



PERIPHERAL OSSIFYING FIBROMA- CASE REPORT WITH A RARE ETIOLOGY

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ABSTRACT

Fibroma is a relatively common gingival lesion with varying etiologies. It is mostly seen in the adolescent females however, present case was different. A 52 years old female patient came with the complaint of a painless gingival swelling in the upper front tooth region which was interfering while mastication. Examination and history taking pointed towards a diagnosis of Irritational fibroma. Dilemma exists regarding the diagnosis of such lesions specially when they occur on rare sites. After excision, histopathological reports confirmed it as Peripheral ossifying fibroma.

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INTRODUCTION

The peripheral ossifying fibroma (POF) is a relatively common gingival growth that is considered to be reactive rather than neoplastic in nature. The pathogenesis of this lesion is uncertain.¹ It appears as a nodular mass, either pedunculated or sessile and is often associated with sharp teeth, rough restoration and ill fitting dentures.² Present case is similar gingival overgrowth with an uncommon etiological factor seen in fifth decade of a female.

CASE REPORT

A healthy 52 years old female presented to the department of Periodontics at Modern Dental College and Research centre, Indore with complaint of a painless swelling in her upper front teeth. According to the patient, this reddish pink lump like mass was present for approximately 6 months growing slowly and now started interfering while biting food and she felt uncomfortable. It was not preceded by any trauma or toothache. Occasionally, it bled after brushing. On asking, patient gave history of keeping burning camphor in her mouth for 10 days twice a year as a religious Hindu ritual since last 10 years. On observation, a solitary well defined sessile swelling measuring 1.5cm X 1cm was seen extending from attached gingivae of central and lateral incisors to the middle third of the crown supero-inferiorly and covering central incisor and lateral incisor laterally.

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Color of the swelling was pinkish and surface was normal with no secondary changes. It was non-tender on palpation and firm and considerably hard in consistency.

Provisional diagnosis of Irritational fibroma was made on the basis of history and clinical features. Differential diagnosis included Fibrosed Pyogenic granuloma, Peripheral giant cell granuloma (PGCG) and Peripheral ossifying fibroma (POF). Periodontal treatment plan included patient motivation for oral hygiene habits and quitting the habit of keeping burning camphor inside mouth explaining patient the further problems it may cause.

Scaling and root planing (SRP) was done to eliminate the plaque and calculus. Consent for the surgical procedure was obtained from the patient after proper counseling. After 1 week of SRP, re- evaluation was done and surgical excision of the lesion was performed under local anesthesia down to the periosteum using BP blade. Periodontal dressing was placed after controlling bleeding. Post operative instructions were given to the patient and analgesics were prescribed i.e. Tab Diclomol 100mg tablet twice a day. An antimicrobial mouthwash (0.2% CHX gluconate) was prescribed twice a day for 7 days and the patient was recalled after 1 week for follow up.

The excised tissue was sent for histopathologic examination. Multiple bits of H and E stained sections under microscopic examination revealed Peripheral ossifying fibroma. The Specimen showed hyperplastic parakeratinized stratified squamous epithelium with anastomosing rete pegs and fibrous

connective tissue containing irregularly shaped trabeculae of bone, fibroblasts and cementum like material.



Pre- operative facial view



Pre- operative palatal view (Mirror image)



Dimensions of the excised tissue



Post-operative 7 days



Excision of the swelling



Post operative 1 year facial view



Post-operative 1 year palatal view (Mirror image)

1 week post operatively patient presented for follow up examination. On removal of periodontal pack, satisfactory healing was observed. The patient was kept on regular recall visits and was followed up to 1 year. Supportive periodontal therapy was given and stable results were obtained till the last follow up.

