



Peripheral Ossifying Fibroma – A Clinical Case Report

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Abstract: Localized gingival growths are one of the most frequently occurring lesions in the oral cavity. These lesions present with few clinical & histopathologic similarities. Among these lesions, an infrequently occurring gingival lesion is the Peripheral Ossifying Fibroma (POF). It is a non-neoplastic enlargement of gingiva which shows areas of calcification or ossification. The present article describes a case of a 52-year-old female who reported with a painless gingival overgrowth in the mandibular anterior region. Clinically, the lesion was asymptomatic, firm, pale pink and sessile. The lesion was surgically excised followed by histopathologic analysis that confirmed it to be POF.

Introduction:

Peripheral ossifying fibroma (POF) is a non-neoplastic entity, which occurs on the gingiva in response to trauma or irritation. It is a reactive, non-neoplastic lesion of connective tissue that primarily arises from interdental papilla. The most common site of occurrence of POF is anterior maxilla and it shows female predilection. POF comprises of 9% of total gingival overgrowths. [1,2] Incidences of recurrence of POFs is found to be 8.9–20% owing to incomplete removal of lesion, improper elimination of local irritants, and inaccessibility during surgical excision because of the intricate location of POF being present usually at interdental areas. In order to avoid recurrences, deep excisions are preferred.[3]

This case report describes a case of POF in a 52-year-old female present in the mandibular anterior region. The lesion was surgically excised and the patient was followed for a period of 1 year and reported no recurrence.

Case Presentation- A 52-year-old female patient reported to the OPD of Department of Periodontology & Implantology, Subharti Dental College & Hospital, Meerut, with the chief complaint of a painless overgrowth in her mandibular anterior region since past 6 months. Intraoral examination revealed a solitary, sessile gingival overgrowth extending mesiodistally from mesial surface of #32 to distal surface of #41. Cervico-incisally, the growth extended from attached gingiva up to the incisal surfaces of the incisors. The colour of the growth was same as that of the involved gingiva with a more reddish pink presentation on the cervical aspect. [Fig.1] On palpation the swelling was non tender, firm, non-compressible and associated with slight bleeding on probing. The growth was oval with approximately 15 mm × 6 mm × 6 mm in size in greatest dimensions. Radiographic examination revealed erosive bone changes around the interdental bone of #32 & #41.

Differential diagnosis included Pyogenic granuloma, Traumatic fibroma and peripheral ossifying fibroma & provisional diagnosis of inflammatory enlargement was made.

Surgical Procedure – After obtaining patient's consent, it was decided to excise the growth conservatively. Adequate local anaesthesia was administered, and the lesion boundaries were marked with a Haematoxylin pencil. [Fig.2] With a #15 blade, the growth was excised. [Fig.3] The excised lesion measured approximately 15 mm × 6 mm × 6 mm. [Fig.4] A collagen sponge was placed at the surgical site over which a periodontal dressing was given. [Fig.5- 6] Postoperative instructions were given to the patient and analgesics & antibiotics were prescribed. The patient was also instructed to use 2% Povidone-Iodine mouth rinse for 10 days and was

recalled after 10 days for re-evaluation and removal of the dressing. The excised tissue was placed in 10% neutral buffered formalin and was sent for histopathological analysis. Biopsy specimen, microscopically consisted of hyperplastic para- keratinized stratified squamous epithelium and mild to moderate distribution of chronic inflammatory cells within the fibrovascular connective tissue stroma. Multiple irregular bony trabeculae showing presence of osteocytes in lacunae could be appreciated. [Fig.7] Correlating the clinical, radiographic and histopathologic features, the final diagnosis of POF was made.

At 10 days post-operative visit, periodontal dressing was removed, and healing was uneventful. Patient is on regular follow-up and no signs of recurrence observed 6 month post-operatively. [Fig.8]

Discussion:

Ossifying fibromas were first described by Menzel in 1872 and Montgomery in 1927 gave its terminology. Peripheral ossifying fibroma are categorized into two types central and peripheral. [4] The central type of ossifying fibroma arises from the endosteum or the periodontal ligament (PDL) adjacent to the root apex and the peripheral type occurs on the soft tissues overlying the alveolar process. POF is a solitary, slow growing nodular mass that is either pedunculated or sessile. Most often its located in the gingival papilla between adjacent teeth.

Although the etiopathogenesis of POF is uncertain, it is believed to be originating from cells of periodontal ligament because of the following reasons –

- a) occurrence mostly in the gingival interdental papilla,
- b) its proximity to the gingival to periodontal ligament,
- c) the presence of oxytalan fibres within the mineralized matrix of some lesion, and the fibro-cellular response in periodontal ligament [5].

