



## **Erythroplakia (A Dangerous Red Mucosa) & Leukoplakia Associated with Amalgam Restorations**

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### **ABSTRACT**

"A white patch or plaque of the oral mucosa that cannot be described clinically or pathologically as any other disease," according to the definition of oral leukoplakia. Erythroplakia is a clinical name for a red lesion that cannot be classified as any other condition clinically or pathologically. Erythroplakias are seen on the lateral border of the tongue, the floor of the mouth, the retromolar pad, and the soft palate, and are more common in elderly males. A 48-year-old man with leukoplakia on the left side of the buccal mucosa and erythroplakia on the right side of the buccal mucosa presented with bilateral buccal mucosa burning. The amalgam restorations on the right side (Erythroplakia) of the buccal mucosa were consequently removed, and the cavities were replaced with a composite resin restorative material. However, the Amalgam repair on the left side of the buccal mucosa (Leukoplakia) was not eradicated. Erythroplakia on the right side of the buccal mucosa was completely gone after 2 weeks of follow-up. However, leukoplakia on the left side of the buccal mucosa remains, but without symptoms. Amalgam fillings have been linked to OL lesions in this case.

### **Introduction:-**

"a white patch or plaque of the oral mucosa that cannot be described clinically or pathologically as any other disease," according to the introduction (1). The prevalence of OL varies between 0.5 and 3.4 percent, with a peak incidence rate in people over 50. The malignant transformation rate of OL has been estimated to be between 0.1 and 17 percent (2).

Oral Erythroplakia is a potentially cancerous condition. It is highly linked to substance misuse, such as smoking and non-smoking tobacco, alcohol, and so on. It is most usually linked to the use of cigarettes. Erythroplakia of the oral cavity is a distinct disease entity that must be distinguished from other specific or nonspecific inflammatory oral lesions, according to Shafer WG and Waldon CA, 1975, however this can only be done in most cases by biopsy. The source of erythroplakia is unknown, although researchers believe it is caused by tobacco and alcohol, which are comparable to the causes of squamous cell carcinoma. Nearly 40% of cases of Oral Erythroplakia progress to Oral Cancer. (3) and (4)

In dental practice, dental amalgams are still the most widely employed posterior restorative material. There is a link between mercury contact allergy and mouth lesions, according to research. Despite the fact that amalgam-related problems like as burning mouth and xerostomia. (5)

This case study depicts a patient who had Erythroplakia and Leukoplakia lesions, had a positive skin patch test reaction to amalgam, and recovered when his amalgam restorations were removed and replaced with a different material.

### **Case Presentation:-**

A 48-year-old man with suspicious red and white lesions on his buccal mucosa was referred to the Department of Dentistry. The patient's main complaint was a burning sensation in his mouth, as well as a dry mouth. Intra orally, a white lesion on the left side of the buccal mucosa and an erythematous region on the right side of the buccal mucosa were revealed on examination ( Fig:- 1,2). The patient had no medical history and had never smoked or chewed tobacco. Amalgam restorations on both sides of the lower back teeth. The Amalgam restorations were not flawed and were competently implemented. Restorations were completed a year ago. The development of the Oral leukoplakia and Erythroplakia lesions had coincided with the times of dental treatment, according to the patient's medical history. The patient had acquired hypersensitive reactions to the amalgam or its components, as evidenced by this.

As a result, the amalgam restorations on the right side of the buccal mucosa (Erythroplakia) were removed, and the cavities were restored with a composite resin restorative material. However, the Amalgam repair on the left side of the buccal mucosa (Leukoplakia) was not eradicated.

**Treatment :-**

Retinoid- isotretinoin 0.05% gel and corticosteroid - Tab. Prednisolone 5mg (Orally) twice a day for first 7 days and once a day for next 7 days advised. along with steroids, antioxidant drugs also given.

Erythroplakia on the right side of the buccal mucosa was completely gone after 2 weeks of follow-up. However, leukoplakia on the left side of the buccal mucosa remains, but without symptoms. (Figures 3 and 4) Amalgam fillings have been shown in this case to induce Oral Lesion. The amalgam restorations on the left side of the lower back tooth region were also removed during the next visit. and composite restoration was used to repair it.



Figure:- 1, 2. ( Pre treatment)



Figure:- 3, 4 ( Post treatment)

**Pathophysiology:-**

Hypersensitivity to amalgam has been linked to a number of amalgam-related disorders, including burning mouth, xerostomia, and orofacialgranulomatosis. Musculoskeletal and cognitive problems may also be caused by mercury compounds (6). The occurrence of oral lichen planus is directly connected with contact allergy to mercury, according to research (5). The phrase 'oral lichenoid lesion' is widely used to characterize such lesions that appear as a result of dental restorations (5,6).

**Discussion:-**

Oral leukoplakia has been linked to the use of tobacco and the intake of alcoholic beverages. It has also been shown that smokers have a higher chance of getting OL than non-smokers (7). Sanguinaria, a herbal extract present in toothpaste and mouthwashes, has also been linked to an OL lesion of the right buccal mucosa before to therapy. Before treatment, there was a leukoplakia lesion in the left buccal mucosa and an amalgam restoration in the lower mandibular tooth. Before treatment, a leukoplakia lesion on the right lateral part of the tongue. The lesion is indicated by black arrows, and the amalgam fillings in the upper and lower teeth are indicated by white arrows. Oral Leukoplakia is a type of oral leukoplakia that develops over time. Some microbiological research have looked at fungal and viral agents (Candida, HPV, and EBV) as etiological contributors in the development of OL (7, 8).

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**Conclusion:-**

In conclusion, treatment of clinically detectable premalignant lesions is very important for prevention of oral carcinoma.

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