

CASE REPORT

RECURRENT PERIPHERAL OSSIFYING FIBROMA – A CASE REPORT

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ABSTRACT:

Peripheral ossifying fibroma (POF) is a non- neoplastic soft tissue tumour affecting the oral cavity. It commonly occurs on facial aspect of the gingival tissue. We report here diagnosed case of rare recurrence of peripheral ossifying fibroma in 60 years old male.

Keywords: Growth, Ossification, Peripheral ossifying fibroma (POF), Peripheral giant cell granuloma, Pyogenic granuloma, Traumatic fibroma

INTRODUCTION

Benign fibrous overgrowths arising from the mucous membrane are termed as fibromas and are frequent growths in the oral cavity. Many of the fibrous growths originate from underneath the periodontium, similar to peripheral ossifying fibroma (POF). POF is an occasional growth of the anterior region of mandible and accounts for 3.1% of all oral tumors and 9.6% of the gingival lesions. About 60% of these tumors occur in maxilla and more than 50% of all cases of maxillary POF are found in the incisors and canine areas.¹ Synonyms of POF are peripheral cementifying fibroma, calcifying or ossifying fibroid epulis and peripheral fibroma with calcification. It is usually associated with irritant agents such as calculus or bacterial plaque on teeth, orthodontic appliances, ill-adapted crowns, and irregular restorations.² It is commonly seen in female adolescents and young adults (peak age range is between 10 and 19 years)³ as a common gingival growth in the vicinity of the interdental papilla of the maxillary incisors or canines.² It appears as a nodular mass, either pedunculated or sessile. The color ranges from red to pink and the surface is frequently, but not always ulcerated.³ The lesion is usually present for many months to years before it is diagnosed. POFs are usually less than 1.5 cm in diameter, and diagnosis can be made by clinical inspection, radiological findings and biopsy.^{3,2}

CASE REPORT

A 60 year old male patient reported to our department with the chief complaint of growth on his gums around upper front teeth since 2-3 yrs. Patient reported that growth was sudden in onset and initially it was of peanut sized and it gradually progressed to attend the present size. Volume 5, Issue 2, 2016

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patient did not report any discomfort or pain with the swelling. Patient also reported that he had similar kind of growth in the same region about $1^{1/2}$ years ago. According to patient, patient had history of accident and fractured his maxillary anterior teeth, which subsequently replaced by fixed prosthetic denture. Patient reported he had noticed similar kind of growth of present type following the placement of Fixed Partial Denture. For the same complaint patient consulted a physician at general hospital and got the tumor excised. The growth was provisionally diagnosed as Traumatic fibroma by the General Surgeons at hospital. Histopathology report of first episode was not available with patient. The present episode appears to be recurrence of earlier lesion. Patient's medical and family history was non-contributory. On general physical examination no abnormality was found.

Intraoral examination revealed a solitary (figure 1), pedunculated growth seem to be arising from interdental papillary gingival (figure 2) with labial aspect of 11, 21. The growth extending on cervical one-third of 11 and 21. The growth appears to be oval in shape, approximately 1 X 1.5 cm in size. The margins of growth are well defined. Mucosa over the growth is grayish white and reddish in colour in parts. No pulsation were observed. On palpation, all inspector findings were confirmed like size, shape and extend were confirmed. Growth was firm in consistency, non-compressible, on tender in nature, no bleeding or pus discharge elicited on provocation. Growth was mobile and can be separated partly from underlying teeth. The grayish white areas were observed on growth which indicate irritation, trauma from food substances, tooth brushing etc.On basis of history, clinical examination and a provisional diagnosis of peripheral ossifying fibroma with upper front teeth region was given. Traumatic fibroma, Peripheral giant cell granuloma and Pyogenic granuloma were considered as the differential diagnoses.

Intial radiographic examination of the lesion did not revealed any calcifications. Patient was referred to department of Periodontia for surgical excision (figure 3). Radiograph of excisiced specimen revealed radiopaque foci suggesting presence of calcification (figure 4). On basis of which radiographic diagnosis of ossifying fibroma was given. Then specimen was send to histopathological examination which showed stratified squamous epithelium encircling a dense fibrous stroma, bundles of collagen fibres and areas of ossification suggestive of fibroma with ossification. Based on the history, clinical examination, radiographic findings and histopathological findings, a final diagnosis of recurrent peripheral ossifying fibroma (POF) was made. The tumour was removed by laser surgery by department of Periodontia. The patient was kept under periodic postoperative follow-up for six months. Healing was uneventful and no recurrence has been noted.

