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Traumatic Ulcerative Granuloma Mimicking Squamous Cell Carcinoma in Oral Lichen Planus

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Traumatic Ulcerative Granuloma Mimicking Squamous Cell Carcinoma in Oral Lichen Planus

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Abstract

Background: Oral lichen planus is an immune mediated mucosal disorder affecting up to 2% of the population. Dysplasia has been known to develop in 0.1% to 1% of patients with lichen planus. This necessitates close surveillance for the development of atypical lesions.

Case: Described is the case of a 68-year-old female patient with oral lichen planus who developed a non-healing ulceration on her right lateral tongue. Out of concern for neoplasia, a biopsy was performed. Histopathologic report indicated features consistent with traumatic ulcerative granuloma. The lesion did not return.

Conclusions: Oral lichen planus is a common mucosal disease. Although uncommon, traumatic ulcerative granuloma should be considered when atypical ulcerations arise in patients with lichen planus. However, such atypical ulcerations cannot be assumed to be benign. Prompt biopsy is appropriate due to the risk for dysplasia associated with lichen planus.

Key Words: lichen planus, oral; traumatic; ulcer, ulcerative; granuloma.

Oral lichen planus is an immune-mediated mucosal disorder affecting up to 2% of the population. Dysplasia has been known to develop in 0.1% to 1% of patients with lichen planus.[9] This necessitates close surveillance of patients for the development of atypical lesions, including malignant ulcerations.

Traumatic ulcerative granuloma is a relatively rare condition that presents as a rapidly enlarging ulceration on mucosa overlying skeletal muscle. Trauma is believed to be a factor in its pathogenesis. After searching the literature, no other reports of traumatic ulcerative granuloma arising in a patient with lichen planus could be found.

Case study

Described is the case of a 68-year-old female patient with oral lichen planus who developed a non-healing ulceration on her right lateral tongue (Figures 1-4). The ulcer was slightly raised, with whitish borders, and exhibited a "punched out" appearance. Out of concern for a malignant ulceration, especially with the history of lichen planus, an incisional biopsy was performed (Figure 5). The specimen was sent for routine histologic processing and staining with hematoxylin and eosin. Microscopic examination revealed ulceration with a deep inflammatory infiltrate extending into the underlying skeletal muscle layers and containing numerous neutrophils along with many eosinophils (Figures 6; 7, see Page 56). Within one month following biopsy the lesion healed and did not return. We continued to monitor the patient's lichen planus, but she was lost to follow-up with the outbreak of COVID-19 in Michigan.

Discussion

Traumatic ulcerative granuloma (TUG) is a relatively uncommon lesion of the oral mucosa. It presents as a persistent, sometimes painful ulceration with raised rolled borders, and so clinically mimics squamous cell carcinoma.[3,4] The tongue is the most frequent site of occurrence. It is also known by many names, including traumatic ulcerative granuloma with stromal eosinophilia (TUGSE), eosinophilic ulcer of soft tissue, and others.

(Continued on Page 56)

Figures 1 – 6

Figure 1: September 2018 — Erythematous lower labial mucosa especially at mucosal-vermillion border.

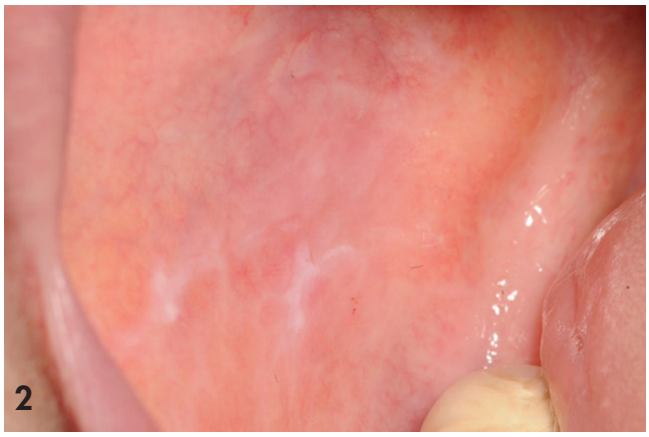


Figure 2: September 2018 — Wickham's striae and shallow erosion (top of photo).

Figure 3: March 2019 – Patient reported increased burning and ulceration, denied history of trauma, no lymphadenopathy; patient declined biopsy at this time.

Figure 4: Clinical exam. Raised ulceration; rolled borders; "punched-out" appearance; painful to palpation. Patient now asked for biopsy.

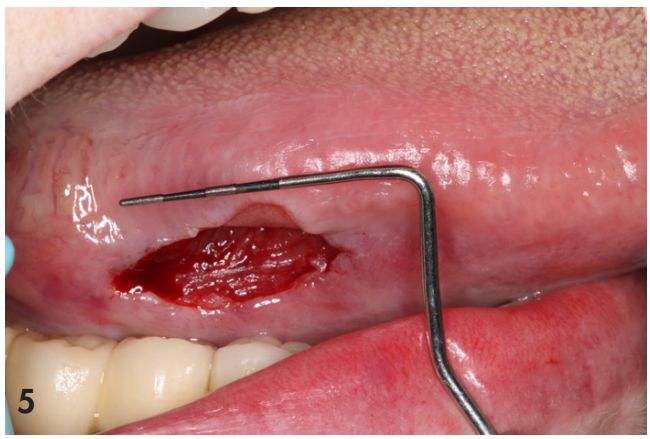


Figure 5: Incisional biopsy.

