

Peripheral Odontogenic Fibroma : A Case Report

Vinayak V Meharwade¹, Vidya V Meharwade²

1- Assistant Professor, Department of Periodontology, Sinhgad Dental College and Hospital, Pune, Maharashtra, India.

2- Lecturer, Department of Conservative, Sinhgad Dental College and Hospital, Pune, Maharashtra, India.

Correspondence to:

Dr Vinayak V. Meharwade BDS, MDS
Assistant Professor, Department of Periodontology
Sinhgad Dental College and Hospital, Pune, Maharashtra.

Contact Us : editor@ijdmr.com
Submit Manuscript : submissions@ijdmr.com
www.ijdmr.com

ABSTRACT

Gingival enlargement is most common occurring entity in oral cavity. Peripheral odontogenic tumor is one of the rare forms of benign gingival enlargements. It occurs as unencapsulated, sessile, gingival mass, commonly presenting in anterior region. It is composed of fibrous connective tissue associated with various amounts of calcifications and islands of odontogenic epithelium. It is frequently misdiagnosed as pyogenic granuloma, peripheral giant cell granuloma, or odontogenic tumors, due to similar clinical features. Hence histo-pathological examination is necessary for accurate diagnosis, and differential diagnosis is important because, peripheral odontogenic fibroma has tendency to recur. Present case of 18year female, reports clinical, histo-pathologic features and radiologic findings of a large peripheral odontogenic fibroma.

KEYWORDS: Fibroma, Gingival Neoplasms, Odontogenic Tumors

INTRODUCTION

Localized reactive or inflammatory proliferative lesions are fairly common in oral cavity which presents as localized gingival enlargement.¹⁻³ Such reactive lesion are commonly associated with local factors such as plaque, calculus etc.¹⁻³ One of such benign localized gingival enlargement which is relatively rare in occurrence is odontogenic fibroma.^{4,5} Odontogenic fibroma occurs as central or as peripheral lesion. WHO classification presents detailed explanation of central odontogenic fibroma and briefly states that peripheral odontogenic fibroma is

extra-osseous counter part of central odontogenic fibroma.⁵ It is characterized by fibroblastic connective tissue with variable amount of apparently inactive odontogenic epithelium with or without varying amount of calcification.⁵⁻⁷ Sometimes it may also show presence of variable amount of myxoid connective tissue. As a result it was also called as odontogenic epithelial hamartoma, hamartoma of dental lamina, peripheral ameloblastic fibrodentinoma, and granular cell odontogenic fibroma.⁸⁻¹¹ The present case report describes clinical, Histo-pathological features of

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peripheral odontogenic fibroma of maxillary anterior region.

CASE REPORT

A 18 year systemically healthy non-smoker female presented to our private practice with a painless localized gum swelling on the facial aspect of maxillary anterior teeth (Figure No.1). This swelling was initially very small and has grown to present size within a period of 10 months. On examination this reddish pink well-demarcated sessile lesion was oval, firm in consistency and overlying non-ulcerated mucosa was erythematous. The lesion measured 25mm by 20mm extending from distal of 13 to mid-buccal of 14 teeth and involved attached, marginal and papillary gingiva (Figure No.2). Patient had generalized shallow pocket with poor oral hygiene. Peri-apical radiograph of 12 and 13 teeth revealed normal findings.

Local anesthesia was administered and a wide excision of lesion was performed along with gingivoplasty of adjacent gingival tissue to create symmetrical postoperative gingival contour. Postoperatively periodontal pack was placed and that uneventful. The patient was followed up for 2 years at every 6 month interval and there was no recurrence seen.



Figure No.1: Buccal view of the lesion.



Figure No.2: Occlusal view of the lesion.

HISTOLOGY

H and E section shows predominantly fibro-cellular connective tissue with overlying hyperplastic stratified squamous epithelium with slender deep penetrating rete pegs. The connective tissue shows dense infiltration of inflammatory cells chiefly plasma cells and lymphocytes (Figure No.3). Few islands of odontogenic epithelium were seen within fibrous connective tissues (Figure No.4a,4b,4c). Areas of calcification resembling dentinoid and osteoid tissue were seen.

