Plasma Cell Mucositis of the Hard Palate

Steven B. Micucci, MD1, Shane A. Zim, MD1, and Elizabeth M. Hosfield, MD2

A 57-year-old male with a history of dermatitis and eczema presented to clinic with a 4-year history of a waxing and waning hard palate lesion with bleeding and pain. He denied additional symptoms, is a nonsmoker, and a social alcohol drinker.

Physical examination reveals a partially edentulous man with an erythematous and ulcerative lesion on the left side of the hard palate, adjacent to the lingual surface of the alveolus approximately 2 cm in diameter (Figure 1). A punch biopsy was taken from the lesion. Pathological analysis on low-power view with hematoxylin and eosin–stained sections showed a diffuse, band-like, subepithelial inflammatory infiltrate (Figure 2). A high-power display demonstrated a proliferation of cells with eccentric, clock-faced nuclei and perinuclear hoff's, compatible with plasma cells (Figure 3). Kappa and lambda stains (not shown) exhibited a polytypic staining pattern, compatible with a reactive process. No significant eosinophils were noted, and there was no vacuolar interface dermatisis, ruling against a drug reaction. Although the histologic findings are not entirely specific, plasma cell mucositis was raised as a primary consideration. Our patient was treated with clobetasol propionate 0.025% topical paste, and follow-up at 1 month showed resolution of the lesion.

Plasma cell mucositis is an uncommon inflammatory condition of the oral mucosa, typically characterized by a well-circumscribed edematous and erythematous lesion.1 Symptoms commonly include pain and bleeding. The etiology of plasma cell mucositis remains uncertain, though it is thought to be due to a hypersensitivity reaction to an allergen. Known allergens include flavored chewing gum, fluoride, mouthwashes, red pepper, khat leaves, and others. A classification scheme has been proposed based on one of 3 etiologies: allergen derived, neoplastic in origin, or idiopathic.2 In our case, no causative factor was identified.

1 Department of Head and Neck Surgery–Otolaryngology, Kaiser Permanente Oakland Medical Center, Oakland, CA, USA
2 Department of Pathology, Kaiser Permanente San Francisco Medical Center, San Francisco, CA, USA

Received: July 14, 2019; revised: August 4, 2019; accepted: August 7, 2019

Corresponding Author:
Steven B. Micucci, MD, Department of Head and Neck Surgery–Otolaryngology, Kaiser Permanente Oakland Medical Center, 3600 Broadway, Oakland, CA 94611, USA.
Email: steven.b.micucci@kp.org

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First described in the 1970s, plasma cell mucositis shares similar findings to multiple other conditions in the oral cavity including plasma cell gingivitis, including plasmacytosis, idiopathic gingivostomatitis, atypical gingivostomatitis, allergic gingivostomatitis, and plasma cell gingivostomatitis.3,4 This process has been reported to occur in a variety of locations including the larynx, epiglottis, vulva, conjunctiva, nasal aperture, lips, and tongue.5 When the mucous membranes of the genitalia are involved, the term plasma cell balanitis or plasma cell vulvitis is employed.6,7

The diagnosis of plasma cell mucositis requires correlation of a comprehensive history and physical examination with diagnostic testing and histopathological analysis. A differential diagnosis includes lichen planus, secondary syphilis, candidiasis, allergic and irritant contact dermatitis, drug reactions, herpes simplex virus, neoplastic change, vascular malformation, necrotizing sialometaplasia, extramedullary plasmacytoma, and plasma cell granuloma.

Careful histopathological analysis is required for accurate diagnosis of plasma cell mucositis, as it is primarily a diagnosis of exclusion. Prominent plasma cell infiltration within a dense collagenous stroma is indicative of the disease and submucosal polyclonal pattern of kappa and lambda light chains illustrate a benign and reactive process.5,8 Pathological examination and clinical course confirm the diagnosis in the majority of cases.

Although the etiology is unknown, Román et al propose that low IgA levels may correspond with the development of repetitive and localized subclinical infections that may ultimately progress to chronic and nonspecific plasma cell mucositis.5

Treatment for plasma cell mucositis requires removal of the offending causative agent, when identified. If the allergen is not known, as in our case, treatment can be managed via medical or surgical approaches. Topical or systemic corticosteroids, antihistamines, and antimicrobials are the mainstay of medical management. Tissue destruction with CO2 laser ablation, liquid nitrogen, electrocoagulation, excision, or radiation therapy have all been described.9,10 Our patient was treated with clobetasol propionate 0.025% topical paste, and follow-up at 1 month showed resolution of the lesion.

In conclusion, plasma cell mucositis is a rare inflammatory lesion of the oral mucosa, and the diagnosis can be challenging. Careful attention to the history, physical examination, and histopathological analysis are required to obtain a timely diagnosis and begin appropriate therapy.

Declaration of Conflicting Interests
The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding
The author(s) received no financial support for the research, authorship, and/or publication of this article.

ORCID iD
Steven B. Micucci  https://orcid.org/0000-0003-2192-3050

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Figure 3. High-power view of oral lesion.