

CASE REPORT



Leukoedema of the buccal mucosa - A case report

Vaidhehi Narayan Nayak¹, H. C. Girish¹, Sanjay Murgod¹, R. Narahari², B. N. Yathindra Kumar¹

¹Department of Oral Pathology, Rajarajeswari Dental College and Hospital, Bengaluru, Karnataka, India, ²Department of Oral Surgery, Rajarajeswari Dental College and Hospital, Bengaluru, Karnataka, India

Keywords:

Leukoedema, premalignancy, smoking

Correspondence:

Dr. Vaidhehi Narayan Nayak, Department of Oral Pathology, Rajarajeswari Dental College and Hospital, Kumbalgodu, Ramohally Cross, Bangalore – 560074, Karnataka, India.
E-mail: vaidhehinayak@gmail.com

Received: 16 June 2018;

Accepted: 20 July 2018

doi: 10.15713/ins.jmrps.139

Abstract

Leukoedema is a variant of oral mucosa which mimics premalignant lesion more so when there is associated smoking habit. We report a case of leukoedema which had a strong smoking habit.

Introduction

Leukoedema is the normal anatomic variant of the oral mucosa which has clinical appearance similar to potentially malignant white lesions such as leukoplakia and lichen planus. Other lesions which closely mimic leukoedema are white sponge nevus and cheek bite. Its association with smoking habit is unclear. The present case of leukoedema discussed here has strong smoking habit association.

Case Report

A 28-year-old male patient complains of grayish-white patch on the left and right buccal mucosae. The patient gave a history of smoking six cigarettes per day for 6 years. The patch was noticed accidentally while brushing teeth. The general physical examination was non-contributory and the lesion was asymptomatic. On examination, the lesion is grayish-white in color with irregular borders which present at the level of occlusal plane in both the right and left buccal mucosae extending to retromolar trigone area [Figure 1]. Lesion was non-scrapable and persisted after stretching the mucosa. Based on the clinical examination and prevalent smoking habit, provisional diagnosis of leukoplakia was given. Biopsy of the lesion was performed to confirm the diagnosis.

Histopathology

Histopathological examination reveals hyperparakeratosis and acanthosis of surface epithelium. Cells of the spinous layer show intracellular edema. Cells appear pale and have pyknotic nucleus [Figure 2]. No dysplastic features were observed. Based on clinicopathologic correlation, final diagnosis of leukoedema was given.

Treatment

No treatment is required for leukoedema, although topical application of tretinoin has shown a promising result in symptomatic cases.^[1]

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] The present case was bilateral grayish-white lesion on the buccal mucosa at the level of occlusal plane. On stretching the mucosa, the lesion persisted. It did not disappear or become more prominent which rules out white sponge nevus and lichen planus, respectively.

The association of smoking and leukoedema has been controversial. In the present case, the patient had smoking habit



Figure 1: Leukoedema of the buccal mucosa seen as whitish gray line at the level of occlusal plane

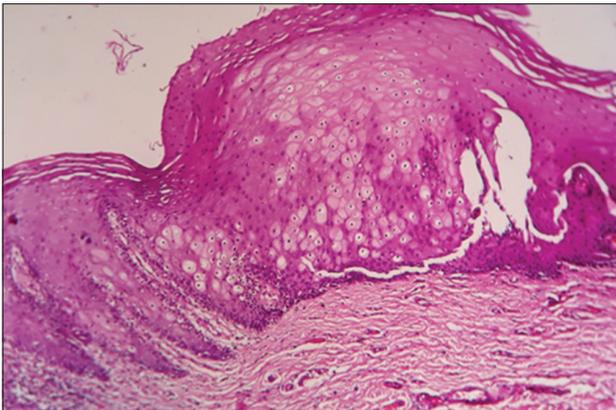


Figure 2: H and E stained section under $\times 10$ magnification shows edematous spinous layer

of 6 years. In an Indian study consisting of 50,915 populations, the incidence of leukoedema was only 0.11%, and among the cases, smoking habit was prevalent.^[4] In a study by van Wyk, an association of leukoedema and smoking was investigated, and no positive association 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]

The incidence of leukoedema varies worldwide. A definite racial predilection to African origin individuals has been observed in few studies.^[7,8] High incidence of leukoedema was noted in a study by Roy *et al.*, 1972, in which 400 patients of 430 examined had leukoedema, whereas the study by Axéll and Henricsson showed 48.9% incidence of leukoedema.^[9,10]

Indian experience with leukoedema has been low as observed from reported cases. Anuna *et al.* reported a prevalence of 3.78% in their study from Southern India.^[11] Joshi and Tailor had 0.81%

prevalence of leukoedema in their study from central Gujarat.^[12] A largest study group from four states of India comprising of 50,915 villagers had a prevalence of 0.11%.^[13]

Conclusion

Leukoedema is a harmless white lesion of the oral cavity which mimics premalignant lesion more so when it is associated with smoking. A prompt biopsy will help arrive at the diagnosis. More studies are needed to assess the actual prevalence of leukoedema in India and worldwide.

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How to cite this article: Nayak VN, Girish HC, Murgod S, Narahari R, Kumar BNY. Leukoedema of the buccal mucosa - A case report. *J Med Radiol Pathol Surg* 2018;5:16-17.