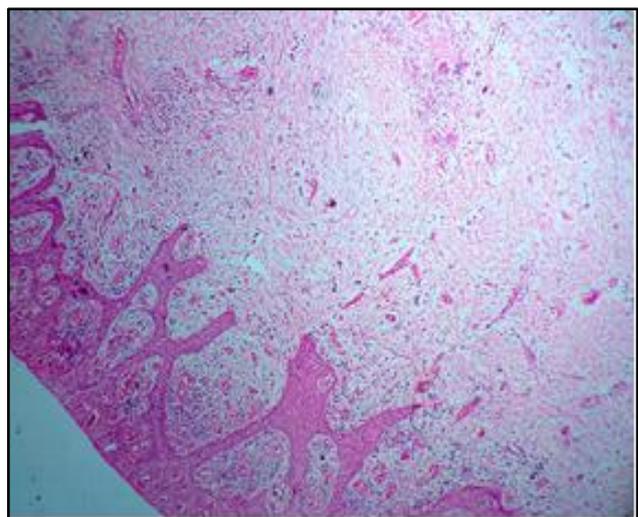


Figure No.3: Photomicrograph of lesion showing surface squamous epithelium exhibiting slender, deep penetrating rete pegs. (Haematoxylin and Eosin stain [H&E], 4x).

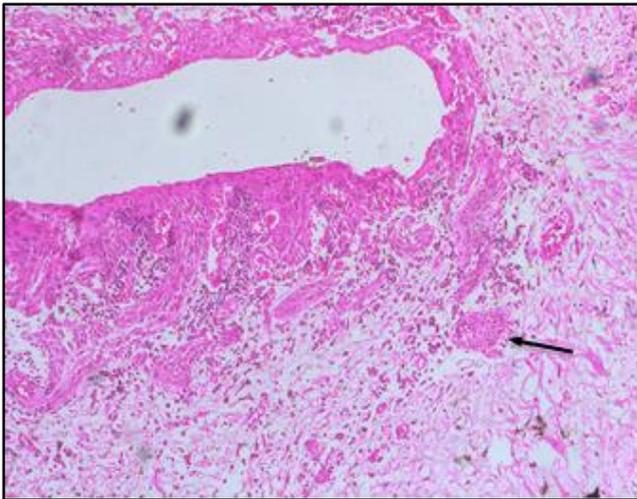


Figure No.4a: Photomicrograph of lesion showing inflamed fibrous connective tissue with island of odontogenic epithelium.(H & E, 4x).

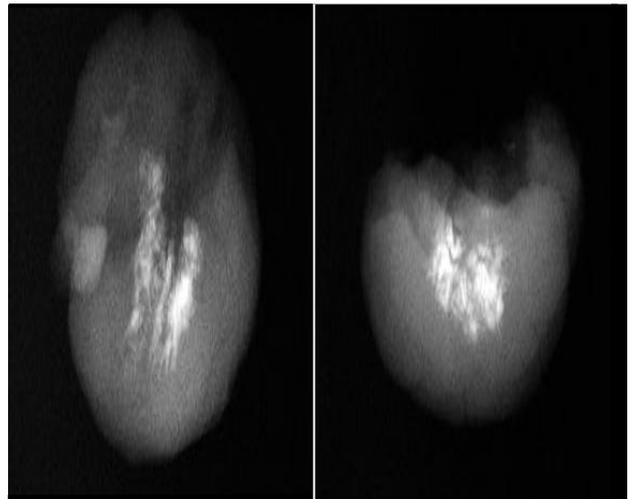


Figure No.5: Radiograph of the excised lesion showing central areas of calcification.

