

## Case Report

### Peripheral Giant Cell Granuloma: A Case Report

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#### **ABSTRACT**

Peripheral giant cell granuloma is a hyperplastic reaction of the gingival connective tissue in which histiocytes and endothelial cellular components predominate. It has an unknown etiology and this lesion represents a reactive lesion. A case report of 62 years old male patient with peripheral giant cell granuloma is presented here and in the present case importance of correct diagnosis and management of peripheral giant cell granuloma is discussed.

#### **KEYWORDS**

Hyperplastic reactive lesions, Giant cell granuloma.

#### **INTRODUCTION**

Peripheral giant cell granuloma is a rare, nonneoplastic localized hyperplastic reactive lesion of gingiva caused by local irritants or trauma.<sup>1</sup> But trauma would not appear to be an important factor in the development of this lesion. Modern investigations supports the view that it is just an unusual proliferative response to tissue injury.<sup>2</sup> Peripheral giant cell granuloma is most likely to cause bone resorption. The features that set Peripheral giant cell granuloma apart from other reactive hyperplasia are the appearance of multinucleated giant cells and lack of infectious

source. The cells of Peripheral giant cell granuloma are likely to arise from mucoperiosteum or periodontal ligament.<sup>3</sup> Lesion can emerge as sessile or pedunculated and may or may not be ulcerated. Clinically it resembles pyogenic granuloma and histopathologically central giant cell granuloma. Peripheral giant cell granuloma can occur both in anterior and posterior region of gingiva and alveolus with the preference to mandibular arch than maxillary.<sup>4,5</sup> Differential diagnosis include pyogenic granuloma, fibroma, gingival cyst of an adult and aneurysmal bone cyst. Clinical appearance ranges from pink to dark red or purplish, elevated lesion of gingiva.<sup>6</sup> This case reports peripheral giant cell lesion of maxillary anterior region in a 62 year old male patient.

#### **CASE REPORT**

A male patient aged 62 years reported to the Department of Periodontics, Tamilnadu Government Dental College Chennai with a chief complaint of swelling in the left upper gum region since 6 months. The swelling started as a small growth and has grown to the present size. On clinical examination exophytic growth of size 2x3cm was present on left alveolar mucosa in relation to 22,23,24 region extending anteriorly up

to distal aspect 21, posteriorly up to distal aspect of 24, Superiorly up to labiobuccal sulcus and inferiorly up to middle third of crown of 22. On palpation growth was firm in consistency with a diffuse base which blanched on pressure. There was local factors around the growth. It was the patient's first visit to the dentist because growth was not associated with pain. The patient's medical history revealed that he had diabetes and was under medication.

Phase I therapy was done. The patient was kept on maintenance phase. Investigations ordered were complete hemogram and OPG. OPG showed generalized interdental horizontal bone loss with vertical bone loss in relation to 16, 23 regions with periodontal widening. Routine blood investigation showed normal values. Since the lesion was not regressing after 1 month surgical therapy was planned. The surgical technique was explained to

the patient in his own language and informed consent was obtained. Surgical excision was planned under local anaesthesia after getting the medical opinion. Lesion was separated from the adjacent tissue by blunt dissection and removed in one piece. The lesion was completely excised and remnant of soft tissue adjacent to tooth was also excised to avoid recurrence in future. Periodontal dressing was given. Antibiotics and analgesics were prescribed. The growth was transported to the lab in 10% formalin. After the follow up for 3 months, no bony defect was apparent in that area.

Histopathological examination revealed stratified squamous epithelium with varying thickness, fibrocellular connective tissue with numerous multinucleated giant cells, blood vessels and extravasated RBC suggestive of Peripheral giant cell granuloma.

### **Clinical Pictures**



**Figure 1: Preoperative photograph**



**Figure 2: Intraoperative photograph**



**Figure 3: Surgically excised growth**



**Figure 4: Postoperative view after 2 weeks**

## DISCUSSION

Peripheral giant cell granuloma is a peripheral exophytic lesion found on gingiva and it is five times as common as central lesion.<sup>7</sup> It is an example for benign inflammatory hyperplasia and may represent an unusual response to tissue injury in which fibroblast, osteoblast, osteoclastic potential predominate.<sup>8</sup> This soft tissue purple red nodule appears very similar to pyogenic granuloma and peripheral ossifying fibroma. Biopsy is essential for differentiation.

Typical histopathological presentation includes, the presence of multinucleated giant cells in combination with mesenchymal and red blood cells.<sup>9</sup> The treatment requires surgical excision, care being taken to remove the entire base of lesion that ensures deep excision of the lesion including periosteum and affected periodontal ligament followed by a thorough curettage of the area to remove local factors from the area.

## CONCLUSION

Peripheral giant cell granuloma also known as Giant Cell Epulis is the most common giant cell lesion in the oral cavity which is most likely to cause bone resorption. Most of the times it is painless because nerves do not proliferate within the reactive hyperplastic tissue. Histological confirmation is essential for treatment plan. Successful treatment of choice is surgical excision which will minimize the recurrence of the lesion. Regardless of the surgical technique employed it is important to eliminate the etiological factors. Consideration should be given for correct

diagnosis and proper treatment planning for successful management. Further research is needed to clarify the pathogenesis and nature of those giant cell lesions and other markers involved have to be investigated.

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