



PLASMA CELL GRANULOMA OF GINGIVA: AN UNUSUAL CASE REPORT

Pathology

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ABSTRACT

Plasma cell granuloma of gingiva is a rare benign lesion of oral cavity characterised by infiltration of the plasma cells in the connective tissue stroma. They primarily occur in the lungs. But, it may also be seen in brain, kidney, stomach, heart and so on. Intraorally it occurs in tongue, oral mucosa and gingiva [1]. We report a case of 35 years old female patient presenting with a gingival mass opposite to the third molar tooth of left side, since two months. This mass caused her difficulty in chewing however it was painless. All routine investigations carried were within normal limits. Radiologically infiltrative borders of the mass were seen. She was treated with excision biopsy. Histopathologically the diagnosis was given of plasma cell granuloma.

KEYWORDS

Plasma cells, gingiva, inflammatory, pseudotumor, allergens, granuloma etc

INTRODUCTION:

Plasma cell granuloma is an unusual benign condition of gingiva characterised by dense infiltration of normal plasma cells [2]. Its also known by other names like atypical gingivostomatitis, plasmacytosis, plasma cell gingivostomatitis, idiopathic gingivostomatitis and allergic gingivostomatitis [3]. It is a non neoplastic condition and so its also known as inflammatory pseudotumor [1]. They generally occur between 4th to 5th decade of life with a slight female preponderance. [4] Clinically they present as a nodular polypoidal mass with smooth surface.

CASE REPORT:

We report a case of 35 years old female presenting with a nodular polypoidal mass, smooth in consistency opposite to the third molar tooth of left side. It was painless and light pink in colour. She had a history of herbal toothpaste use. She was investigated thoroughly for any systemic symptoms. Routine blood investigations were normal. Radiologically it showed infiltrative margin giving the appearance of malignancy. So in view of above findings excision biopsy was advised.

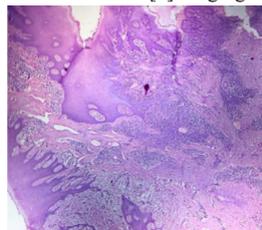
We received the histopathological specimen that was greyish white in colour, soft to firm in consistency measuring 3cms*2cms. On examining under the microscope the section showed tissue lined by stratified squamous epithelium with pseudoepitheliomatous hyperplasia. The stroma was heavily infiltrated with plasma cells of reactive origin. Foreign body type of giant cell is also seen. In our case we did not do IHC staining for ruling out plasmacytoma as there were no systemic features. Now the patient is under regular follow up after surgery. No recurrence is reported till date. The patient is doing quite well.

DISCUSSION:

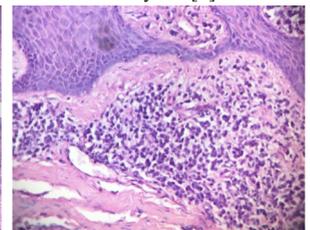
Plasma cell granuloma was first time reported long back in 1968 by Bhaskar, Levin and Firch [5]. The etiology of plasma cell granuloma is unknown. Some studies consider it as an immunological reaction to the allergens in tooth paste, chewing gum, mints and certain food products such as red pepper, khat leaves, arbi leaves and flavouring agents [6]. It was classified by Sollicito, Guenberg et al in 1992 on the basis of etiology as 1. Allergic, 2. Neoplastic, 3 Unknown cause. [7]. In our case since the patient had a long term history herbal tooth paste use so we arrived to the conclusion that the cause of granuloma formation was allergic.

The lesion is usually lined by stratified squamous epithelium with pseudoepitheliomatous hyperplasia. The underlying connective tissue appears as fascicles of spindle mesenchymal cells admixed with chronic inflammatory cells. It may have various components like fibroblasts, myofibroblasts, inflammatory cells which includes plasma

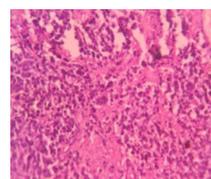
cells, lymphocytes, histiocytes etc. All these components are arranged in varying proportions and thus may cause marked histological diversity in different cases. Depending on the predominant component its given its nomenclature. If the plasma cells predominate than its of inflammatory origin, while the others having predominantly fibroblasts and myofibroblasts are often misinterpreted as nodular fasciitis or fibrosarcoma. There are also some studies which give a conflicting opinion regarding the inflammatory or neoplastic origin. The findings of human herpes virus 8 DNA sequence and overexpression of IL-6, cyclin D1 has been seen in few cases [8]. In a study done by Kim et al they suggested that IL-6, phospholipase C-Y1 may induce heavy plasma cells infiltration in cyclosporin induced gingival growth. [9] Oral plasma cell granulomas needs to be distinguished from follicular dendritic cell tumor. In view of predominance of plasma cells a differential diagnosis of plasmacytoma can also be given. However in these cases the plasma cells will be atypical rather than reactive [10]. Moreover the patients will have other systemic symptoms along with positive IHC staining for kappa or lambda and CD 138. Other differential diagnosis could be of pyogenic granuloma which usually presents as pendunculated growth with surface ulceration and hemangioma which blanches on applying pressure [11]. The enigma of plasma cell granuloma is considered as a clinical entity for a number of years with several reports appearing in the literature. Clinically a diffuse erythematous lesion in the gingiva with a sharp demarcation along the muco-gingival junction. It may bleed with trauma [7] but gingival ulceration is very rare [6].



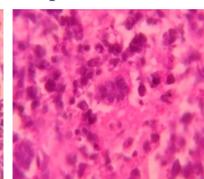
Low power view showing Pseudoepitheliomatous hyperplasia



20X view showing infiltration of Plasma cells in subepithelium



40X view showing Reactive plasma cells



100X showing foreign body Giant cell

CONCLUSION:

Plasma cell granuloma of gingiva is a rare entity that may be confused with a malignant tumor on clinical and radiological findings[12]. On causing severe inflammation and discomfort with bleeding it may mimic a more severe condition. So its very important to recognise it as a benign condition to avoid un-necessary extensive and potential destructive surgeries causing further discomfort to the patient. Careful clinical observation followed by HPE is enough for a definitive diagnosis. Proper oral hygiene is always to be maintained. Blood analysis may rule out other systemic disorder with oral manifestation. We report this case because of its rarity.

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