showing radiopacity

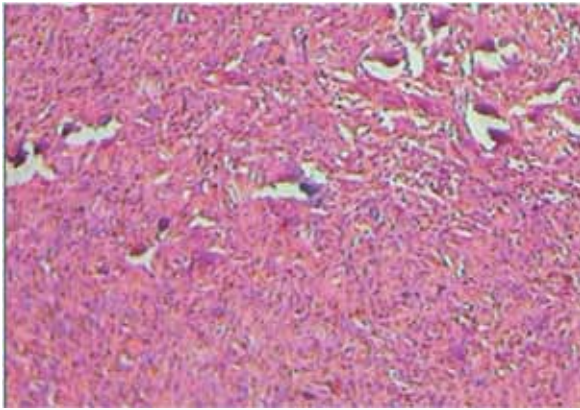


Figure 3: Histopathological section showing hypercellular stroma with evidence of calcified tissue



Figure 4: Normal healing after removal of swelling



Figure 5: Orthodontic treatment of the patient

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