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Case Report

Ginvival Plasma Cell Granuloma

Somerville-Caso Santiago Walter[1*], Ramos-Garibay José Alberto[2], Haces-Caso Alfonso[3], Martínez-Berlanga Paulina[4]

[1]Dermatologist, Member of the Medical Association at the ABC Medical Center, Mexico

[2]Deputy head at the Dermatopathology department of Pacua Dermatological Center, Mexico

[3]Dentist, fixed prosthetics, Mexico

[4]General Physician, member of the Medical Association at the ABC Medical center, Mexico

***Corresponding author**: Somerville-Caso Santiago Walter, Dermatologist, Member of the Medical Association at the ABC Medical Center, Mexico

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Abstract

Gingival Plasma cell granuloma (GPCG) is a rare benign lesion, which is considered within the so called pseudotumors. In other specialties, it is known as plasma cell granuloma. Histologically characterized by dense inflammatory cells infiltrates, mainly plasma cells. This manuscript presents the case of a 75-yearold woman, with a tumour in the upper alveolar region of the oral cavity. The final diagnosis corresponds to GGCP. Successfully treated with surgery, without recurrences. It is important to know this pathological entity to differentiate it from other oral cavity tumours with malignant behaviour.

Keywords: Gingival Granuloma; Plasma Cell Gingivitis

Introduction

Plasma cell granuloma of the gingiva is a tumorous lesion characterized by a proliferation of inflammatory cells [1-3]. This places GPCG in the pseudotumors group, with the consequent benign behaviour. However, its appearance, the characteristics of growth and the site where it is found can simulate a malignant neoplasm. It is known by synonyms such as plasma cell gingivitis [1]; inflammatory microfibrobalstic tumour, inflammatory pseudotumor [2]; Benign Myofibroblastoma [3]. Plasma cell infiltration can occur in any tissue. These lesions have no sex predilection and may occur at any age, mainly in adults. The incidence of plasma cell granuloma is unclear, as well as the etiopathogenesis, biological behaviour, appropriate treatments and prognosis. It may occur due to periodontitis, per radicular inflammation or may be due to an idiopathic antigenic cue. The treatment for plasma cell granuloma is a complete resection [4].

Case Report

A 75-year-old female presents an asymptomatic oral cavity tumour, for the last 6 months, with progressive growth, which makes chewing moderately difficult. Without specific previous management or relevant medical history. On physical examination, a well-circumscribed exophytic lesion, with a smooth surface and firm consistency in the right upper alveolar region, was observed. Pink colour with whitish areas and increased vascularity (Figure 1). Pyogenic granuloma versus gingival fibroma was the clinical diagnosis; therefore complementary studies, radiology images and incisional biopsy were requested. The radiological examination showed a slightly opaque mass that separates the dental pieces, compatible with soft tissue tumour (Figure 2). The histopathological examination of the biopsy obtained, with Haematoxylin and Eosin stain, revealed the interpapillary processes mucosal epithelium with irregular and considerable acanthosis. Superficial chorion shows no alterations. The reticular chorion is entirely occupied by dense infiltrates, plasmatic cells predominance, organized in lobules, separated by collagen thin fibrous bundles, without atypia. The diagnosis of gingival granuloma of plasma cells is conclusive (Figures 3,4). The patient underwent a surgical procedure for the total removal of the lesion. The surgical piece reveals the same histological changes. The lesion was remove completely. Currently,

18 months later, there is no recurrence of the lesion (Figure 5).

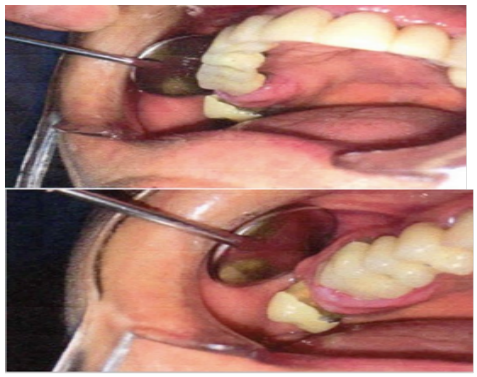

Figure 1: Tumour appears as a limited gingival thickening, in the right upper posterior region, separating molars. Smooth surface and an increased vascularity.

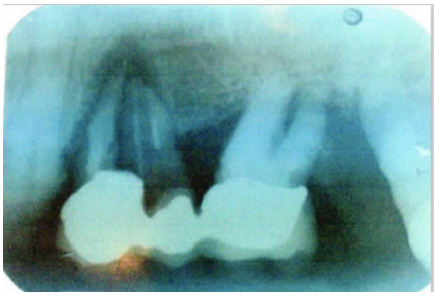

Figure 2: Intraoral radiography reveals an interdental space with radiopaque and other radiolucent areas, which suggests soft tissue tumour. Showing no bone involvement.

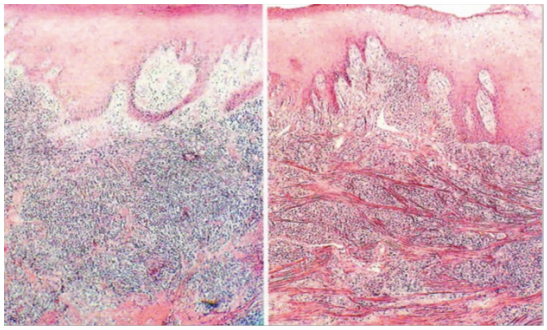

Figure 3: Histological image: epithelium with irregular acanthosis. The superficial and reticular chorion with dense inflammatory infiltrates. (Haematoxylin and Eosin, 4X).

