PERIPHERAL GIANT CELL GRANULOMA – A CASE REPORT

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ABSTRACT

Peripheral giant cell granuloma (PGCG) is an infrequent exophytic lesion of the oral cavity, also known as giant cell epulis, osteoclastoma, giant cell reparative granuloma, or giant-cell hyperplasia. The aim in publishing this report is to present the clinical, histopathological features and treatment of a PGCG case which was seen on gingiva and disturbed chewing functions due to its large size. A 21 years old female patient who complained about gingival enlargement and pain while chewing was admitted. Her intraoral examination revealed a raised, round, sessile, smooth-edged mass which was 2 cm in diameter and was located on the mandibular gingiva. After initial periodontal treatment, excisional biopsy was performed under local anesthesia. Biopsy specimen embedded in 10% formalin and sent to department of pathology for histopathological investigations. The lesion was diagnosed a PGCG after clinical and pathological examination. Two weeks after surgery, area of the lesion appeared completely healed. No recurrence of the lesion was found even six months after surgery. PGCG lesions when become large impair the functions of mastication. Recurrence is rarely seen when irritative factors are eliminated.

Key words: *Giant cell granuloma, Gingival enlargement, Oral reactive lesions*

INTRODUCTION

Peripheral giant cell granuloma (PGCG) is an infrequent exophytic lesion of the oral cavity, also known as giant cell epulis, osteoclastoma, giant cell reparative granuloma, or giant cell hyperplasia.[1,2,3] PGCG is reactive lesion occurring on the gingiva and alveolar ridge usually as a result of local irritating factors such as tooth extraction, poor dental restorations, food impaction, ill fitting dentures, plaque, and calculus.[4]

Clinical appearance of PGCG can present as polyploidy or nodular lesion. Primarily bluish red with a smooth shiny or mamillated surface stalky or sessile base, small and well demarcated. Pain is rare and in most cases the lesion is induced by constant trauma.[5,6,7]

Radiographic examination generally have no findings, because the lesion is a soft tissue mass. PGCG is a soft tissue lesion that very rarely affects the underlying bone, though the later may suffer superficial erosion.[8,9] PGCG may occur at any age but exhibits a peak incidence between 40 and 60 years of age. Women are affected more than men.[4,10]

Histological features of PGCG reveal a non capsulated mass of tissue containing a large number of young connective tissue cells and multinucleated giant cells. Hemmorage, hemosiderine, inflammatory cells, and newly formed bone or calsified material may also be seen throughout the cellular connective tissue.[7]

CASE REPORT

A 21 years old female patient who complained about gingival enlargement and pain while chewing was admitted. Her intraoral examination revealed a raised, round, sessile, smooth-edged mass 2 cm in diameter located on the right mandibular gingiva (Figs 1 and 2). The patient's general hygiene was not too good. There was accumulation of plaque and calculus. She was systemically healthy and was not taking

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any medication. Radiological examination revealed no evidence of bony involvement.

After initial periodontal treatment, an excisional biopsy of the lesion was performed. Biopsy specimen was embedded in 10% formalin and sent to department of pathology. Routine histological examination with hematoxylin and eosin stain were performed. The microscopic features of the lesion were consistent with PGCG. A large number of stromal fibroblastic cells and multinucleated giant cells were seen. (Figs 3 and 4) Postoperative healing was uneventful. No recurrence of the lesion was found six months after surgery.

DISCUSSION

Giant cell granuloma as (peripheral and central) are benign, non odonyogenic, moderately rare tumors of the oral cavity.[7,10] PGCG is a relatively frequent benign reactive lesion of the oral cavity, originating from the periosteum or periodontal membrane following local irritation or chronic trauma.[9] PGCG arise interdentally or from the gingival margin, occur most frequently on the labial surface, and may be sessile or pedunculated. They vary in appearance from smooth, regularly outlined masses to irregularly shaped, multilobulated protuberances with surface indentations.[6] There are no pathogomic clinical features whereby these lesions can be differentiated from other forms of gingival enlargement. Microscopic examination is required for definitive diagnosis. The PGCG has numerous foci of multinuclear giant cells and hemosiderine particles in a connective tissue stroma. Areas of choronic inflammation are scattered throughout the lesion, with acute involvement occurring at the surface. The overlying epithelium is usually hyperplastic, with ulceratin at the baseline.[6] In this case, all of these features were present.

The etiology of PGCG is unknown. Local irritation factors such as poor dental restorations, dental extraction, plaque, and calculus accumulation play significant role in the development of a PGCG.[7]

The differential diagnosis of PGCG includes lesions with very similar clinical and histological characteristics, such as central giant cell granuloma, which are located within the jaw itself and exhibit a more aggressive behavior.[5] Only radiological evaluation can establish a distinction. In some instances, the giant cell granuloma of the gingiva is locally invasive and causes destruction of the underlying bone.[6] The early and precise diagnosis of these lesions allows conservative management without risk to the adjacent teeth or bone.[9] Also in this case, after clinical and radiographical evaluation, no destruction of underlying bone was detected.

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