Bilateral Leukoedema and Its Management - A Case Report

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Abstract: Leukoedema being a common developmental variation of oral mucosa 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 morsicatio buccarum 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 57year-old female patient reported to us with discoloration and mild burning sensation over both the sides of the inner cheek for past 6months. No other associated oral habits were noted. General and systemic examinations revealed no other comorbid. 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 EROSIVE LICHEN PLANUS. Differential diagnosis of frictional keratosis white sponge nevus, leukoedema and leukoplakia were considered. 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 7days in view of nonspecific chronic inflammation and topical tretinoin for 30days in view of leukoedema were advised. Patient improved symptomatically after 2months

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 appearance of mucosa resembling multiple premalignant white lesions. The 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. Anna 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 lekoedema.

References


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

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.