CASE REPORT

PERIPHERAL OSSIFYING FIBROMA

AUTHORS: Dr. Prerna Agarwal; PG Student, Dr. Manvi Agarwal; Sr. Lecturer, Dr. Hirak Bhattacharya; Professor, Dr. Mini Saluja; Reader, Department of Periodontology and Implantology
Address Of Correspondence: Dr. Prerna Agarwal 124-A Civil Lines Bareilly-243001 email id: dr.agarwal1086@yahoo.in, Phone No. - 9927900055

ABSTRACT: Peripheral ossifying fibroma is a relatively uncommon gingival growth that is considered to be reactive in nature and postulated to appear secondary to irritation or trauma. They usually occur in young adults with a female predominance and are solitary in nature. We report a case of peripheral ossifying fibroma in a 28-year old female.

INTRODUCTION:
Peripheral ossifying fibroma (POF) is a non-neoplastic enlargement of gingiva that is classified as a reactive hyperplastic inflammatory lesion. In 1872, Menzel first described ossifying fibroma, but only in 1927 Montgomery assigned its terminology. Ossifying fibroma epulis; ossifying fibroma with calcification; peripheral cement-ossifying fibroma and calcifying fibroma are other terms used for peripheral ossifying fibroma.

CASE REPORT
A 15-year-old female patient reported to the Department of Periodontics at Institute of Dental Sciences in Bareilly, India with a chief complaint of a painless gingival growth in relation to upper right front teeth. The swelling started as a small nodule that progressed gradually to the present size within a span of 15 days. The patient did not give any history of trauma, injury, or food impaction and there was no significant medical history. An intraoral examination revealed generalized pale pink gingiva with a well-demarcated, non-tender, firm, focal, sessile nodular growth arising from the interdental papilla of the maxillary right central and lateral incisors and covering the crown of the maxillary lateral incisor (fig.1). The oval-shaped mass was 2.5cm x 3cm in size, with a reddish pink color, smooth surface, and distinct edges. Bleeding on probing was noted. An intraoral periapical radiograph of the maxillary right central and lateral incisors showed no interdental bone loss (fig 2). Clinically, differential diagnoses for the growth were pyogenic granuloma, peripheral odontogenic fibroma, fibroma, and peripheral giant cell granuloma was made. A provisional diagnosis of pyogenic granuloma. Oral hygiene instructions were given to the patient and oral prophylaxis was done. After 2 weeks, the growth was excised conservatively (fig.3) to prevent the development of an unsightly gingival defect in the anterior maxilla, followed by root planing and curettage. The excised tissue (fig.4) was sent for histopathological examination. The patient was recalled after 15 days for evaluation and showed uneventful healing (fig.6). At 2 months recall, recurrence of the growth was not observed (fig.7). Histologically, the specimen showed parakeratinized stratified squamous epithelium and underlying connective tissue, which was composed of densely packed collagen fibers and fibroblasts (fig.5). Deeper areas showed the presence of multiple irregular calcified areas and osteoblastic rimming. Patchy distribution of chronic inflammatory cells was seen. Histologically, the specimen was suggestive of peripheral ossifying fibroma/peripheral calcifying fibroma. Based on clinical and histological findings, the lesion was diagnosed as POF.

Fig.1 Intra oral view     Fig.2 Radiograph
Fig.3 Excision from base     Fig.4 Excised specimen
Fig. 5 Histological Picture     Fig.6 Recall (15 days)
Fig.7 Recall (2 months)
DISCUSSION

Ossifying fibroma occurs mostly in craniofacial bones and is generally categorized into two types: central and peripheral. The central type of ossifying fibroma arises from the endosteum or the periodontal ligament (PDL) adjacent to the root apex and expands from the medullary cavity of the bone. On the other hand, the peripheral type shows a contiguous relationship with the PDL, occurring solely on the soft tissues overlying the alveolar process.

The reasons for considering a PDL origin for POF include: exclusive occurrence of POF in the gingiva (interdental papilla); the proximity of the gingival lesion to the periodontal ligament; the presence of oxytalan fibers within the mineralized matrix of some lesions; age distribution, which is inversely related to the number of lost permanent teeth; and the fibrocellular response in POF, which is similar to the other reactive gingival lesions of PDL origin. The pathogenesis of POF is uncertain. As they resemble clinically and histopathologically to pyogenic granuloma, some consider POF to develop secondary to fibrosis of granulation tissue. Moreover, due to its female gender and second decade predilection, the role of hormones has also been questioned. The most widely acceptable histiogenesis for POF is the inflammatory hyperplasia of the cells of the periosteum or periodontal ligament. The inflammatory reaction is believed to occur secondary to trauma from local irritants such as plaque, calculus, restorations or ill fitting dental appliances. This is convincing, as they occur exclusively in gingival and with the histomorphological evidence of oxytalan fibers within the mineralized matrix. Another interesting observation is the decline in number of cases as age advances.

Surgical excision is the preferred choice of treatment for POF. The recurrence rate of POF is high, varying from 7% to 45%, which may reflect the technique and philosophy of surgical management. However, Walters et al also stated that total excision of the lesion in the maxillary anterior region can result in an unsightly gingival defect unless appropriate efforts are taken to repair the periosteal defects. Various different surgical techniques like lateral sliding flap of full thickness or partial thickness, subepithelial connective tissue graft, or coronally positioned flap may be used to manage this defect and minimize patient esthetic concerns.

REFERENCES:
7. Miller CS, Henry RG, Damm DD. Proliferative mass found in the gingiva. JAm Dent Assoc. 1990;121(4):559-560