

Recurrent Peripheral Ossifying Fibroma: A Case Report of Recurrence after 5 years

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ABSTRACT

Localized growths are commonly seen on gingiva. Many of them are reactive rather than neoplastic lesions. Clinically it becomes difficult to differentiate one specific entity from other. Histopathological examination is required for confirmative diagnosis. Peripheral ossifying fibroma is one such lesion. The signs of recurrence in spite of thorough excision and debridement exposed the need for further study of the causes of recurrence and possible modes to prevent recurrence. We present a case of recurrence of peripheral ossifying fibroma in a 40 year female which recurred after 5 years.

Key words: Peripheral ossifying fibroma, Interdental papillary lesion

INTRODUCTION

Ossifying fibroma is a benign bone tumor, considered to be a type of fibro-osseous lesion. Its origin is supposed to be from periodontal membrane.¹ There are 2 types of ossifying fibroma: central and peripheral. Central type arises from endosteum or periodontal ligament adjacent to root apex and expands to medullary cavity of bone, whereas peripheral occurs exclusively on soft tissue covering the alveolar process.² Peripheral ossifying fibroma is a reactive lesion and originates from periodontal ligament. Clinically it shows benign behaviour.³ This lesion is more prevalent in women and generally

occurs in second decade of life. Maxilla is most commonly affected. It occurs on gingiva and mostly seen anterior to molars as interdental papillary lesion.⁴

CASE REPORT

A 40 years old female patient reported to Department of Oral Medicine and Radiology, Swargiya Dadasaheb Kaleigh Smruti Dental College and Hospital, Nagpur with the chief complain of swelling in upper front region of jaw since 3 months. History of present illness revealed that Patient was apparently alright 3 months back then she started noticing swelling in upper front region of jaw. The swelling was gradual in onset, initially small in size and gradually increased to the present size. The swelling was associated with continuous pain which was localized, and mild in intensity which aggravated on brushing. Bleeding from the swelling was also noticed while brushing. She gave history of trauma 10 years back. There was no history of pus discharge, no history of fever. Her past medical history was not relevant. Her past dental history revealed swelling in upper anterior region of jaw 5 years back for which excision of lesion was done. Histopathological diagnosis was peripheral ossifying fibroma.

On general examination, Patient was conscious, co-operative, well oriented to time, place and person. Her vital parameters

were within normal limit. On intraoral examination a single soft tissue growth seen on interdental papillary gingival region on labial aspect with respect to 21 extending antero-posteriorly from mesial of 21 to distal of 21 and superior-inferiorly from attached gingiva to marginal gingiva of 21. It is 1.5 x1cm in size. Surface was smooth. It was roughly oval in shape and reddish pink in colour. Surrounding mucosa was normal and edges were well defined. There was no visible pulsation, discharge and sinus formation. On palpation, It was sessile, firm, non-tender with smooth surface and edges were well defined. (Fig 1). On hard tissue examination, Ellis class I # with 21. Tenderness was negative with 21. Pit and fissure caries was seen with 36,46. There was generalized attrition. Root piece was present with seen 26. Vitality test was done which showed non vital with 21 and 11. Radiograph showed no bony changes (Fig 2). Routine blood investigations were within normal limits. The lesion was completely

excised (Fig 3) and specimen sent for histopathological examination.



