CASE REPORT

PERIPHERAL OSSIFYING FIBROMA: A DIAGNOSTIC DILEMMA

Anuj Singh Parihar[1], Sumit Narang[1], Anu Narang[2], Rajbir Singh[3]

[1]Department of Periodontology, People's College of Dental Sciences and Research Centre, Bhopal, Madhya Pradesh, [2]Department of Conservative Dentistry, People's Dental Academy, Bhopal, Madhya Pradesh, [3]Department of Periodontology, Christian Dental College, Ludhiana, Punjab, India

ABSTRACT:
Peripheral ossifying fibroma (POF) is a non-neoplastic enlargement of the gingival, which is one of the main benign, reactive hyperplastic inflammatory lesions of the gingiva occurring in young adults. It has a very high recurrence rate of around 7-45%. For this reason, a longer patient follow-up is very important in POF. Peripheral ossifying fibroma comprises about 9% of all gingival growths. POF has similar clinical presentations with different lesions which makes it difficult to reach at a correct diagnosis. In this article, we are reporting a case of peripheral ossifying fibroma (POF) in a 16-year-old female patient.
Key Words: Fibrous hyperplasia, Peripheral ossifying fibroma, Peripheral giant cell granuloma, Pyogenic granuloma

CORRESPONDING Author: Dr. Anuj Singh Parihar, Post Graduate Student, People's College of Dental Sciences & Research Centre, Bhopal, Madhya Pradesh, India, E-mail address: dr.anujparihar@gmail.com

This article may be cited as: Parihar AS, Narang S, Narang A, Singh R. Peripheral Ossifying Fibroma: A Diagnostic Dilemma. J Adv Med Dent Scie Res 2015;3(2):162-164.

INTRODUCTION:
Peripheral ossifying fibroma is a gingival lesion specified by high degree of cellularity, usually exhibiting bone formation, although occasionally cementum- like material or rarely distrophic calcification may be found.[1] Eversol and Robin coined the term POF.[2] In 1872, Menzel first described ossifying fibroma, but Montgomery in 1927 gave its terminology.[3] It is usually arising from interdental papilla and irrespective of being inflammatory or neoplastic, PDL cells were thought to be the cells of origin.[2] These lesions gives impression as a slow growing, solitary, nodular mass and can be either sessile or pedunculated.[2] POF comprises about 9% of all gingival growths.[4] POF's are more commonly seen in white than blacks and sometimes they are seen hi Hispanics also.[5] Intra-orally, POF's are mostly found in the interdental papilla between adjacent teeth, like in this article, we are presenting a case of 16-year-old female patient having peripheral ossifying fibroma in maxilla (figure 1).

CASE REPORT:
A 16-year-old female patient reported to the Department of Periodontology, People's college of dental sciences and research centre, Bhopal, India with the chief complaint of gingival overgrowth behind her left side lateral incisor and canine. According to the patient, the overgrowth had gradually increased in size. The gingival overgrowth was oval in shape and 2.0 cm x 2.0cm in size (figure 2).

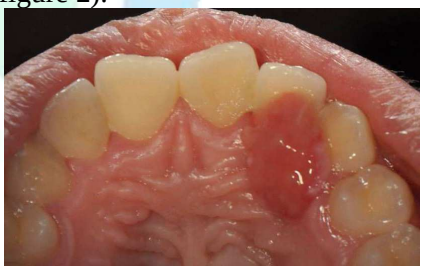

Figure 1: Intra-oral view

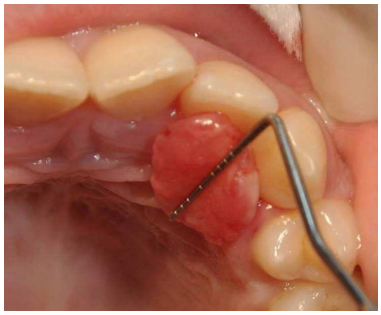

Figure 2: Measurement of lesion

There was no pain reported by the patient. Patient complained of occasional bleeding from the overgrowth during tooth-brushing. The gingival overgrowth was asymptomatic, non-ulcerated and overlying mucosa was also appeared normal. There

was no significant medical history and no other immediate family member had any similar sort of a problem. There was no past dental history and habit history (chewing tobacco or smoking cigarette).

Investigations:
Pre-operative orthopantamograph (OPG) was performed (figure 3).

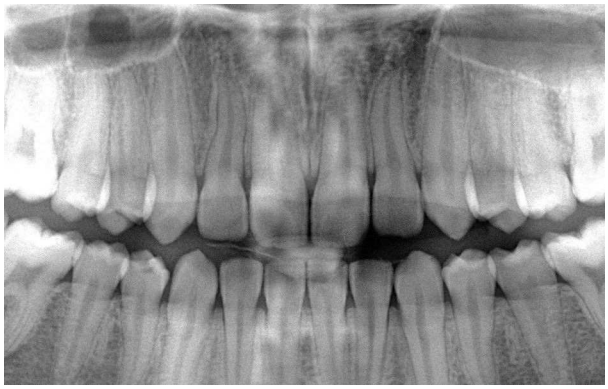

Figure 3: Pre-operative OPG

OPG revealed no interdental bone loss. Blood investigations including bleeding time, clotting time and random blood glucose level were recorded before the treatment. They were found to be with normal range. Excisional biopsy of the excised lesion was done for histopathological findings.

