

## HIV-associated Psoriasiform Mucositis: A Case Report of Oral Psoriasis

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### ABSTRACT

This is an unusual case of oral psoriasis in a patient with cutaneous psoriasis who presents with HIV infection and diabetes mellitus. The case report reviews clinical/histopathologic presentation and management of psoriasiform lesions of the oral mucosa. There is limited knowledge of oral manifestations of psoriasis in HIV-infected patients and further studies are warranted.

**Keywords:** Mucositis; HIV; Psoriasis; Geographic tongue; Psoriasiform

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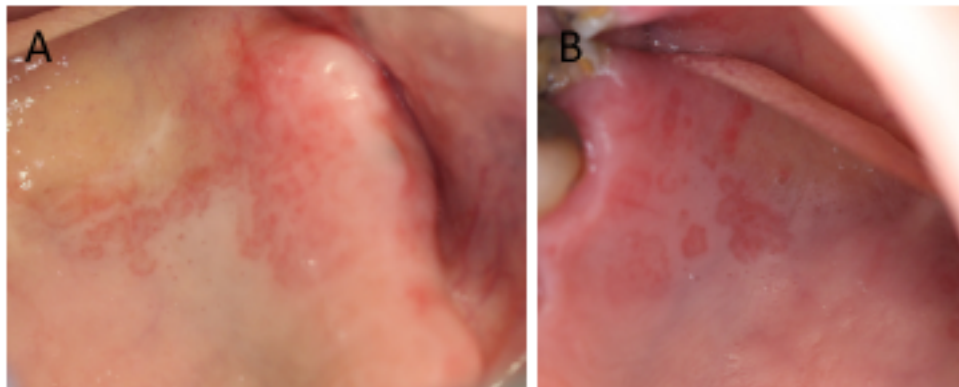
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### INTRODUCTION

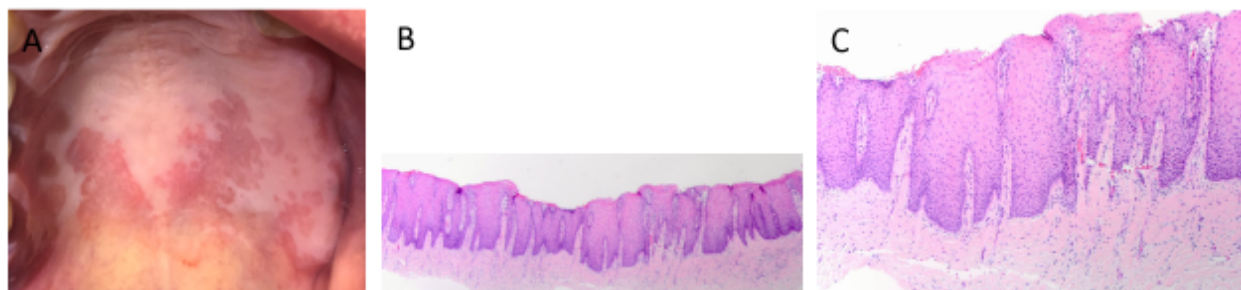
Psoriasis is a common inflammatory autoimmune disease marked by chronic, erythematous plaques on the scalp, torso, and extremities and is diagnosed via examination of cutaneous lesions for the presence of signature markers such as parakeratosis, acanthosis and Munro abscesses.<sup>[1,2]</sup> While oral manifestations of psoriasis are rarely documented in clinical observations, several types of lesions diagnosed as oral psoriasis have been described. Most cases of psoriasiform mucositis are asymptomatic with resolution following the control of cutaneous disease.<sup>[3,4]</sup> Oral psoriasis can also be treated with topical or intralesional steroids, retinoic acid mouthwash, and/or tacrolimus treatments.<sup>[5,6]</sup> In this case report, the patient was referred for an oral pathology consult after presentation to an oral surgeon with numerous “gum” lesions. The patient was originally treated for cutaneous psoriasis with apremilast, which was discontinued due to lack of prescription coverage. Upon resumption of apremilast for cutaneous lesions, a reduction of oral lesions was observed over a course of three months.

