Peripheral Ossifying Fibroma: A Case Report & Review of Literature

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Gingival enlargements are commonly seen especially localized. Most of these enlargements are non-neoplastic and rather reactive by nature. On clinical examination, it is not always possible to differentiate one specific gingival enlargement from other. Clinically, differentiating one from the other as a specific entity is often not possible. To identify these lesions, histopathological examination is required. One of such seen entities is peripheral ossifying fibroma (POF) that is diagnosed by histopathological examination. Peripheral ossifying is a reactive benign lesion. A clinical report of 23 years old male with POF maxillary left canine and premolar region is reported with treatment and 1-year follow-up.

**Keywords:** Enlargement, Histopathological, Peripheral ossifying fibroma

**INTRODUCTION**

Fibromas are benign fibrous overgrowths that arise from the mucous membrane. Many fibrous growths originate from periodontium. These lesions occurring on gingiva include peripheral ossifying fibroma (POF), peripheral giant cell granuloma (PGCG), pyogenic granuloma, and focal fibrous hyperplasia.¹² Such lesions may arise as a result of plaque, calculus, microorganisms, restorations, and dental appliances.²³ The POF frequently arises from the interdental papilla and is commonly seen in the maxillary anterior region. The purpose of this article is to present a case of POF and briefly reviewing the current literature. The differential diagnosis with the treatment plan has also been discussed.

**CASE REPORT**

A healthy 23-year-old patient reported to the Department of Periodontics at the I.T.S Dental College Hospital and Research Centre with “swollen gums on upper front teeth region.” On elaborating the chief complaint, the “Swelling” was present for approximately 3 months. The past dental history revealed that swelling on the gums at the same site was present 6 months earlier, also which he got surgically excised. Post 3 months of surgical excision swelling reoccurred. As reported by the patient, the swelling was interfering with his bite and felt uncomfortable. Bleeding occurred when he brushed his teeth and also sometimes while eating. No medical and familial history reported by the patient.

**Clinical Examination**

Clinical examination revealed an erythematous gingival enlargement present on the distal aspect of the maxillary left Lateral Incisor and extending to the distal aspect of the maxillary first premolar (Figure 1). The lesion appeared exophytic with an irregular surface (Figure 2). On the measurement, it was 7 mm in anterior-posterior direction, 9 mm laterally and 5 mm in thickness. The lesion appeared reddish-pink in color. It was slightly pedunculated with a broad base attachment. The lesion was neither fluctuant nor did it blanch on pressure, and had a rubbery consistency.

**Radiographic Examination**

IOPA examination in relation to 23 and 24 regions did not indicate the presence of bony involvement.

**Differential Diagnosis**

The following differential diagnoses were made:
1. Irritaitonal fibroma,
2. Pyogenic Granuloma,
3. PGCG.

**Treatment**

The enlarged tissue was excised using scalpel under (2% Lignocaine with 1:80,000 adrenaline) Local Anesthesia.
Gingivoplasty was performed in the adjacent areas of enlargement for overall contouring of gingiva (Figure 3). Adjacent teeth were scaled to remove any underlying local irritants. The excised tissue was submitted for histopathological analysis (Figure 4). Periodontal dressing (Coe-Pack) was placed at the treated site for patient’s comfort.

**Histopathology Report**
Submitted H and E stained section revealed parakeratinized stratified squamous epithelium with elongated rete ridges. Underlying connective tissue stroma was cellular with plump fibroblasts with foci of osteoid, like calcification, and globular calcified area resembling cementum. Large number of chronic inflammatory cells could also be
appreciated. Histopathological diagnosis of POF was given.

**Follow-Up**

Uneventful healing was observed at 10 days and 20 days postoperatively (Figure 5). There was no evidence of recurrence of the lesion was observed on 1-year follow-up. Then the patient was kept under observation and followed for a year. No reoccurrence of enlargement was observed (Figure 6). Oral hygiene instructions were given to the patient on the follow-up visit at every 3 months.

**DISCUSSION**

In late 1940s, Intraoral ossifying fibromas were first described in the literature. Different names have been given to similar types lesions, such as peripheral fibroma with calcification, epulis, peripheral fibroma, calcifying fibroblastic epulis, peripheral cementifying fibroma, peripheral fibroma with cementogenesis, and peripheral cemento-ossifying fibroma. The sheer number of names used for fibroblastic gingival lesions indicates that there is much controversy surrounding the classification of these lesions. Buchner and Hansen hypothesized that early POF is present with ulcerated nodules having little calcification, which may allow a misdiagnosis as pyogenic granuloma.

The POF, as observed in this case, is a focal, non-neoplastic, reactive tumor-like growth of soft tissue that often arises from the interdental papilla. It is a relatively common lesion, comprising nearly 3% of oral lesions sent for histopathological examination in one study, approximately 1-2% in other studies. Das and Das in 1993 also obtained similar results, with 1.6% POFs among 2,370 intraoral biopsies sent for histopathological examination.

POF may present as a pedunculated enlargement with irregular surface and may have broad attachment base. These lesions may vary in color from red to pink with areas of ulceration, and they may have smooth or irregular surface. Although generally these are <2 cm in diameter, but studies have also shown variation in sizes ranging from 0.2 cm to 9 cm.

PFO may be present for months to years before excision, depending upon the degree of ulceration, interference with function and discomfort to the patient. In general, 60% of POFs were observed in the maxillary arch, and they occur more commonly in the anterior than the posterior region, with 55-60% observed in the incisor-cuspid region.

POFs are believed to originate from gingival fibers of the periodontal ligament as hyperplastic growth of gingiva. This hypothesis is based on the fact that POFs originate exclusively on the gingiva, the close proximity of the gingiva with periodontal ligament and the inverse correlation between age distribution of patients with POF and the number of missing teeth.

Histologically, the POF presents to be a non-encapsulated mass of cellular fibroblastic connective tissue of mesenchymal origin, which is covered with stratified squamous epithelium and is reported to be ulcerated in 23-66% of cases. Most ulcerated lesions are seen in patients in the second decade of life. Treatment primarily consists of conservative surgical excision of the lesion and scaling of adjacent teeth. A variation of rate of recurrence has been observed ranging from 8.9%, 9%, 14%, 16%, and 20%. Therefore, regular follow-up is required.

**CONCLUSIONS**

POF is a relatively slow advancing lesion with generally limited growth. It represents a reactive non-neoplastic lesion of connective tissue. Its asymptomatic nature makes it progressive over a long period of time before patients seek any form of treatment. A slowly progressive pink soft tissue gingival over-growth in the anterior maxillary arch of an adolescent should raise suspicion of a POF.

Treatment modality consists of surgical excision of the lesion, scaling of adjacent teeth. Regular postoperative follow-up is required because of the growth potential of incompletely removed lesions and high recurrence rate of 8-20%.

**REFERENCES**


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