



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. Clinically, it resembles a peripheral fibroma, but histopathologic analysis always reveals immature bone and osteoid within the lesion. We report a rare case of peripheral ossifying fibroma in a 36 old female. Clinical, radiographic, and histopathological features along with etiopathogenesis and differential diagnosis are also discussed.

Key words: Peripheral Ossifying Fibroma, Gingival overgrowth, Gingival enlargements

Introduction

Localized growths are commonly seen on the gingiva. These typically represent reactive proliferative lesions, rather than true neoplasms [1,2,3]. Peripheral ossifying fibroma is defined as a well demarcated and occasionally encapsulated lesion consisting of fibrous tissue containing variable amounts of mineralized material resembling bone [4]. Clinically, it resembles a peripheral fibroma, but histopathologic analysis always reveals immature bone and osteoid within the lesion [5].

Peripheral ossifying fibroma is found exclusively on the gingiva and does not arise in other oral mucosal locations [6]. It varies from pale pink to cherry red in color, can be either pedunculated or sessile and is typically located in the interdental papilla region [6,7]. The lesion may cause separation of the adjacent teeth, and occasionally minimal bone resorption can be seen beneath the lesion [8].

The present report describes a case of POF in a 36-year-old female patient.

Case Report

A 36-year-old female patient reported with a chief complaint of soft tissue overgrowth in upper right region of the mouth. The patient first noticed it about 6-7 months ago but did not seek treatment until it reached the current proportions. The medical history was not significant. Extraoral examination revealed essential bilateral symmetry and overlying skin showed no signs of inflammation [Figure 1].



Figure 1 : Extra-oral

Regional lymphnodes were non palpable. A thorough intra-oral examination revealed a firm, rubbery, reddish pink sessile mass in the maxillary right first and second premolar region measuring 3 × 4 mm in size, oval with diffused borders [Figure 2].



Figure 2: Intra-oral Lesion

The surface of the lesion was smooth. The second premolar drifted buccally [Figure 3].



Figure 3: Migrated 2nd premolar on buccal aspect of the lesion.

The mass was firm in consistency; non tender and no bruit or pulse was felt. Considerable deposition of sub and supragingival plaque and calculus and grade I mobility in relation to first and second premolar was noticed. The lesion was painless unless traumatized by aggressive tooth brushing or chewing hard foodstuffs.

Radiographic findings:

Introral periapical radiograph of the concerned area showed marked bone loss and diffuse radiopacities in flocculent pattern over the first and second premolar along with the displacement of the teeth. Occlusal radiograph revealed a tooth like calcified mass between first and second premolar. Migrated second premolar was also evident [Figure 4].

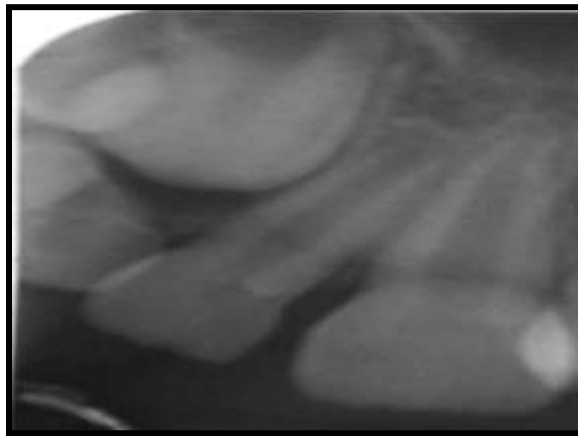


Figure 4: Radiograph revealing a calcified mass between premolars.

A provisional diagnosis of peripheral ossifying fibroma was reached. After ensuring that the hemogram of the patient was within normal limits, excisional biopsy of the lesion was performed under local anesthesia. The second premolar was extracted [Figure 5].



Figure 5: Excised tissue and extracted 2nd premolar.

Histopathology

Histopathological examination revealed a delicate connective tissue stroma covered by stratified squamous epithelium which is disrupted at places. The bulk of the lesion is composed of cellular mass of connective tissue comprising of large number of plump proliferating fibroblasts, mixed inflammatory cell infiltrate and mineralized component in the form of interconnecting trabeculae of woven bone. All these features were suggestive of peripheral ossifying fibroma [Figure 6].