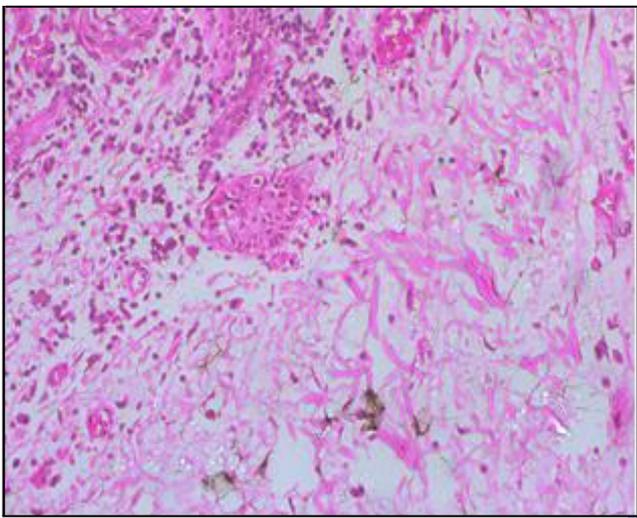


Figure No.4b: Photomicrograph of lesion showing inflamed fibrous connective tissue with island of odontogenic epithelium.(H & E, 10x).

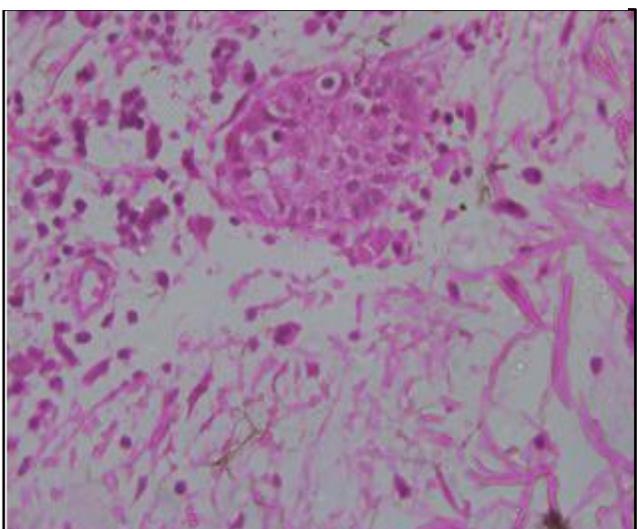


Figure No.4c: Photomicrograph of lesion showing island of odontogenic epithelium.(H & E, 40x).

DISCUSSION

Gardner (1982), describing the nature of peripheral odontogenic fibroma (POF), considered it to be extra-osseous counterpart of central odontogenic fibroma.¹² Demographic data from the literature indicates peak occurrence of POF is third decade and commonly in incisor canine region followed by premolar and molar area.^{7,13,14,15} It is more prevalent in females. Very few cases have been reported in pediatric age group (23.2%).⁷ Thus the present case was unique as lesion was seen in 18 year female in canine premolar region. On comparing the size of lesion the mean size report was 1.2mm.⁷ In this case the size of lesion was 25mm by 20mm, which was, much more than the mean size reported in literature. But Lin et al have reported POF of size 4.5cm by 4cm.¹⁶ The present case was followed for only 2 years, as patient did not maintain follow up schedule. There was no recurrence seen during this follow up period. But Armas et al have reported recurrence on two occasions over a period of 17 years.¹⁷ According to Daley and Wysocki the was significant recurrence rate (38.9%) while Ritwik et al reported recurrence rate of 50%.^{7,15} The reason cited for recurrence was budding of basal cell layer of surface

epithelium.⁷ Thus further evaluation was necessary to know about recurrence rate in this patient.

Very few authors have reported radiographic findings of POF.⁷ Horizontal bone loss or normal radiographic features are common findings on periapical radiographs. Although periapical radiograph in the present case did not show any radiographic changes, but radiograph of the excised lesion showed areas of radiopacity within the central portion of the lesion (Figure No.5). As per our knowledge such finding has not been reported in literature so far which is unique to this case report.

On comparing the histologic features of the present case, it was seen that most of the findings were similar to characteristics results described in the literature.^{9,11,13-15} But it was seen that occurrence of islands of odontogenic epithelium were very few and were not associated with areas of calcification.

CONCLUSION

The present case report of large localized gingival enlargement is unique in terms of its age of occurrence, size of lesion and its radiographic features. But revelation of odontogenic epithelial island within the fibrous connective tissue during histopathologic examination leads us to definitive diagnosis of peripheral odontogenic fibroma. Thus localized gingival enlargement should be carefully evaluated so that accurate diagnosis can be made for the benefit of the patient.

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