## CASE REPORT

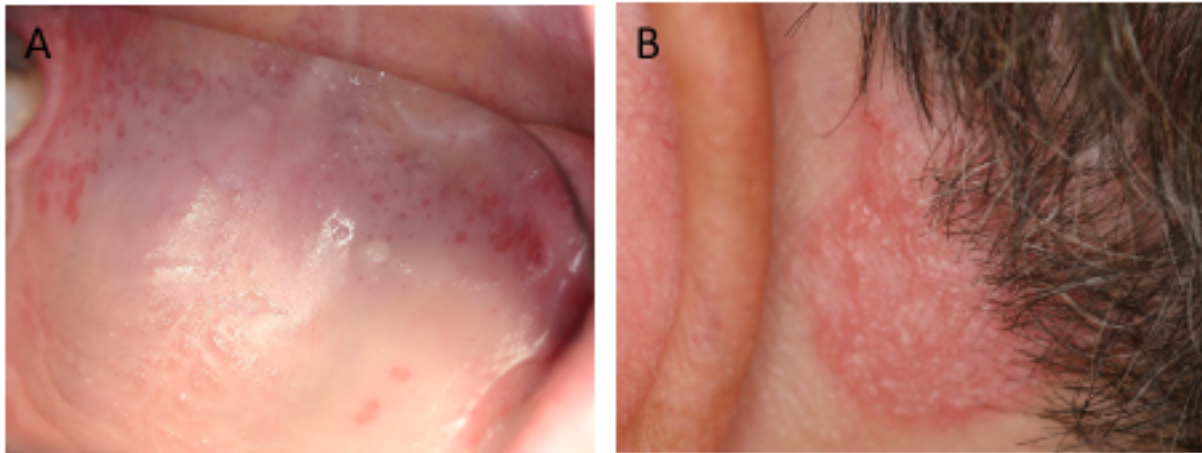
A 60-year-old male presented for evaluation of “gum” lesions noted by an oral and maxillofacial surgeon (Figure 1). The medical history was significant for Human Immunodeficiency Virus (HIV) infection, type 2 diabetes mellitus, and cutaneous psoriasis. On examination, multiple red macules were noted on the palate (Figure 1). The patient was previously treated with chlorhexidine gluconate 0.12% oral rinse but the lesions persisted. Exfoliative cytology was performed and the patient was treated empirically for erythematous candidiasis. However, exfoliative cytology was negative for *Candida* organisms. On return for re-evaluation, the oral lesions had become widespread (Figure 2A). The patient reported that he had discontinued apremilast for lack of prescription insurance coverage and his cutaneous lesions had also worsened. A biopsy of the palatal lesions was recommended, and a tentative diagnosis of oral psoriasis was rendered. Microscopic examination revealed hyperparakeratosis and psoriasiform mucositis (Figure 2B and C). Since the oral lesions were asymptomatic, the patient was reassured, advised to resume treatment with apremilast, and return for re-evaluation. One month after resuming treatment with apremilast, a regression of oral lesions (Figure 3A) as well as cutaneous lesions (Figure 3B) was observed.



**Figure 1:** Initial presentation: red, serpiginous lesions of the palate. (A) Upper right quadrant, (B) Upper left quadrant.



**Figure 2:** Oral lesions 2 weeks post-discontinued apremilast. (A) Widespread palatal lesions; (B) and (C) Hematoxylin-eosin staining of incisional biopsy of the left palatal lesion demonstrating hyper parakeratosis & psoriasiform mucositis. Photomicrographs courtesy of Dr. Stephen Roth.



**Figure 3:** Oral and cutaneous lesions 3 months post-resumption of apremilast. (A) Regression of palatal lesions; (B) Retroauricular cutaneous lesion period.

