

Bilateral Leukoedema and Its Management - A Case Report

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Abstract: *Leukoedema being a common developmental variation of oral mucosal clinically represents as a diffuse, greyish white, opalescent appearance of mucosa resembling multiple premalignant white lesions. The histopathological evaluation plays a key role in differentiating leukoedema from other white lesions. Here we present a case report of leukoedema with its appropriate investigative tool and management.*

Keywords: White lesions

1. Introduction

Leukoedema is a common developmental anatomic variant of the oral mucosa [1,2] in which the clinical features resembles premalignant white lesions such as leukoplakia. Other lesions such as oral lichen planus, oral candidiasis, white sponge nevus and morsicatiobuccarum also mimic leukoedema. The prevalence is more common in black skinned adults of about 70-90% and black skinned children of about 50%. The prevalence in white skinned people is considerably less (prevalence rate: 3/1,000 white adults). Habits such as tobacco smoking and chewing has been attributed to enhance the whiteness and size of the lesion but most cases are so subtle.

2. Case Report

A 57-year-old female patient reported to us with discoloration and mild burning sensation over both the sides of the inner cheek for past 6 months. No other associated oral habits were noted. General and systemic examinations revealed no other comorbidities. On local examination, inspection revealed well defined bilateral erythematous region interspersed with white lace-like pattern suggestive of WICKHAM STRIAE measuring 2*1cm in relation to retromolar region (Figure 1 and 2). On palpation mild tender elicited and consistency as that of normal mucosa. Based on the clinical presentation and history, the case was provisionally diagnosed as EROSIIVE LICHEN PLANUS. Differential diagnosis of frictional keratosis white sponge nevus, leukoedema and leukoplakia were proposed. Incisional biopsy was done bilaterally under local anesthesia and the specimen sent for histopathological evaluation.

The histopathological report reveals that "fibroadipose tissue lined by stratified squamous epithelium. The lining epithelium show mild acanthosis and parakeratosis. Focal intercellular edema and prominent intracellular edema is noted. These changes are more pronounced in the superficial layers of the epithelium. A subepithelial chronic lymphoplasmacytic infiltrate is also noted and there is no evidence of atypia or malignancy seen. (Figure 3)

Based on histopathological findings, the confirmatory diagnosis was made as LEUKOEDEMA with nonspecific chronic inflammation.

Treatment

Topical application of triamcinolone for 7 days in view of nonspecific chronic inflammation and topical tretinoin for 30 days in view of leukoedema were advised. Patient improved symptomatically after 2 months.

3. Discussion

Leukoedema is considered as an abnormality of oral mucosa in which leukoplakia is most likely to occur. [2] It occurs bilaterally but unilateral cases have also been reported. [3]. Leukoedema is persistent, and most common in individuals with dark skin. The etiology of this condition is unknown. [3] Clinical examination readily differentiates leukoedema from leukoplakia since there is no loss of pliability or flexibility of the involved tissues. [4,5]. In addition, the tissues affected by leukoedema manifest an edematous state. Clinical STRETCH TEST differentiates leukoedema from lichen planus. [4,6] Areas exhibiting leukoedema will either disappear or persist upon stretching, whereas lesions of lichen planus will become more pronounced. The present case was bilateral erythematous-white lesion on the buccal mucosa at the level of occlusal plane. On stretching the mucosa, the lesion become more prominent which rules out white sponge nevus and lichen planus, respectively.

Prevalence of leukoedema with Indian population has been low as observed from reported cases. Anuna et al. reported a prevalence of 3.78% in their study from Southern India. [9]

Van Wyk investigated the association of leukoedema and smoking, no positive correlation was established. [5] They concluded that smoking does not cause leukoedema but may aggravate it. Leukoedema was once considered as premalignant lesion but has been discredited as it is proved to have no malignant potential. [6]

No treatment is necessary for leukoedema as it has no malignant potential and does not change significantly after 25-30 years of patient age. [7]

Symptomatic leukoedema seems to respond to topical application of tretinoin. [9]

4. Conclusion

Though this case represents erosive lichen planus clinically, histopathological evaluation concludes the lesion as leukoedema. Hence histopathological assessment plays a

significant role in final diagnosis. I conclude that topical tretinoin application has a definitive impact on symptomatic leukoedema

References

- [1] Duncan SC, Su WP. Leukoedema of the oral mucosa. Possibly an acquired white sponge nevus. *Arch Dermatol* 1980;116:906-8.
- [2] Rajendran R, Sivapathasundharam B. Benign and malignant tumors of the oral cavity. *Shafer's Textbook of Oral Pathology*. 6th ed. New Delhi: Elsevier India Pvt Ltd.; 2009. p. 92.
- [3] Negm SA. Unilateral leukoedema-case report. *Int J Dent Clin* 2013;5:21-2.
- [4] Hammer JE, Mehta FS, Pindborg J, Daftary DK. An epidemiologic and histopathologic study of leukoedema among 50, 915 rural Indian villagers. *Oral Surg Oral Med Oral Pathol* 1971;32:58-65.
- [5] van Wyk CW. An investigation into the association between leukoedema and smoking. *J Oral Pathol* 1985;14:491-9
- [6] Sunitha C, Gabiel SR, Rajgopal S, Donald F. A brief review of common oral premalignant lesions with emphasis on their management and cancer prevention. *Indian J Surg* 2011;73:256-61
- [7] Vaidhehi Narayan Nayak , H. C. Girish , Sanjay Murgod , R. Narahari , B. N. Yathindra Kumar , Leukoedema of the buccal mucosa - A case report . *Journal of Medicine, Radiology, Pathology & Surgery* (2018), 5, 16–17
- [8] Anuna LM, Keerthilatha MP, Amar AS, Manoj V. The prevalence of oral mucosal lesions in patients visiting a dental school in Southern India. *Indian J Dent Res* 2008;19:99-103
- [9] Scott C. Duncan, MD; W. P. Daniel Su, MD , **Leukoedema of the Oral Mucosa** Possibly an Acquired White Sponge Nevus. *Arch Dermatol*. 1980;116(8):906-908



Figure 2: Lesion in the right side of the buccal mucosa

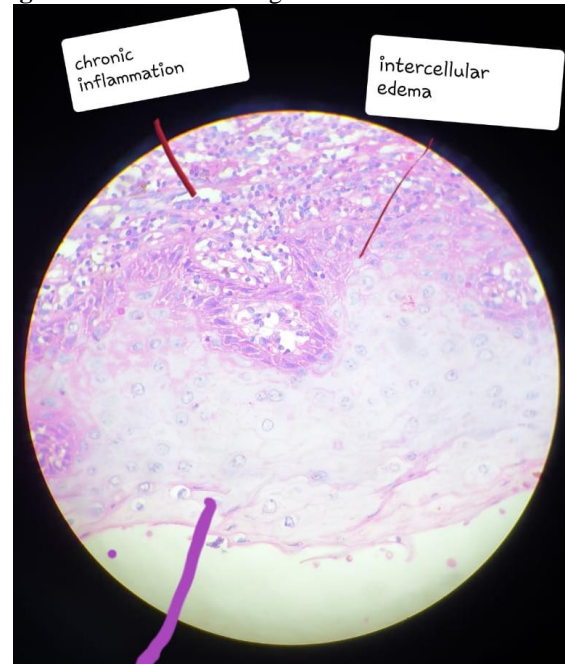


Figure 3: 10x view shows that mild acanthosis and prominent intracellular edema is noted.



Figure 1; Lesion in the left side of the buccal mucosa and parakeratosis. Focal intercellular edema