

Case Report**Management of a Gingival Tumor: Peripheral Odontogenic Fibroma: A Case Report**

Roopa DA, Singh S, Singh A, Ramesh G

Abstract: The peripheral odontogenic fibroma is a tumor that occurs exclusively in the soft tissues covering tooth-bearing areas of the jaws. In present case a 35 year old female patient reported with localized enlargement arising from the interdental papillae on the lingual aspect of mandibular canine-premolar region. Thorough scaling and root planning was done. The lesion was excised under local anesthesia with the help of Orban's and Kirkland knife and sent for histopathological examination. Case was diagnosed as Peripheral odontogenic fibroma according to clinical features & histological report. Patient was reviewed after 6 months & no recurrence was observed in this period. The patient was then put into maintenance phase.

Keywords: Enlargement; Fibroma, Interdental papilla; Tumor.

INTRODUCTION

The peripheral odontogenic fibroma (POF) is defined as a relatively rare tumor that occurs exclusively in the soft tissues covering tooth-bearing areas of the jaws.¹ Peripheral odontogenic fibroma was first defined by Gardner, which was initially thought to be a rare extra osseous counterpart to central odontogenic fibroma and distinct from peripheral ossifying fibroma.² The World Health Organization (WHO) define Peripheral Odontogenic Fibroma as "a benign odontogenic neoplasm of fibroblastic origin characterized by relatively mature collagenous fibrous tissue and varying amounts of odontogenic epithelium with potential to occur in either a central or an extra osseous location. The extra osseous counterpart is designated as peripheral odontogenic fibroma. A slight female predominance has been seen in a literature review by Daley et al. Age at diagnosis varies with a peak in the third and fourth decades of life.³

CASE REPORT

A 35 year old female patient reported in the Department of Periodontology, Rama Dental College, Kanpur, with localized enlargement arising from the interdental papillae on the lingual aspect of mandibular canine-premolar region (Fig1). The Patient noticed a small growth which has increased to the present size since 5 months, causing slight displacement of both the teeth and creating a space between

them. On examination the growth was solitary, approximately 2 x 2.5 cm in size, was found to be sessile growth i.r.t 44&45 with mild ulceration on the surface of the growth. On palpation the lesion was firm, non tender & slightly erythematous. Periodontal examination revealed the presence of localized 3-4mm deep pocket and sub-gingival flecks of calculus in relation to the right canine-premolars. A Radiograph of the involved area revealed non-significant bone loss. Patient had a very poor oral hygiene.



Fig. 1: Sessile gingival growth seen i.r.t 44&45

A clinical diagnosis of generalized mild to moderate chronic periodontitis with focal fibrous hyperplasia/irritation fibroma was made. Thorough scaling and root planning was done. The lesion was excised under local anesthesia and sent for histopathological examination. The growth was excised with the help of Orban's and Kirkland knife. Periodontal pack was placed and the patient was recalled after 7 days for pack removal. Post operative healing was uneventful and the

patient was instructed to follow thorough oral hygiene (Fig 2&3). The Patient was reviewed after 4 weeks, 3 months and 6 months, to check for recurrence. No recurrence was observed in this period. The patient was then put into maintenance phase (Fig 5).



Fig. 2: Fibrom excision being performed



Fig. 3: Fibroma Excised



Fig. 5: Complete healing observed after 6 months

On histopathological examination, H & E stained sections revealed the presence of hyperplastic stratified squamous epithelium with long and coalescing retepegs. Few areas of epithelium showed changes towards hyperchromatic cells with stellate reticulum like cells within the epithelium. The underlying connective tissue stroma was loose to dense with myxomatous changes at few areas. There were small rests, chords and strands of

odontogenic epithelium within the stroma (Fig 6). There was also area of ulceration with dense infiltration of chronic inflammatory cells with dilation & proliferation of blood capillaries. Final diagnosis of Peripheral odontogenic Fibroma was made.



Figure 6: Photomicrograph shows cellular myxomatous to fibrous stroma interspersed with odontogenic cells in the form of strands (10X magnification).

DISCUSSION

Peripheral Odontogenic Fibroma is the only Peripheral Odontogenic Tumor that is more frequent than its central counterpart. The mean age at diagnosis for the population at large is 32.3 years, and there is a slight female preponderance. The mandibular incisor/canine and premolar areas are the most prevalent sites, affecting both the buccal and lingual aspects of the gingiva.⁴ POF is frequently misdiagnosed as pyogenic granuloma. Clinical features of pyogenic granuloma are very similar to those of Peripheral Odontogenic Fibroma and make it difficult to differentiate it from Peripheral Odontogenic Fibroma. Manor et al have suggested that Peripheral Odontogenic Fibroma, the most common peripheral odontogenic tumor, should be considered for the differential diagnosis of gingival lesions.⁵

The Peripheral odontogenic fibromas is an uncommon exophytic mass found on the gingiva and can clinically mimic a variety of reactive lesions and neoplasm. In the past Peripheral Odontogenic Fibroma has also been designated as 'odontogenic gingival epithelial hamartoma' by Baden & co-workers and as

'peripheral ameloblastic fibrodentinoma by many workers. At one time, the terms 'Peripheral ossifying fibroma' and 'peripheral odontogenic fibroma' were used interchangeably. Gardner in 1982 defined POF and that the term be restricted to the extraosseous counterpart of central odontogenic fibroma (WHO-type).⁶ They are rare and comprise only 0.05% of all biopsy specimens, but they are the most common peripheral odontogenic tumor. The ratio of occurrence of the central to peripheral odontogenic fibroma is 1.4:1.4.⁷

Over years, Peripheral Odontogenic Fibroma has been widely accepted as an odontogenic tumor of mesenchymal origin. The clinical differential diagnosis includes inflammatory lesions such as fibrous hyperplasia, peripheral Fibroma, peripheral odontogenic tumors, reactive lesions like peripheral giant cell granuloma, peripheral ossifying fibroma, pyogenic granuloma, epulis fissuratum and gingivitis.⁶ The present case report in a 35 years old female showing the feature of sessile growth with one area of mild ulceration seen on the surface of the growth between canine and premolars with mild displacement of canine & 1st premolar in 4th quadrant which is similar to the features reported by Lin et al.⁵ The present case was diagnosed on the basis of clinical & histological features. Patient was reviewed after 4 weeks, 3 months and 6 months, to check for recurrence. No recurrence was observed in this period.

CONCLUSION: All gingival growths should be assessed by the clinical, radiographic and histopathologic investigation in addition to regular follow-ups of all such patients.

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