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Olgu Sunumu / Case Report

Peripheral Giant Cell Granuloma in Maxilla: Case Report

Maksillada Periferal Dev Hücreli Granüloma: Olgu Sunumu

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Abstract

Peripheral giant cell granuloma (PGCG) is a reactive exophytic lesion that occurs on the gingiva and alveolar crest due to local irritation and trauma. It is usually localized in the mandible and it is frequently seen in 4-6 decades. The clinical appearance is bluish red, lesion similar to liver tissue, usually smaller than 2 cm. Its treatment is surgical excision. Very rarely, recurrence is observed. In this case report, the treatment and follow-up of the lesion located in the maxillary premolar region and diagnosed as PDHG histopathologically in a 51-year-old female patient were presented.

Keywords: Peripheral giant cell granuloma, granuloma, maxilla, oral cavity

Öz

Periferal dev hücreli granüloma (PDHG) lokal irritasyon ve travma sebebiyle gingiva ve alveoler kret üzerinde ortaya çıkan reaktif ekzofitik bir lezyondur. Genellikle mandibulada lokalizedir ve sıklıkla 4.-6. dekatlarda görülür. Klinik görünümü mavimsi kırmızı renkte, karaciğer dokusuna benzeyen genellikle 2 cm'den küçük lezyondur. Tedavisi cerrahi eksizyondur. Çok nadir olarak nüks görülmektedir. Bu olgu raporunda 51 yaşında kadın hastada maksiller premolar bölgede bulunan ve histopatolojik olarak PDHG tanısı konulmuş lezyonun tedavisi ve takibi sunulmuştur.

Anahtar Kelimeler: Periferal dev hücreli granülom, granüloma, maksilla, oral kavite

INTRODUCTION

Reactive lesions in the oral cavity are among common cases in the daily practice of oral surgery. Reactive lesions are characterized by an abnormal proliferation of connective tissue as a result of chronic irritations. The reactive lesions are fibroepithelial hyperplasia, pyogenic granuloma, peripheral ossifying fibroma, and peripheral giant cell granuloma (1). Proliferative lesions commonly occur on the gingiva. Proliferative lesions exhibit a reactive character rather than a neoplastic character. Most of these lesions are reactive chronic inflammatory hyperplasias caused by minor trauma or chronic irritation (2).

Giant cell granulomas (GCG) are non-neoplastic local hyperplastic lesions that could occur after trauma and inflammation (3). Giant cell granulomas can be classified as peripheral and central. Central giant cell granulomas are located inside the bone, while peripheral giant cell granulomas (PGCG) are located peripherally around the alveolar crest and gingiva (4). PGCGs are observed as limited tumor-liked gingival-mucosal growth in oral tissues. PGCGs are frequently observed between the ages of 40-60. It is more common in females, and in the maxilla (4).

Although PGCG etiology is not fully known, it is considered as a reactive hyperplastic lesion. It is thought to cause bone resorption with increased activation of osteoclasts in relation to the proliferation of macrophages in its pathogenesis (5,6). Periodontal problems, traumatic tooth extraction, periodontal surgery, misplaced teeth, false dentures and restorations, calculus, dental plaque, food accumulation, orthodontic treatment, hormonal changes, and hyperparathyroidism are factors of PGCG (5,6).

The clinical appearance of PGCG is generally a small, limited, dark red-colored, liver-like focus, with or without

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stem, located in the gingiva and alveolar crest, as a painless and bleeding lesion (7,8). Radiographic findings of PGCGs are non-specific, rarely in some cases, superficial erosion can be seen on the bone by radiography (7,8).

Treatment of PGCG is the excision of the lesion (including some of the surrounding healthy soft tissues) and curettage of the relevant region. However, eliminating local etiological factors is very important to reduce the possibility of recurrence (6).

In this case report, the diagnosis and treatment process of the patient diagnosed with PGCG in the maxilla is presented.