## DISCUSSION

Psoriasis is a common inflammatory autoimmune disease, affecting two percent of the population. It typically begins in early adulthood and can continue throughout the patient's lifespan.<sup>[1,2]</sup> While causes of psoriasis have not been identified, it is known to be a multifactorial disease in which relapses of symptoms can be induced by environmental or psychosomatic triggers.<sup>[1,2]</sup> Clinical signs include cutaneous lesions, most commonly found on the extremities, scalp, and torso, which may also be accompanied by joint inflammation.<sup>[1,2]</sup> The initial lesions are small papules with later manifestations including erythematous plaques covered by white scales, demonstrating signature Auspitz sign upon removal.<sup>[1,2]</sup> The microscopic appearance of these lesions demonstrates parakeratosis, acanthosis, budding at the tips of rete ridges, Munro abscesses, intraepithelial inflammation, dilatation of superficial capillaries and thinning of the suprapapillary plate.<sup>[1,2]</sup>

Oral manifestations of psoriasis are rarely documented and are very rarely clinically observed without cutaneous presentation of the disease.<sup>[3,4,7,8]</sup> There is no general agreement of the presentation or microscopy of the oral lesions.<sup>[3,4,8]</sup> Several clinical patterns have been described, varying from raised white lesions to flattened red lesions with white borders.<sup>[3,4,7,8]</sup> Oral manifestations of psoriasis can also be similar to those of geographic tongue.<sup>[7,8]</sup> Generally, to support the diagnosis of oral psoriasis, the histopathology is expected to be similar to the definitively diagnosed cutaneous lesions.<sup>[7]</sup> Therefore, most diagnoses of oral psoriasis are made based on a parallel clinical course with cutaneous disease and the typical histologic features of the cutaneous lesions.<sup>[3,4,7,8]</sup> Oral manifestations are expected to resolve as the cutaneous disease is managed. In some cases, corticosteroids have been applied topically or via intralesional injection.<sup>[3,4]</sup> Treatment using retinoic acid mouthwash has also been used successfully to resolve symptoms of oral psoriasis.<sup>[5]</sup> However, when the mouthwash treatment was discontinued, the lesions returned at follow-up appointments.<sup>[5]</sup> Symptoms of oral psoriasis have also been treated with a tacrolimus 'swish-and-spit'

regimen.<sup>[6]</sup> Tacrolimus is an immunosuppressive drug used to lower risk of organ transplant rejection and is also used for the treatment of T-cell-mediated diseases like psoriasis.<sup>[9]</sup> This tacrolimus ‘swish-and-spit’ regimen targeted geographic tongue, which can be an oral manifestation of psoriasis. In this study 70% of patients saw improvement.<sup>[6]</sup> Apremilast, the medication given to the patient in our case study, is given orally for the treatment of certain types of psoriasis and psoriatic arthritis. The drug acts as a selective inhibitor of the enzyme phosphodiesterase-4 (PDE4) and inhibits spontaneous production of TNF-alpha. Its successful use has been described in the treatment of a patient with psoriatic arthritis and concomitant HIV and hepatitis B virus (HBV) infections.<sup>[10]</sup>

There is no consensus definition of HIV-associated psoriasis, but it is typically more severe, and harder to treat than its classic form.<sup>[11,12]</sup> Patients tend to require a more tailored therapeutic approach due to its relationship to their other treatments, and the sudden severity of flare-ups.<sup>[11]</sup> Some of these tailored regimens consist of topical therapies, phototherapy, and highly active anti-retroviral therapy. These treatments are rarely enough to mitigate the disease due to the rapidity and severity of its presentation in HIV-infected patients. The difficulty in treating this disease stems from the fact that most systemic psoriasis treatment is immunosuppressive, making them an unfavorable option for already immunocompromised HIV-infected patients.<sup>[13]</sup> Psoriasis is usually associated with increased T-cells; however, in HIV infection, psoriasis is a marker of immunosuppression.<sup>[11-13]</sup> It is hypothesized that the imbalance of the CD4/CD8 ratio in HIV-infected patients may cause uncontrolled pro-inflammatory pathways, thereby inducing psoriasis.<sup>[12,13]</sup> While HIV-associated cutaneous psoriasis has been documented, oral manifestations of psoriasis in HIV-infected patients have not been described. Thus, the limited knowledge of oral manifestations of psoriasis, particularly in HIV-infected patients makes this patient presentation an interesting case and demonstrates the need for further studies.

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