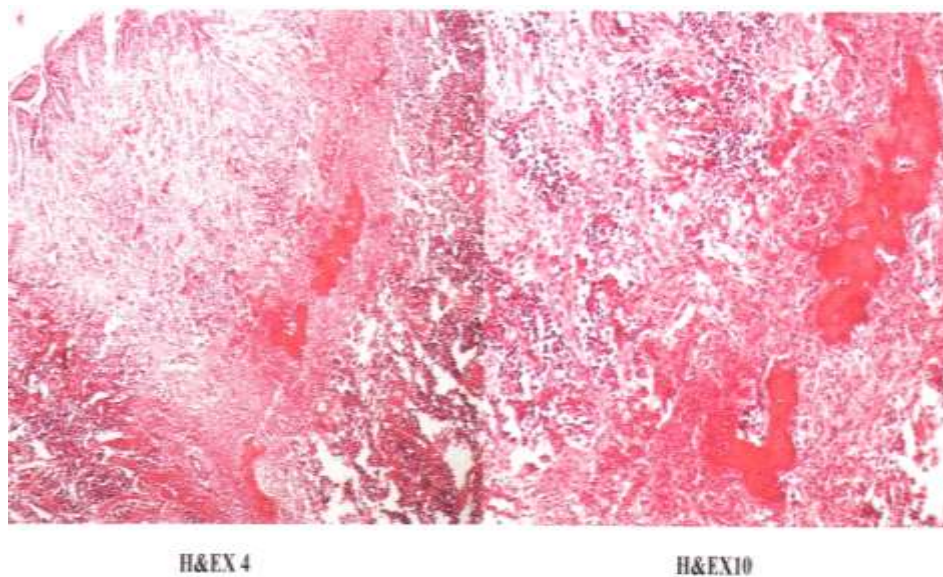


Figure 6 : Histopathological Report

Discussion

The term POF was coined by Eversol and Robin [9]. POF has been given many synonyms, such as epulis, calcifying fibroblastic granuloma, peripheral cementifying fibroma, peripheral fibroma with cementogenesis, peripheral cemento-ossifying fibroma, ossifying fibroepithelial polyp and peripheral fibroma with osteogenesis [10]. The lesion affects females more often than males (5:1 respectively). The high female predilection and a peak occurrence in second decade and declining incidence after third decade of life suggested hormonal influence [11].

The etiopathogenesis of POF is unclear, trauma or local irritants such as subgingival plaque and calculus, dental appliances, poor quality dental restorations, microorganisms, masticatory forces, food lodgment and iatrogenic factors all influence the development of the lesion [10]. An origin from cells

of periodontal ligament has been suggested because of exclusive occurrence of POF from interdental papilla, the proximity of gingiva to PDL, the presence of oxytalan fibers within the mineralized matrix of some lesions, the age distribution which is inversely related to the number of lost permanent teeth, and the fibro cellular response like other reactive gingival lesions of periodontal ligament origin [12]. The case presented significant amounts of plaque, calculus which are considered to be irritants triggering the lesion [13].

The lesion represents varying stages of a fibroma with ossification; however, ossification or calcification may not be evident in all cases, particularly in earlier stages of growth. Foci of radioopaque material, bone formation or dystrophic calcification may be seen, particularly in large or lesions with overt mineralization [12]. The present case demonstrated marked dystrophic calcification within the lesion.

The size of POF lesions is usually less than 1.5-2 cm in diameter but has been known to grow larger sizes [14]. The growth in the above case was larger in size than the average lesion. POF can cause resorption of the alveolar crest and separation of adjacent teeth with pathologic migration [14], both of which were evident in the present case.

Treatment of POF consists of elimination of etiological factors, scaling of adjacent teeth and total aggressive surgical excision along with involved periodontal ligament and periosteum to minimize the possibility of reoccurrence [6]. Long term postoperative follow up is extremely important because of the high growth potential of incompletely removed lesion and relatively high recurrence rate of approximately 20%.

Conclusion

The lesion must be examined thoroughly both radiographically and histologically to make an accurate diagnosis. Regardless of the surgical technique employed, the complete removal of the lesion as well as complete elimination of the etiological factors must be achieved to prevent recurrence.

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