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PERIPHERAL GIANT CELL GRANULOMA AND PERIPHERAL OSSIFYING FIBROMA: A CASE REPORT

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Abstract: The aim of this study was to present the clinical and histopathological evaluation of reactive gingival lesions, such as peripheral giant cell granuloma (PGCG) and peripheral ossifying fibroma (POF). These cases show that without histopathological evaluation, these two lesions could have been misdiagnosed due to their similarity in appearance. Early detection and treatment of these lesions are important to reduce bone loss or displacement of tooth.

INTRODUCTION:-- Reactive gingival lesions --such as peripheral giant cell granuloma (PGCG), peripheral ossifying fibroma (POF), parulis, haemangioma and pyogenic granuloma resemble tumorous like lesions, and they are usually localized to the gingiva (especially in the interdental gingiva) or the alveolar mucosa. Reactive gingival lesions are often found to be associated with irritants such as plaque, calculus, poor dental restorations, ill-fitting dentures, and trauma or tooth extraction. However, the etiology of these lesions is still not precisely known.

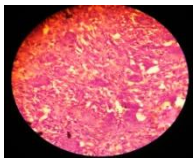
PGCG is an oral non-neoplastic tumorous proliferation that is usually localized to the gingiva or the alveolar mucosa without osseous tissue destruction. Etiological factors of PGCG are poor dental restorations, food impaction, ill-fitting dentures, plaque and calculus. Affected patients are generally adults and females in the fourth to sixth decades of life.

POF is a central bony lesion, although peripheral variations also exist. It is a localized and relatively common gingival enlargement, occurring only on the gingiva and often related to the periodontal ligament. The anterior maxillary region is the most common localization for POF (60%). It is believed that inflammatory hyperplasia originating in the superficial periodontal ligament is a factor in the histogenesis of POF. Although the exact etiology is unknown, POFs are believed to be caused by irritants such as calculus, plaque, dental appliances, ill-fitting crowns and rough restorations.

CASE 1---A 47 years old female patient was referred to Department of Dentistry, North Bengal Medical College and Hospital with the complains of reddish purple gum swelling localized in the upper anterior region of jaw for last 6 months and occasionally bleeding occurred when she brushed her teeth. Intra oral examination reveled a firm, sessile erythematous, papular swelling located on the buccal gingiva on the upper right lateral incisor and canine region. The lesion was asymptomatic, noncapsulated and measured approximately 2.5 cm. in diameter. Panoramic radiograph was obtained and determined with normal limits. Surgery was performed under local anaesthesia, the mass was completely excised and sent for H/P examination and adjacent teeth were scaled to remove local irritant, patient was followed up 15 days postoperatively the surgical site appeared to be healing well.

pre operative view

per operative view



histopathological view

excised growth

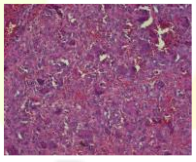
9 month post operative view

Peripheral Ossifying Fibroma

CASE 2—A 42 year old female was referred to the Department of Dentistry, North Bengal Medical College and Hospital complaining of a swelling localized in front region of lower jaw. Patient did not report pain, but complained about discomfort while chewing. Intra oral clinical examination showed reddish purple tissue over growth at lower anterior gingival ridge. Lesion was asymptomatic and measured approximately 2cm. in diameter. Surgery was performed under local anaesthesia the mass was excised and histopathological examination were performed.

pre operative view

per operative view



histopathological view of PGCG

excised growth

6 months post operative view

Peripheral Giant Cell Granuloma

HISTOPATHOLOGICAL REPORTS:

Peripheral ossifying fibroma displays immature calcified foci of bone encapsulated within a proliferation of fibroblasts and chronic inflammatory cells.

Peripheral giant cell granuloma reveals a dense infiltrate of histiocytes and multi-nucleated giant cells within the sub epithelial fibrous stroma.

DISCUSSION: It is difficult to differentiate PGCG and POF by clinical examination alone. Although POF is often ulcerated and inflammed, it lacks the purple or blue colour discoloration that is commonly associated with PGCG. Histologically POF can be presented with either undamaged or ulcerated stratified squamous epithelium; the deeper fibroblastic component is highly cellular with central areas of calcification. POF are more cellular than fibroma and less cellular than pyogenic granuloma.
Clinically PGCG is small well demarcated reddish mass on the gingiva usually originating from either periodontal ligament or mucoperiosteum. Katsikeris and Kakarantza-Angelopoulou reported that most common location for PGCGs are incisor and canine regions with predilection for mandible. PGCG is usually found in adults. Kfir et. al and Zhang et.al reported no difference in incidence of PGCG between male and female.

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