Fig 1: Pre-operative clinical photograph showing gingival lesion

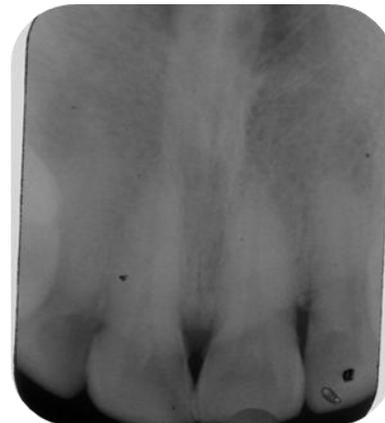


Fig 2: IOOPA of anterior region showing no bony changes



Fig 3: During excision and Post operative photographs

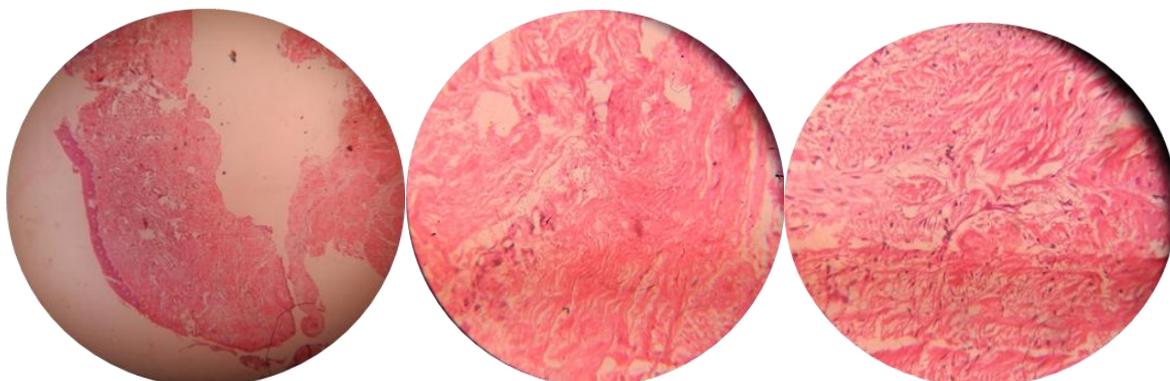


Fig 4: Histopathological H and E stained sections showing features suggestive of recurrence of ossifying fibroma.

Histopathological examination: The H and E stained section showed connective tissue lined by epithelium of non-keratinized stratified squamous epithelium. The connective tissue consisted of abundant fibroblasts and collagen fibres. There was absence of neovascularization and minimal inflammation /inflammatory induced proliferation (Fig 4). Based on clinical presentation, present histopathological findings and past histopathological report, diagnosis of recurrence of peripheral ossifying fibroma was made.

Management: The recurrence rate of peripheral ossifying fibroma is high for reactive lesions which varies from 8.9-20% and may be due to incomplete removal of the lesion⁵. Therefore, local resection with deep margins including both the periodontal ligament and the affected periosteal component was done under local anaesthesia, after the elimination of local etiological factors.

DISCUSSION

Peripheral ossifying fibroma is the 3rd most common localized reactive lesion. The term was coined by Eversole and Robin in 1972.⁶The etiology of Peripheral ossifying fibroma is unknown; however, the lesion is thought to arise from cells of periodontal ligament due to trauma and local irritation such as dental plaque, microorganism, ill-fitting denture etc.⁷ The etiology in present case can be trauma to tooth. Hormonal influences may play a role, as it has higher incidence among females, increasing occurrence in the second decade and declining incidence after the third decade (Kenney et al, 1989). In the present case report the lesion was reported in female patient which indicate that hormones may have probably influenced in higher incidence in female population.⁸ Peripheral ossifying fibroma lesion does not require imaging beyond radiograph⁹. Clinically it present with slow growing nodular mass. It may be either sessile or pedunculated¹⁰. These findings are consistent with present case. Most of the cases of peripheral

ossifying fibroma reported to be around 1.5cm.¹¹. In present case the dimension of lesion were similar. Regarding the etiology, two theories have been proposed. First theory states that POF starts as pyogenic granuloma and later during development it gets calcified. Second theory, POF originate as inflammatory hyperplasia of PDL cells. Considering the proximity of PDL to gingiva and presence of oxytalan fibers within the mineralized matrix the second theory is most accepted.⁵ Peripheral ossifying fibroma can show diffuse foci of calcification but not all lesions exhibit radiographic changes.¹²A definitive diagnosis of Peripheral ossifying fibroma is made by histopathological evaluation of biopsy specimen. The following features are usually observed during microscopic evaluation.¹³ Benign fibrous connective tissue with varying amount of myofibroblasts and collagen, sparse to profuse endothelial proliferation. Mineralized material which may represent mature, lamellar or woven osteoid, cementum like material or related findings can also be identified in these lesions.

The rate of recurrence has been reported to vary from 8.9%to20%; Kenney *et al.*, 1989; Eversole and Rovin,1972] average time interval for the first recurrence is 12 months [DasandAzhar,2009].¹⁴ Therefore, regular follow-up is required. Recurrence in the present case can be due to previous incomplete surgical removal of the lesion with local debridement.

CONCLUSION

A peripheral ossifying fibroma is a slowly progressing lesion with limited growth. Many cases will progress for long periods before patients seek treatment, because of the lack of symptoms associated with the lesion. Treatment consists of through local debridement and wide surgical excision, including the periosteum and scaling of the adjacent teeth. Close postoperative follow-up is required due to its high rate of recurrence. A case of

recurrent ossifying fibroma after 5 years is reported.

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