Differential Diagnosis:
On the basis of clinical findings, a differential diagnosis of Peripheral ossifying fibroma, Pyogenic granuloma, Peripheral giant cell granuloma, Peripheral giant cell granuloma, and Fibrous hyperplasia were made. On histological examination of biopsy specimen showed a) high degree of cellularity b) Parakeratinized stratified squamous epithelium overlying connective tissue stroma. c) Calcifications in the hypercellular fibroblastic stroma. Based on history, clinical presentation and histopathological examination, the gingival overgrowth with respect to 22 and 23 regions confirmed as peripheral ossifying fibroma (POF).

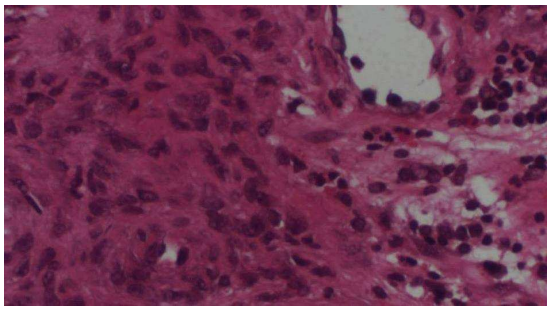

Figure 4: Histophotograph showing calcifications in hypercellular fibroblastic fibroma

Calcifications in the hypercellular fibroblastic fibroma is the classical histopathological feature which differentiate POF from other fibrous proliferations. [5]

Treatment:
The patient had gone for conservative surgical excision under local anaesthesia (figure 5).

Figure 5: Surgical excision

Through scaling and root planning was done before performing the surgery. Also informed consent was taken from the patient before the start of the surgery. Surgical curettage was performed after excision of the lesion. Once stoppage of bleeding occurred, suturing was done followed by periodontal dressing. Patient was prescribed pain killer, antibiotic, and chlorhexidine mouthwash.

Outcome and Follow-up:
Since POF has fairly high recurrence rate, regular follow-ups were arranged (at 1 week, 1 month, 3 month, 6 month, 1 year and 2 year interval) to rule out any recurrence. Healing was uneventful. No Postoperative complications were found.

DISCUSSION:
Since the late 1940s, intraoral ossifying fibroma has been described.[6] Many synonyms have been given till date. Some of the important ones are Peripheral fibroma with calcifications, peripheral ossifying fibroma, epulis, calcifying fibroblastic granuloma, peripheral cementifying fibroma, peripheral fibroma with cementogenesis and peripheral cement-ossifying fibroma.[6] The term POF and PODF should be mixed, PODF is a rare counterpart of central odontogenic fibroma.[7] In North America, PODF is still used as a synonym for POF by many because they think that PODF is derived from periodontal ligament and hence to be odontogenic.[7] The POF is more commonly seen in young females than males.[8] Female to male ratio varies from 2:1 to 3:2 and the common site of occurence for POF is anterior to molars in both maxilla and mandible.[9] Etiological factors for POF

are trauma and irritation, mainly due to the calculus and plaque deposition around the lesion.[10] In 3.8% of cases performed by Buchner and Hansen, POF was found to be associated with an orthodontic appliance.[11] POF represents upto 2% of all oral lesions that are biopsied.[12] Surgical excision with deep and peripheral margins including both periodontal ligament and the affected periosteal component. [12] In addition to surgical resection elimination of surrounding plaque and calculus should also be considered with utmost care and precision.

REFERENCES:

1. Nanda R, Chhabra R, Shamsi AM, Khalid M, Khandelwal D. Peripheral ossifying fibroma: A case report. Int J Dent Med Res 2014;1(3):66-8.
2. Choudary SA, Naik AR, Naik MS, Anvitha D. Multicentric variant of peripheral ossifying fibroma. Indian J Dent Res 2014;25:220-4.
3. Popat Ravi, Popat Parita. Peripheral ossifying fibroma- Case report. Int J Dent Sci Res 2014;2(3):63-5.
4. Bhasin M, Bhasin V, Bhasin A. Peripheral ossifying fibroma. Case Rep Dent 2013;2013: 497234.
5. Pradeep AR, Guruprasad CN, Agarwal E. N Y State Dent J 2012 Jun-Jul;78(4):52-5.
6. Sah K, Kale AD, Hallikerimath S, Chandra S. Peripheral cement-ossifying fibroma: Report of a recurrence case. Contemp Clin Dent 2012;3:S23-5.
7. Poonacha KS, Shigli AL, Shirol D. Contemp Clin Dent 2010 Jan;1(1):54-6.
8. Fausto KA, Robbins and Cotran. Pathologic basis of disease. 7th ed. Philadelphia: WB Saunders; 2008. P. 775-6.
9. Mishra MB, Bhishen KA, Mishra S. J Oral Maxillofac Pathol 2011 Jan;15(1):65-8.
10. Buchner A, Hansen LS. The histomorphologic spectrum of peripheral ossifying fibroma. Oral Surg Oral Med Oral Pathol 1987;63:452-61.
11. Farquhar T, MacLellan J, Anderon RD. Peripheral ossifying fibroma: A case report. JCDA 2008;74(9):809-812.

Source of Support: Nil

Conflict of interest: None declared