



**ORIGINAL RESEARCH PAPER**

**Dental science**

**PERIPHERAL OSSIFYING FIBROMA: A CLINICAL & HISTOPATHOLOGICAL REPORT**

**KEY WORDS:**

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**ABSTRACT**

Gingiva is the most common site for localized growths or lesions that are considered to be reactive rather than neoplastic in nature. Oftenly, these growths are difficult to be diagnosed clinically and can be identified as specific entity only on the basis of typical and consistent histomorphology. Peripheral ossifying fibroma (POF) is one such of reactive lesion or growth. Peripheral ossifying fibroma can be developed due to embedment of a foreign body. It has been described with various synonyms and is believed to developed from the periodontal ligament comprising about 9% of all gingival growths. The size of the growth is generally small, located mainly in the anterior maxilla with a higher predilection for females, and it is more common in the second decade of life. A clinical report of 55-years-old female with a peripheral ossifying fibroma in the anterior maxilla region showing significant growth is presented.

**INTRODUCTION**

Peripheral ossifying fibroma (POF) is a reactive soft tissue lesion that is usually grows on the interdental papilla. It is slow growing mass which can be pedunculated or sessile with broad base, usually smooth surfaced and varies from pale pink to cherry red in color. It comprise about 9% of all gingival growths and to arise from the gingival corium, periosteum, and the periodontal membrane. It has also been believed that it represents a maturation of a pre-existing pyogenic granuloma or a peripheral giant cell granuloma.<sup>1</sup> Other terms used to refer POF are peripheral cementifying fibroma, peripheral fibroma with cementogenesis, peripheral fibroma with calcification, calcified or ossified fibrous epulis and calcified fibroblastic granuloma.<sup>2,3</sup>

The purpose of this article is to present a case of POF and briefly review the current literature of this lesion and emphasize the importance of discussion of a reasonable differential diagnosis with the patient.

**CASE REPORT**

A 55-year-old female patient reported to the Department of periodontology, Govt. dental college and hospital, Aurangabad, Maharashtra, with the chief complaint of swelling of the gums near upper front tooth region for the past 1 year. The swelling gradually progressed to the present size. No relevant family history and medical history was present neither patient gave any history of trauma, injury, or food impaction. On intraoral examination, a painless pedunculated, cauliflower-like mass was present on the labial interdental aspect between maxillary left permanent canine and 1<sup>st</sup> premolar extending towards the occlusal surface. The lesion was about 1 cm mesiodistally and 1.5 cm cervico-occlusally. Radiograph revealed bone loss between maxillary canine and first premolar. 9mm periodontal pocket depth was measured on distal aspect of 23 and mesial aspect of 24. Plaque and calculus was present.

Initially scaling and root planing was performed. After two weeks surgical procedure was planned. The lesion was excised and coronally advanced flap was reflected (Figure 2) to perform regenerative procedure. DFDBA bone graft and collagen membrane (PERIOCOL) was placed over the bone defect (Figure 3). Sutures were placed and excised tissue was send for histopathological examination. Post operative instructions were given. Reevaluation revealed complete soft tissue healing and no sign of recurrence over a period of 6 months. (Figure 4)

Histopathologically, the tissue section revealed fibrillar stroma along with multiple trabeculae of immature bone and

globules of darkly stained calcified material. (Figure 5). On the basis of clinical, radiographic, and histopathological investigation, the diagnosis of POF was given.



**Figure 1 Baseline**



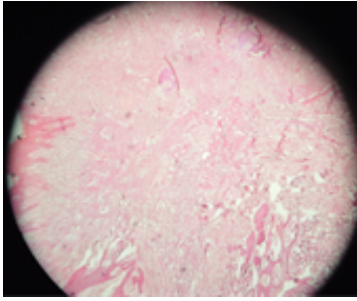
**Figure 2 Tissue excised and Coronally advanced flap reflected**



**Figure 3: DFDBA bone graft and periocoll membrane placed**



**Figure 4: After 6 months**



**Figure 5: Histopathological section**

**DISCUSSION**

Almost 60% of the lesions like POF occur in the maxilla and mostly occur anterior to molars. POF is most common in the second decade of life affecting mostly females.<sup>4</sup> Dental plaque, calculus, prosthesis, and restorations are considered to be the irritants triggering the lesion.<sup>5</sup>

Although the etiopathogenesis of POF is uncertain some investigators consider it a neoplastic process, whereas other argue it is a reactive process; however, in either case, the lesion is thought to arise from the cells of the periodontal ligament.<sup>2</sup>

Treatment of POF requires adequate surgical intervention that ensures complete excision of the lesion including periosteum and affected periodontal ligament. Thorough scaling and root planing of adjacent teeth and/or removal of other sources of irritants should be accomplished. POF can cause erosion of bone, can displace teeth, and can interfere or delay eruption of teeth, therefore early recognition and definitive surgical intervention result in less risk of tooth and bone loss.<sup>6</sup> The recurrence rate varies from 7 to 20% according to various authors.<sup>5</sup>

Histologically, the POF is shown as a non-encapsulated mass of cellular fibroblastic connective tissue of mesenchymal origin, covered with stratified squamous epithelium, which is ulcerated in 23-66% of cases respectively.<sup>1,4</sup> POFs content shows fibrous connective tissue, endothelial proliferation and mineralization. Endothelial proliferation can be profuse in the areas of ulceration, which can be misdiagnosed, as the lesion which appear to be a pyogenic granuloma. The mineralized component of POF varies, occurring in approximately 23-75% of cases according to published clinical reports. Mineralization varies between cementum-like material, bone (woven and lamellar) and dystrophic calcification.

**CONCLUSION**

Clinically it is difficult to differentiate between most of the reactive gingival lesions particularly in the initial Stages, therefore early recognition is required. It is important to eliminate the etiological factors along with surgical procedure and the tissue has to be histologically examined for confirmation.

**REFERENCES**

1. Bhaskar NS, Jacoway JR. Peripheral Fibroma and Peripheral Fibroma with Calcification: Report of 376 Cases. *JADA* 1966;73:1312-20.
2. Kumar SK, Ram S, Jorgensen MG, Shuler CF, Sedghizadeh PP. Multicentric peripheral ossifying fibroma. *J Oral Sci* 2006;48:239-43.
3. Moon WJ, Choi SY, Chung EC, Kwon KH, Chae SW. Peripheral ossifying fibroma in the oral cavity: CT and MR findings.
4. Buchner A, Hansen LS. The Histomorphologic Spectrum of Peripheral Ossifying Fibroma. *Oral Surg Oral Med Oral Pathol* 1987;63:452-61.
5. Gardner DG. The peripheral odontogenic fibroma: An attempt at clarification. *Oral Surg* 1982;54:40-8.
6. Kenney JN, Kaugars GE, Abbey LM. Comparison between the peripheral ossifying fibroma and peripheral odontogenic fibroma. *J Oral Maxillofac Surg* 1989;47:378-82.