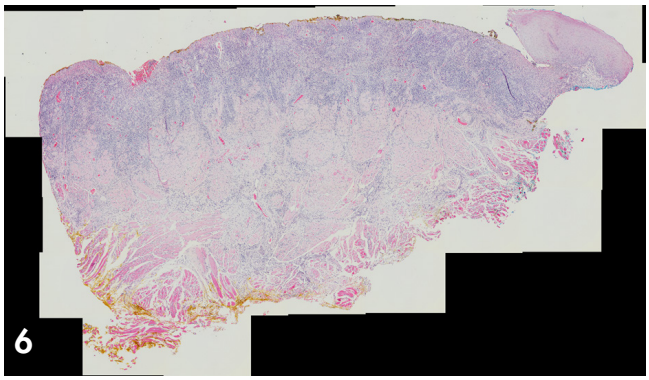


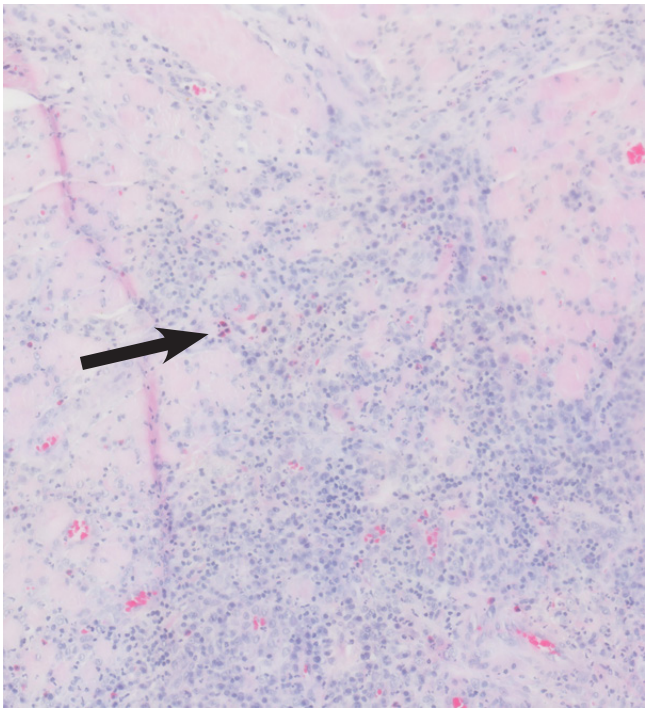
Figure 6: Mucosa mostly denuded with fibrin deposition, numerous enmeshed neutrophils, and abundant underlying granulation tissue.

Trauma is believed to be a contributing factor in its pathogenesis, and it most commonly presents in the fifth to seventh decades of life.[2] Differential diagnosis should include squamous cell carcinoma, CD30 positive lymphoproliferative disease, syphilis, Epstein-Barr virus mucocutaneous ulcer, and major aphthous.[1,9] Due to the wide-ranging clinical differential, biopsy of these ulcerations is essential for diagnosis. The histopathologic findings of TUG/TUGSE consist of ulcerated mucosa with an underlying dense inflammatory infiltrate extending deep into the underlying muscle fibers. The inflammatory cells typically consist of numerous small lymphocytes, eosinophils, neutrophils, and large mononuclear cells with small nucleoli and abundant cytoplasm.[3,4,6] Usually, incisional biopsy initiates a healing response without further treatment.[2,8,9] Lesions have also been successfully treated with intralesional or oral steroids.[5,7] However, it is recommended that recurrent lesions be submitted for immunohistochemical analysis for CD30 marker monoclonality out of concern for CD30+ lymphoproliferative disorders.[4,7]

Conclusion

The occurrence of TUG in patients with oral lichen planus appears to be a very rare phenomenon. Our search of the literature did not reveal any other reported cases. Under-reporting is also a possibility. Persistent ulcerative lesions in lichen planus are often empirically treated with injectable or oral steroids prior to biopsy. Since TUGs may resolve following steroid therapy, the true nature of the ulceration may be overlooked. All non-healing ulcerations in patients with lichen planus must be addressed with the utmost concern for a neoplastic process. However, practitioners should be aware of cases such as the one reported here and consider traumatic ulcerative granuloma in the differential diagnosis of such lesions. ●

Figure 7 — Some granulation tissue infiltrates the skeletal muscle bundles, resulting in chronic myositis. Many eosinophils are present (black arrow).



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About the Author

David Tindle, DDS, MS, DABOM, received his dental education at Baylor College of Dentistry in Dallas, Texas. He completed his residency in oral medicine at the Naval Postgraduate Dental School in Bethesda, Maryland, and is a Diplomate of the American Board of Oral Medicine. Currently, Tindle is a clinical associate professor and the academic discipline coordinator for oral medicine and oral pathology at the University of Michigan School of Dentistry.

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