CASE REPORT

A 51-year-old female presented to the Oral and Maxillofacial Surgery Department with growth a mass in the right maxilla. The patient had no complaints of pain and bleeding, and the mass had been present for 4-5 months. The patient stopped using dental prosthesis because of the mass. However, she reported that the size of the mass increased despite she stopped using the prosthesis. In the intraoral examination of the patient, there was smooth, shiny surface, bluish red color, semi-hard consistency an exophytic lesion on the right maxillary premolar region. (Figure 1). There was no pain and tenderness with palpation in the mass. In the light of these findings, it was decided to take an incisional biopsy from the lesion. As a result of histopathological examination, PGCG was diagnosed. The mass was excised under local anesthesia using electrocautery (Figure2,3). After the lesion was excised, the flap was sutured with a 3-0 silk suture. As a result of the histopathological examination of the biopsy material, the diagnosis of PGCG was confirmed (Figure 4). After the operation, the patient was advised about using hyaluronic acid gel in the surgery area. This hyaluronic acid application was very useful for wound healing and accelerated the epithelization. No complications were observed in the postoperative period. Postoperative 1st, 2nd week and 1st and 6th-month controls were performed. Due to the decrease in the depth of the vestibular sulcus as a result of the controls performed in the 6th month, the patient was offered a vestibuloplasty operation but was not accepted by the patient (Figure 5). No recurrence was observed after 12 months of follow-up.