DISCUSSION

Gingival overgrowth in the form of local proliferative lesion is common and may arise due to proliferation of different connective tissues in periodontium i.e. fibres, bone, cementum, blood vessel or any particular type of cell.³ Exact etiology is not known but it is believed to be derived from periodontal ligament. Most of these lesions are reactive or chronic inflammatory hyperplasia, with minor trauma or chronic irritation being the etiologic factors.¹ In the present case also, it seems to be originated due to an irritation by burning camphor kept within the oral cavity. Chronic irritation of the periosteal and periodontal membrane causes metaplasia of the connective tissue and result in an initiation of formation of bone or dystrophic calcification.⁴

POF was first reported by the Shepherd in 1844 as alveolar exostosis. Eversol and Robin in 1972, later coined the term peripheral ossifying fibroma.⁵ It occurs exclusively on gingival and is considered reactive rather than neoplastic.⁶ Almost two-third of all cases occur in females, with a predilection for the anterior maxilla.⁷ Hormonal influences may play a role, given the higher incidence of POF among females, increasing occurrence in the 2nd decade and declining incidence after the 3rd decade.⁷ Common site of occurrence is in incisor cuspid regions of both maxilla and mandible.⁸ However in the present case, the patient is 52 years old female opposite to that of common age range. This gives an inference that the chief etiology of the lesion may be irritation only.

Related history included the ritual of keeping burning camphor inside mouth every Navratri (hindu festival celebrated thrice a year). This shows the rigid belief Indian population is carrying over for long periods without giving importance to the risks associated.

Clinically, POF is sessile or pedunculated, usually ulcerated and erythematous or exhibits a color similar to that of surrounding gingiva. It does not blanch on palpation. The lesions of POF are usually less than 1.5-2 cm in diameter, but have been known to grow to larger sizes.¹⁰ Similar presentation was seen in present case.

Gardner¹¹ stated that cellular connective tissue of POF is so characteristic that a histological diagnosis can be made with confidence, regardless of the presence or absence of calcification. The peripheral variant is characterized by the presence of collagenous connective tissue, proliferation of endothelial cells and formation of a mineralized product. Peripheral ossifying fibroma can mimic pyogenic granuloma because sometimes endothelial proliferation is dense in areas of ulceration.¹² Based on similar observations; the diagnosis of present case was confirmed histopathologically as POF.

Treatment usually involves surgical removal of the lesion down to the bone. If there are adjacent teeth, they are cleaned thoroughly to remove any possible source of irritation. Surgical excision can be done using scalpel, laser or radial/electrosurgery.¹³ The carbon dioxide laser can effectively excise the lesion and has been shown to allow diagnostic microscopic evaluation with a minimal distortion of the biopsy sample.¹⁴ The advantages of laser excision are minimal post-surgical pain and no need for suturing the biopsy site. This precise tissue destruction can also result in partial or incomplete removal of the base of the pathologic lesion, which can lead to recurrence.¹⁴ Thus, surgical excision including the involved periodontal ligament and periosteum is the preferred treatment, which was performed in this case.

If surgical intervention in an early stage is not done, POF can become large, causing extensive destruction of adjacent bone and significant functional or esthetic alteration.¹⁵ Therefore the same treatment approach was used in the present case.

Due to the high rate of recurrence (8% to 20%), close postoperative monitoring is required in all cases of POF. POF recurs due to 1) the incomplete removal of the lesion, 2) the failure to eliminate local irritants and 3) difficulty in accessing the lesion during surgical manipulation as a result of the intricate location of the lesion (usually an interdental area).¹⁶ Present case was followed for 1 year in order to check for any recurrence but it was not observed during the follow up period.

CONCLUSION

Being relatively common gingival lesion, POF is of importance for Periodontists. Its clinical features and histopathology is important to differentiate it from Peripheral giant cell granuloma, irritational fibroma and Pyogenic granuloma. Despite its common occurrence in 2nd and 3rd decades of life, it may occur lately due to chronic irritation. Habit of keeping burning camphor within the mouth seems to be a very rare but noticeable etiological factor associated with the swelling. Its excision should be deep to avoid its recurrence and long term follow ups are necessary.

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