Trauma to gingiva, plaque accumulation, ill- fitting appliances and crowns, masticatory forces, broken -down restorations are few of the predisposing factors for the development of POF.

Differential diagnosis of POF includes traumatic fibroma, peripheral giant cell granuloma, pyogenic granuloma, and peripheral odontogenic fibroma.[6]

Peripheral giant cell granuloma shows a purple or blue discoloration that is not present in POF. Peripheral odontogenic fibroma is a rare neoplasm which arises from odontogenic epithelial rests in periodontal ligament or attached gingiva itself.[7] Histologically, peripheral giant cell granuloma contains giant cells and peripheral odontogenic fibroma contains odontogenic epithelium and dysplastic dentine. These features are absent in POF.[8] Traumatic fibroma occur on buccal mucosa along the masticatory line. [9] Pyogenic granuloma presents as soft, friable nodule, small in size that bleeds with tendency to haemorrhage.[10]

Treatment modalities for POF include surgical excision using scalpel, lasers or electrosurgery and removal of local irritants. Rate of recurrence of POF varies from 8.9 % to 20 %. Partial or incomplete removal of the lesion is the most common of recurrence. [1]

Conclusion-

POF is a benign, solitary slowly progressive lesion that is often misdiagnosed as pyogenic granuloma. Therefore, histopathological examination is required to confirm the diagnosis. Preferred treatment is the surgical excision of the lesion that includes the involved periodontal ligament and periosteum, which was done in the present case [11].

References:

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Legends to Figures:

Fig. 1 – Pre-operative view

Fig. 2- Lesions boundaries marked

Fig. 3- Excision using # 15 blade

Fig.4 – Dimensions of excised lesion

Fig.5 — Immediate post-operative view

Fig.6– Placement of collagen sponge

Fig. 7 - Histopathological image of Lesion

Fig. 8- 10 days post-operative view



Fig.1 – Pre-operative View



Fig.2 – Lesions boundaries marked



Fig.3 – Excision using # 15 blade

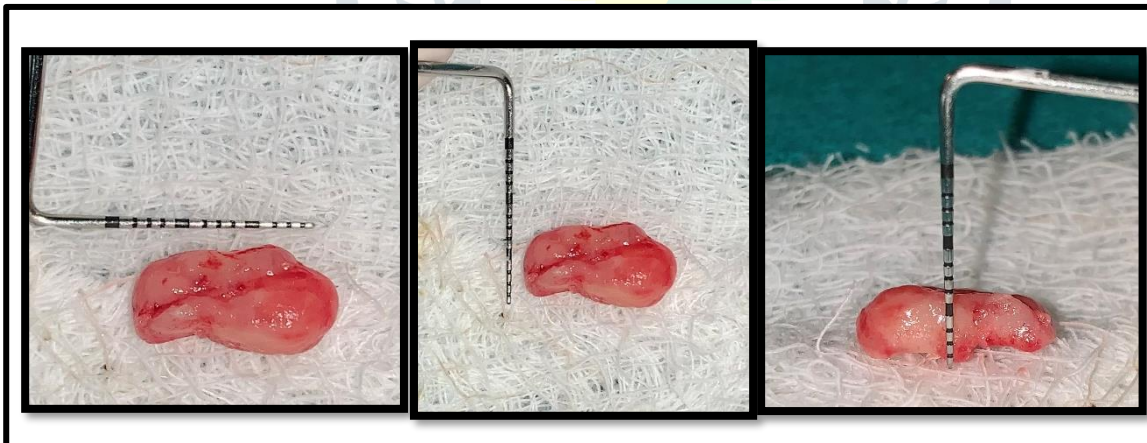


Fig.4 – Dimensions of excised lesion



Fig.5- Immediate Post-operative



Fig.6- Placement of Collagen sponge

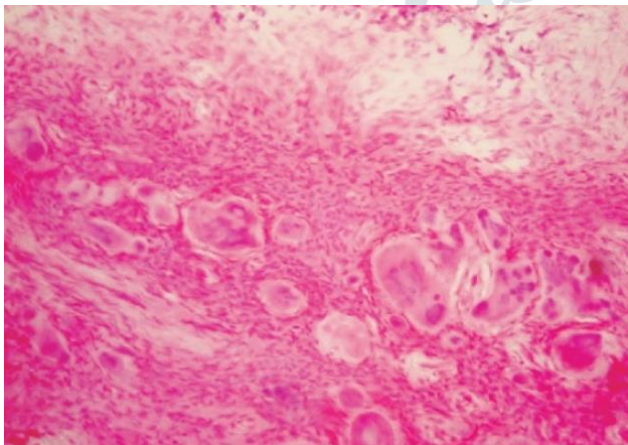


Fig.7- Histopathological image of Lesion



Fig.8- 10-days Post-operative view