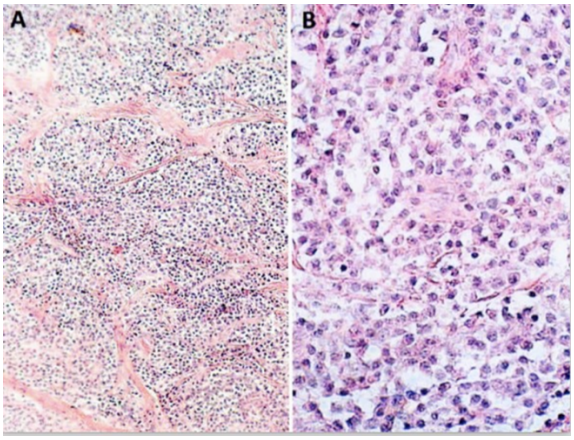

Figure 4: A Infiltrate arrangement in foci or forming lobules (Haematoxylin and Eosin, 10x) B Abundant Plasma cells, with clear cytoplasm (Haematoxylin and Eosin 40X).

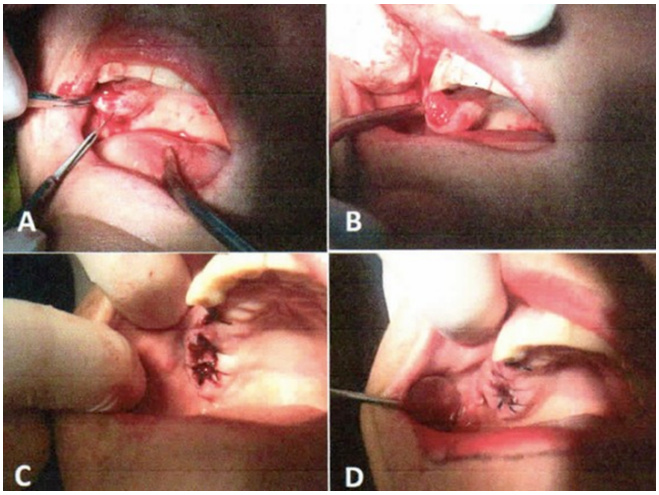

Figure 5: Surgical removal of the tumour. (A, B). 3 days later (C), 8 days later (D).

Discussion

Zoon described the first cases published as plasmatic cell balanitis, in 1952 [5,6], an analogy is made with this type of lesions because they are benign in behaviour and of unknown ethology. The vast majority of cases are described in publications related to the oral cavity and very few in dermatology journals [1,7]. Maymone and Cols 2017, published a review of benign lesions of the oral mucosa and did not consider this entity [8]. In

1973 Bahadory and Liebow reported the first cases of plasma cell granulomas present in lung, vaginal and laryngeal tissues. It can appear in other organs such as brain, heart and stomach, but the vast majorities are located in the oral cavity [6]. In 1968, Bhazkar et al, described the first cases located in the gingiva. Although the underlying cause is unknown, it is considered to be a reactive [5] and no proliferative lesion. Kim and cols. detected the presence of IL76 an phospholipase in the lesions. It is suggested that these substances induce the aggregation of plasma cells [2]. Other theories include the constant local trauma, the use of irrigative toothpaste, the use of chewing gum, viral or bacterial infections [1,10]. The lesion ranges from reddish macule with precise limits, to a solitary exophytic tumour, sometimes hemispherical, with shades of red, smooth surfaces and sharp edges. It grows slowly and the lesion can be asymptomatic or may cause different degrees of pain [2,3,7]. The precise diagnosis is with the histopathological images. The thickness of the epithelium can vary from atrophic to hyperplastic. In the thickness of the chorion, dense infiltrates of plasma cells, with some lymphocytes and histiocytic are identified. No atypia is found. The infiltrate arrangement is in foci or forming lobules, it does no appear as a diffuse infiltrate, do not surround the blood vessels or annexes. The estroma presents different degrees of fibrosis. Immunohistochemistry reveals a polyclonal reaction with positive kappa and lambda chains [1-3,6,7,10]. The differential clinical diagnosis is broad, including solitary myeloma, extra medullar plasmocytoma, deep mycoses, sarcoidosis and a foreign body granulomas5. Histologically must be differentiated from plasma cell microsites or gingivitis [11,12]. In the case presented, fibroma and pyogenic granuloma were ruled out. Carcinomas of various strains must also be ruled out, which is of vital importance [2,6,7,10]. The lesion´s appropriate treatment is unclear. The most commonly considered treatment for GPCG is a complete resection; however, in some cases, total surgical excision is not possible [2,6,7,10]. There are no cases reported with recurrence after surgical removal. A specialist with experience in this area, must perform the procedure. Other cases have been treated with a combination of oral prednisone 50 mg/day and azathioprine 150mg/day3 or with electrocoagulation with satisfactory results1.

Conclusion

GPCG is an uncommon tumoral lesion, when it occurs, is generally in the gingival region. Although it's a benign tumour, it is important to distinguish it, in order to differentiate it from a malignant neoplasm, which requires another approach. Surgical treatment is the chosen one, to avoid patient discomfort due to the effect of occupying mass.

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