Localized Plasma Cell Gingivitis: An Unusual Presentation: A Rare Case Report
Korlepara Rajani, Guttikonda Venkateswara Rao, Taneeru Sravya

Abstract
Plasma cell gingivitis is a rare condition characterized by diffuse and massive infiltration of plasma cells into the sub-epithelial connective tissue. It is usually considered to be a hypersensitive reaction to an allergen, although the exact etiology remains unknown. Clinically, it appears as a diffuse, erythematous and edematous growth in anterior maxillary gingiva with a sharp demarcation along the mucogingival border. Here, we present a rare case of localized plasma cell gingivitis with an unusual presentation in the gingiva of posterior mandible.

Keywords: Epulis; Gingivitis; Hypersensitive; Mandible; Over Growth; Plasma Cell.

Introduction
Plasma cell gingivitis (PCG) is an unusual benign condition of gingiva characterized by dense infiltration of normal plasma cells. It is also described by various synonyms such as atypical gingivostomatitis, plasmacytosis, plasma cell gingivostomatitis, idiopathic gingivostomatitis and allergic gingivostomatitis. The precise etiology of PCG is unknown. However, it is considered to be an immunological reaction to the allergens present in tooth paste, chewing gums, mint and certain food products such as red pepper, khat leaves, arbi leaves. The allergens identified are mostly cinnamon aldehyde and cinnamon used as flavoring agents in chewing gums and dentrifices.

It has been classified into three categories based upon the etiology (Sollecito & Greenberg, 1992) firstly into PCG caused by an allergen, secondly into neoplastic lesions and thirdly into PCG of unknown cause. It affects most frequently maxillary gingiva as compared to mandibular gingiva. The present case report outlines a case of PCG with unusual clinical presentation.

Case Report
A 32 year old female patient presented with a painless enlarging growth in the lower left back tooth region since two months (Figure 1a). The swelling was initially peanut size and gradually increased to the current size. There was no relevant past medical, dental and family history. On inspection, a lobulated erythematous growth present on buccal gingiva which is approximately 4 x 2 cm extending antero-posteriorly from distal surface of 35 to mesial surface of 38 and supero-inferiorly from occlusal plane of lower molars to alveolar mucosa (Figure 1b). Surface of the growth was smooth and shiny. On palpation, the growth was firm in consistency, non-tender and fixed to underlying tissues. On radiographic examination, Orthopantomograph (OPG) revealed interdental bone loss with respect to 36, 37 (Figure 1c). A complete hemogram and a routine biochemical investigations were performed which revealed no abnormality. Based on clinical findings, a provisional diagnosis of pyogenic granuloma was given. The differential diagnosis includes capillary haemangioma, peripheral giant cell granuloma, peripheral ossifying fibroma and peripheral odontogenic fibroma. As the lesion was smaller in size, complete surgical excision was performed and sent for histopathological examination.

Histopathology revealed overlying stratified squamous epithelium with acanthosis. The connective tissue was edematous with dense chronic inflammatory cell infiltrate predominantly of plasma cells which was mainly perivascular (Figure 1d). The plasma cells were oval in shape with eosinophilic cytoplasm along with eccentric and hyperchromatic nuclei (Figure 1e). Mixtures of lymphocytes and few areas of hemorrhage were also noticed. Thus, the final diagnosis of plasma cell gingivitis was given. The patient was under regular follow up and no recurrence was noticed.

Discussion
The enigma of PCG considered as a clinical condition for a number of years, with several reports appearing in the literature. Clinically, PCG appears as a diffuse erythematous & edematous lesion of gingiva with a sharp
demarcation along the mucogingival junction. It frequently bleeds with minimal trauma.\textsuperscript{4} Gingival ulcerations are rare.\textsuperscript{3} However, in the present case the presentation was unusual involving localized posterior mandibular region. This was similar to the case reported by Shruthi S, et al, where PCG was localized in mandibular anterior region.\textsuperscript{5}

Figure 1: The Extraoral (a) and Intraoral (b) photograph of the patient showing localized gingival overgrowth with respect to 36, 37. The Orthopantomogram revealed interdental bone loss (c). The photomicrograph at low power (d) and high power (e) revealing stratified squamous epithelium with abundant plasma cells with eosinophilic cytoplasm and peripherally placed hyperchromatic nuclei (asterisk) (Hematoxylin & eosin stain).

The exact etiology of PCG is not clear but many authors consider it a hypersensitivity reaction to allergens present in the tooth paste, chewing gums and certain food and oral care products. Strong spices and some herbs such as chilli, pepper and cardamom are also implicated in the occurrence of PCG. Other than allergic etiology it can also present as a neoplastic lesion or as lesions of unknown cause.\textsuperscript{1-3,5} The present case depicted here is of unknown etiology.

The first and foremost differential diagnosis of the present case includes pyogenic granuloma as the lesion was solitary, erythematous and localized. The only differentiating feature of pyogenic granuloma is pedunculated growth with surface ulceration\textsuperscript{5} which was not observed in the
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Author Affiliations
1. Dr. Korlepara Rajani, Senior lecturer,
2. Dr. Guttikonda Venkateswara Rao, Professor & Head,
3. Dr. Taneeeru Sravya, Senior lecturer,
Department of Oral Pathology and Microbiology,
Mamata Dental College, Khammam.

References

Corresponding Author
Dr. Rajani korlepara,
Senior Lecturer,
Department of Oral Pathology,
Mamata Dental College,
Khammam, A.P., India.
Ph: +91 7799116228
Email: rajanimds1985@gmail.com

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