DISCUSSION

In oral cavity periodontium can show different types of focal overgrowths. These lesions arise due to overgrowth and proliferation of different components of connective tissue in periodontium, i.e. the fibers, bone, cementum, blood vessel or any particular type of cell. The Volume 5, Issue 2, 2016

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lexicon of focal proliferative lesions commonly occurring on gingival tissue includes fibroma, giant cell fibroma, pyogenic granuloma, peripheral giant cell granuloma, POF and POF.Most of these lesions are reactive chronic inflammatory hyperplasias, with minor trauma or chronic irritation being the etiologic factors.¹

The nomenclature of these lesions is done in such a way so as to highlight the difference in nature of growth, location of growth, origin and the dominant proliferating histological component/cells in the lesion. The lesions which are present intraosseously are termed as "central lesions", whereas their extraosseous counterparts or the lesions which appear on outer soft tissue (e.g. gingiva) are termed "peripheral lesions". Also, a lesion may arise due to inflammation because of a stimulus and is called as a "reactive lesion" or it can be truly "neoplastic" where it is classified as a benign or a malignant neoplasm.¹

The term POF was coined by Eversole and Robin. It occurs exclusively on gingiva. It is a relatively common growth of gingiva and is considered to be reactive in nature rather than neoplastic. POF is characterized by a high degree of cellularity usually exhibiting bone formation, although occasionally, cementum-like material or dystrophic calcification may also be found.^{1,5}

As the lesion occurs only on gingiva and is supposed to be derived from periodontal ligaments, some authorities believed the lesion to be odontogenic in origin. Presently, the origin and pathogenesis of the lesion is unknown. However, due to their clinical and histopathologic similarity, it is considered that at least some cases of POF may arise as a result of maturation of a long-standing pyogenic granuloma¹

POF has a peak incidence in young and teenaged females. Cundiff reported that the lesion is prevalent between ages of 5 and 25 years,⁶ with a peak incidence at 13 years of age. Cundiff also reported a definite female predilection. Female to male ratio may vary from 2:1 to 3:2. The site of occurrence of POF is usually anterior to molars in both maxilla and mandible equally and in more than 50% of cases in the incisor, and cuspid regions.^{1,3}

Clinically, the lesion appears as a nodular mass which may be pedunculated or sessile, pink to red in color and surface is usually but not always ulcerated. In the present case also, the lesion occurred in a middle-aged male in maxillary anterior region and appeared as a nodular pale to pink growth without ulceration.^{1,7}

Radiographic features of the periapical ossifying fibroma vary. Radiopaque foci of calcifications have been reported to be scattered in the central area of the lesion, but not all lesions demonstrate radiographic calcifications. Underlying bone involvement is usually not visible on a radiograph. In rare instances, superficial erosion of bone is noted.⁸



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Figure 1: Solitary growth



Figure 2: Pedunculated growth arising from interdental papillary gingiva



Figure 3: Specimen

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Figure 4: Radiograph of specimen showing radiopaque foci

The clinical differential diagnosis of POF includes Traumatic fibroma, Peripheral giant cell granuloma and Pyogenic granuloma.POF lacks the purple or blue discoloration commonly associated with peripheral giant cell granuloma and radiographically shows flecks of calcification. It is possible to histologically differentiate PGCG and peripheral odontogenic fibroma from POF as PGCG contains giant cells, whereas peripheral odontogenic fibroma contains odontogenic epithelium and dysplastic dentine; all the feature are not seen in POF. Pyogenic granuloma is eryethmatous in appearance due to abundant capillary formation because of which it bleeds profusely which is not seen in POF. Traumatic fibroma occurs because of constant irritation which causes keratosis on surface and on radiograph there is no ossification seen like POF.⁹

Therapeutic management of the extensive POF consisted of complete excision and oral prophylaxis. Follow up is essential because of the recurrence. Rate of recurrence is 8.9% - 20%.^{5,10} Thus, regular follow-up is required and incomplete removal of lesion or failure to eliminate local irritants may lead to recurrence of the growth.³

The case presented here compliened all the clinical features and radiographic features mentioned in the literature except the fact that the age of the patient was 60 years which is in contrast to the literature. The tumour has also showed recurrence which again matches with the literature.

CONCLUSION

POF being one of the commonest solitary swelling in the oral cavity Peripheral ossifying fibroma is slowly progressing gingival enlargement which has to be differentiated from neoplastic growth and other gingival growth forms. In the case presented above we can conclude that with proper history, intra/extraoral examination, radiographic findings and haematologic findings a firm diagnosis of the lesion can be made. Laser excision of the



lesion is the advised management with timely follow up to counter any chances of recurrence.

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