Peripheral Ossifying Fibroma

Abstract
Gingival overgrowths are one of the most frequently encountered lesions in the oral cavity. One of the infrequently occurring gingival lesions is the peripheral ossifying fibroma. It is a reactive non-neoplastic gingival overgrowth occurring mostly in the anterior maxilla in teenagers and young adults. Due to its clinical and histopathologic similarities, some of them are believed to develop initially as a pyogenic granuloma that undergoes fibrous maturation and subsequent calcification. The accepted treatment protocol includes surgical excision followed by histopathologic evaluation and follow up. The present report describes a case of peripheral ossifying fibroma occurring in the left anterior maxilla, in a 22 years old female patient.

Key words- peripheral ossifying fibroma, gingival overgrowth, pyogenic granuloma

Introduction
Benign fibrous overgrowths arising from the mucous membrane are termed as fibromas and are frequent growths in the oral cavity. Peripheral ossifying fibroma (POF) is a localized gingival growth, usually arising from the interdental papilla and represents up to 2% of all lesions that are biopsied. Other terms used to describe this lesion...
include peripheral cementifying fibroma, peripheral fibroma with cementogenesis, peripheral fibroma with osteogenesis, peripheral fibroma with calcification, calcified or ossified fibrous epulis and calcified fibroblastic granuloma. It is widely considered that this lesion originates from the cells of the periodontal ligament and may arise as a result of irritants such as trauma, microorganisms, plaque, calculus, faulty restorations, and dental appliances. Females are more commonly affected, and it is mostly seen in the anterior maxilla. Diagnosis can be made by clinical inspection and biopsy. Incidences of recurrence have been put at 16–20%. Deep excisions have been preferred for recurrences.

Case report
A female patient aged 22 years reported to the Department of Periodontology with a chief complaint of swollen gums in the upper left front region of the jaw since a year. This was painless, except for dull pain while mastication. It was slow-growing in nature. The patient had not taken any treatment for the same and had no relevant medical history.

On intraoral examination, a gingival overgrowth was seen on the gingiva labially in relation to the maxillary left lateral incisor and canine. It was circumscribed with well defined borders and extended from the mucogingival junction onto the cervical third of both the teeth. The growth was pale pink in colour, non-ulcerated with a smooth surface and firm on palpation. It measured approximately 1cm by 1cm in size. (Figure 1) No abnormalities were detected in the other areas of the gingiva and oral cavity.

Based on the above intraoral clinical findings and the periodontal status, it was provisionally diagnosed as pyogenic granuloma with a differential diagnosis of peripheral ossifying fibroma, traumatic fibroma, peripheral giant cell granuloma, peripheral odontogenic fibroma. The treatment protocol followed was performance of initial oral prophylaxis and then surgical excision of the entire lesion under local anaesthesia. (Figure 2) Scaling and root planning of the adjacent teeth was done and the bony defect was curetted. (Figures 3, 4) Periodontal dressing was then placed over the surgical site and the excised lesion was sent for histopathological examination.

Histopathological examination of the growth revealed parakeratinised stratified squamous epithelium with long slender rete ridges and discontinuous epithelium. Underlying connective tissue was highly cellular showing large plump fibroblasts intermingled with fibrillar stroma. Variable amounts of round to oval hematoxyphillic areas of calcification were noticed in deeper areas resembling cementum. Interspersed within were relatively eosinophilic irregular calcified areas resembling bone. (Figure 5)

Overall picture was suggestive of 'peripheral ossifying fibroma.' After a follow-up of 6 months, there was no recurrence observed in the patient.
FIGURE 1: Pre-surgical view

FIGURE 2: After surgical excision

FIGURE 3: Excised growth

FIGURE 4: 1 week post-operative view

FIGURE 5: Microscopic appearance
Discussion
The lesions of ossifying fibroma were first described by Menzel in 1872, but it was termed by Montgomery in 1927. It occurs mostly in craniofacial bones and is categorized into two types: central and peripheral. The central type of ossifying fibroma arises from the endosteum or the periodontal ligament adjacent to the root apex and expands from the medullary cavity of the bone, and the peripheral type occurs on the soft tissues overlying the alveolar process. POF may present as a pedunculated nodule, or it may have a broad attachment base. These lesions can be red to pink with areas of ulceration, and their surface may be smooth or irregular. Histologically, POFs contain areas of fibrous connective tissue, endothelial proliferation and mineralization. The lesion may be present for a number of months to years before excision, depending on the degree of ulceration, discomfort and interference with function.

Peripheral ossifying fibroma needs to be differentiated from traumatic fibroma, peripheral giant cell granuloma, pyogenic granuloma, and peripheral odontogenic fibroma. Peripheral odontogenic fibroma is an uncommon neoplasm that is believed to arise from odontogenic epithelial rests in periodontal ligament or attached gingiva itself. Traumatic fibroma occurs on buccal mucosa along the bite line. Pyogenic granuloma presents as soft, friable nodule, small in size that bleeds with tendency to hemorrhage and does not show calcifications. Also tooth displacement and resorption of alveolar bone are not observed. The clinical features of POF are similar to that of peripheral giant cell granuloma (PGCG). However it lacks the purple or blue discoloration commonly associated with PGCG and radiographically shows flecks of calcification. It is possible to histologically differentiate PGCG and peripheral odontogenic fibroma from POF. PGCG contains giant cells and peripheral odontogenic fibroma contains odontogenic epithelium and dysplastic dentine, whereas all these features are not seen in POF.

Peripheral ossifying fibroma is one of the common solitary swelling in the oral cavity and is many times clinically diagnosed as pyogenic granuloma. Radiological and histopathological examination needs to be done for further confirmation of diagnosis. Treatment consists of surgical excision, including the periosteum and scaling of adjacent teeth. Proper postoperative follow-up is required because of the growth potential of incompletely removed lesions and the high recurrence rate.

References

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