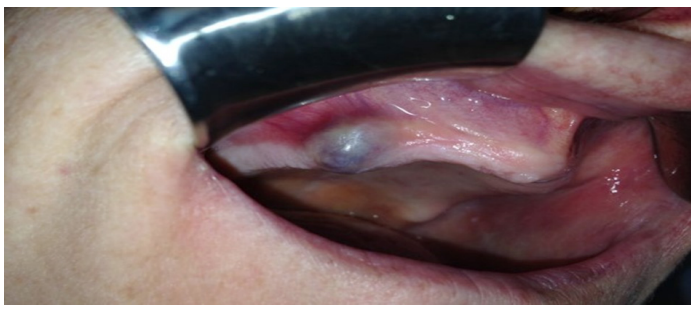

Figure 1. Intraoral view of the lesion

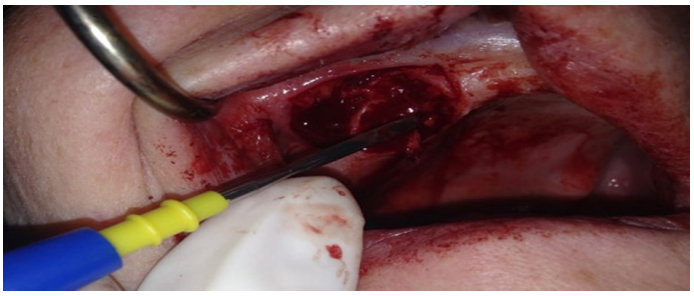

Figure 2. RExcision of the lesion with electrocautery

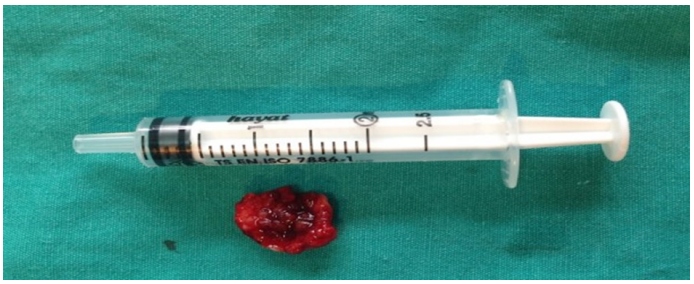

Figure 3. The lesion

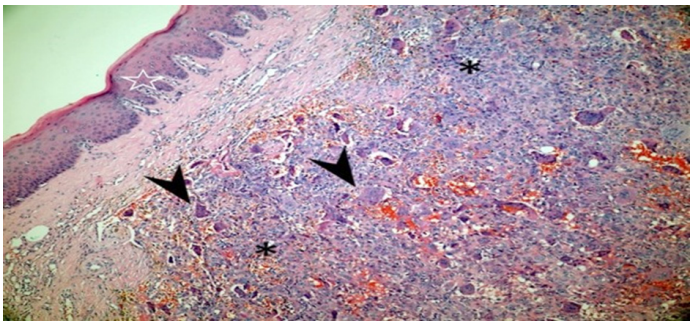

Figure 4. Histological examination of the lesion

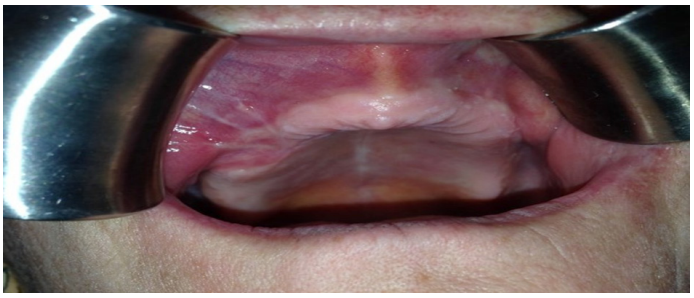

Figure 5. 12 months after the operation

DISCUSSION

PGCGs are exophytic lesions occurring in the oral cavity. These lesions grow from the periodontal ligament or periodontium due to local irritants such as tartar, plaque, incompatible restoration, tooth extraction, and chronic inflammation (9,10). In this case report are presented the diagnosis and treatment of PGCG in the right maxilla caused by chronic trauma. Although PGCGs could be seen in all age groups, they are frequently seen in the 40-60 age group. In addition, PGCGs are more common

in the mandible than in the maxilla (6). In many studies, it is stated that PGCGs are more common in females (11). In this case report, the patient was 51 years old female and the lesion was seen in the maxillary premolar region.

It has been reported that PGCG is seen approximately 1.5 times more frequently in the mandible than in the maxilla (12). In a study in which 62 cases were evaluated retrospectively, it was stated that 43 of the lesions occurred in the mandible (69.4%) and 19 (30.6%) in the maxilla (11). Bodner et al. (7) stated that the mandible was affected 2.75 times more than the maxilla in their study. Demirkol et al. (13) examined 16 PGCG cases in their study. As a result of the study, they reported that 4 (25%) PGCGs were seen in the maxilla and 12 (75%) PGCGs were seen in the mandible. They also stated that only 1 (6.25%) PGCG was seen in the maxilla posterior region and 8 (50%) PGCG were seen in the mandible posterior region. In this case report, the lesion was seen in the maxillary premolar region.

In terms of clinical characteristics, fibroma, peripheral ossifying fibroma, hemangioma, epulis, and pyogenic granuloma should be considered in the differential diagnosis. Because of histological findings are similar to Brown tumor, aneurysmal bone cyst, and benign osseous dysplasia, these pathologies should be considered in the differential diagnosis (14,15).

The treatment module of PGCGs is the surgical removal of the mass completely and eliminating the predisposing factor. In cases of periodontal ligament involvement, extraction of the teeth associated with the lesion is also included in the treatment procedure (13). Recurrence is very rare for PGCG lesions and this rate is reported as 5-11% in the literature (16). Neville et al. reported the recurrence rate varying between 11% and 50% in their multiple case series (17). In the present case report, the lesion was excised with the periosteum and no recurrence was observed during the 12-month follow-up.

As a result, it should be remembered that these lesions can reach large sizes when neglected. It is an important factor that clinicians should know that the recurrence rate decreases with the surgical excision of the lesion and its elimination in predisposing factors. Also, a long-term follow-up of these cases is required.

Informed Consent: *The patients included in the study signed the informed consent form.*

Conflict of Interest: *The authors declare that they have no competing interest*

Financial disclosures: *All authors report no financial interests or potential conflicts of interest.*

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