



Potentially malignant disorder – Oral Erythroplakia: A Review

Dr. Kajal Shilu¹, Dr. Parth Raviya², Dr. Chandramani B. More³

¹Student, K. M. Shah Dental College and Hospital, Vadodara, Gujarat

²Surgeon, K. M. Shah Dental College and Hospital, Vadodara, Gujarat

³Head of department, K. M. Shah Dental College and Hospital, Vadodara, Gujarat

ABSTRACT

Oral Erythroplakia is a Potentially Malignant disorder. The disorder is strongly associated with substance abuse like smoking and smokeless Tobacco, Alcohol etc. it is most commonly associated with smoking tobacco. The present review article of oral Erythroplakia introduces definitions, clinical and Histopathological diagnostic features and short management chart of oral Erythroplakia which provides the easy key to diagnose and differentiate lesion by medicine specialist, ENT surgeon, Oral Surgeon etc.

Keywords: Oral Potentially Malignant Disorder, Oral Erythroplakia, Smoking and Smokeless tobacco, Red Lesion.

1. INTRODUCTION

Shafer WG and Waldon CA, 1975 analyzed that Erythroplakia of the oral cavity is a specific disease entity which must be differentiated from other specific or nonspecific inflammatory oral lesions, although this can only be done in most cases by biopsy. Erythroplakia has an unknown cause but researchers presume that the main causative factor is Tobacco and Alcohol which are, similar to the causes of squamous cell carcinoma. Almost 40 % of cases of Oral Erythroplakia convert into Oral Cancer.^{1, 2} The prevalence rate of oral Erythroplakia is of 0.2% with a range of 0.02% and 0.83% from different geographical areas. It is predominantly seen in the middle-aged and elderly patients. Oral Erythroplakia also was known as Erythroplasia, Erythroleukoplakia, Leukoerythroplakia, Speckled leukoplakia, Erythroplasia of Queyrat^{2,3}.

Table 1: Definitions of Oral Erythroplakia

According to Shafer and Waldron et al (1975)³	Erythroplakia of the oral cavity is defined as a specific disease entity which must be differentiated from other specific or nonspecific inflammatory oral lesions, although this can only be done in most cases by biopsy.
According to WHO Collaborating Centre for Oral Precancerous Lesions (1978)^{3,4,5}	“A fiery red patch that cannot be characterized clinically or pathologically as any other definable disease”.
According to Axell T, Pindborg JJ, Smith CJ, Vander Waal (1994)³	The term Erythroplakia is used analogously to leukoplakia to designate lesions of the oral mucosa that present as red areas and cannot be diagnosed as any other definable lesion ⁷
According to Bouquot, Ephros (1995)³	A chronic red mucosal macule which cannot be given another specific diagnostic name and cannot be attributed to traumatic, vascular, or inflammatory causes.
Pindborg JJ, Reichart PA, Smith CJ, van der Waal (1997)³	A fiery red patch that cannot be characterized clinically or pathologically as any other definable lesion
According to Burket’s 12th edition (2015)⁶	A red lesion of the oral mucosa that excludes other known pathologies ⁴

1.1 Classification - According to Shear et al (1972)³

A. Clinical variations

1. Homogeneous Erythroplakia
2. Erythroplakia interspersed with patches of leukoplakia
3. Granular or speckled erythroplakia (embracing the lesion described as speckled leukoplakia)

B. Microscopic variations

1. Neoplastic

- a. Squamous carcinoma
- b. Carcinoma in situ (intra-epithelial carcinoma) and less severe forms of epithelial atypia

2. Inflammatory

- a. Candida albicans infections (including denture stomatitis)
- b. Tuberculosis
- c. Histoplasmosis
- d. Miscellaneous specific, non-specific and non-diagnosable lesions

2. CLINICAL FEATURES

Both the sex is equally affected. It is most commonly seen in the age group of 40 -60 years. The most commonly affected site is soft palate, the floor of the mouth and the buccal mucosa. Usually, the lesion is asymptomatic, sometimes patient may complaint burning sensation. ^{3,5,8,9}

The WHO ‘Histological typing of cancer and Precancer of the oral mucosa’³ defined the clinical presentation of Oral Erythroplakia

Flat/ smooth, granular or nodular surfaces with a well-defined demarcation adjacent to the normal oral mucosa. May have an irregular, red granular surface intermingled with white or yellow foci, which can be labeled as granular Erythroplakia. There may be numerous, small irregular foci of Leukoplakia dispersed in the Erythroplakic patch, and this has been called speckled leukoplakia. Fiery red surface. It is hardly ever multicentric and rarely covers extensive areas of the mouth. These features are quite useful clinically in discrimination Oral Erythroplakia from other multicentre, bilateral or symmetrical oral disorders, such as erosive lichen planus, erythematous Candidiasis and lupus erythematosus. ³ Patients in whom carcinoma in situ has been diagnosed have been aware of an alteration in the involved site for at least 2.7 years prior to biopsy. Soft on palpation and does not become indurated or hard until an invasive carcinoma develops. Occasionally it is associated with OL and oral squamous cell carcinoma may also be observed in association with other oral mucosal diseases, in particular, oral lichen planus. The typical lesion of OE is less than 1.5 cm in diameter and half are less than 1 cm, but lesions larger than 4 cm have been observed. ^{3,5,7,9,10} Refer Chart 1 clinical appearance of the lesion.



Fig. 1: Oral Erythroplakia on right Buccal Mucosa

3. HISTOPATHOLOGY

Erythroplakia as a clinical term does not carry any histological suggestion; however, histological biopsy of Oral Erythroplakia shows.⁸

- Epithelial Dysplasia – mild to moderate
- Carcinoma in Situ – moderate to severe dysplasia

According to Reichart and Philipsen (2005)⁸, all Erythroplakia showed some degree of epithelial dysplasia: 51% showed invasive squamous cell carcinoma, 40% Carcinoma in situ or severe dysplasia and the remaining 9% demonstrated mild to moderate dysplasia.

Table 2: Differential Diagnosis of Oral Erythroplakia^{9,10}

Nature of condition	Diagnostic category
Inflammatory/immune disorders	<ul style="list-style-type: none"> • Desquamative gingivitis • Erythematous lichen planus • Discoid lupus erythematosus • Pemphigoid • Hypersensitivity reactions • Rieter’s diseases
Infections	<ul style="list-style-type: none"> • Erythematous Candidiasis • Histoplasmosis
Hematomas/Neoplasms	<ul style="list-style-type: none"> • Haemangioma • Kaposi’s sarcoma

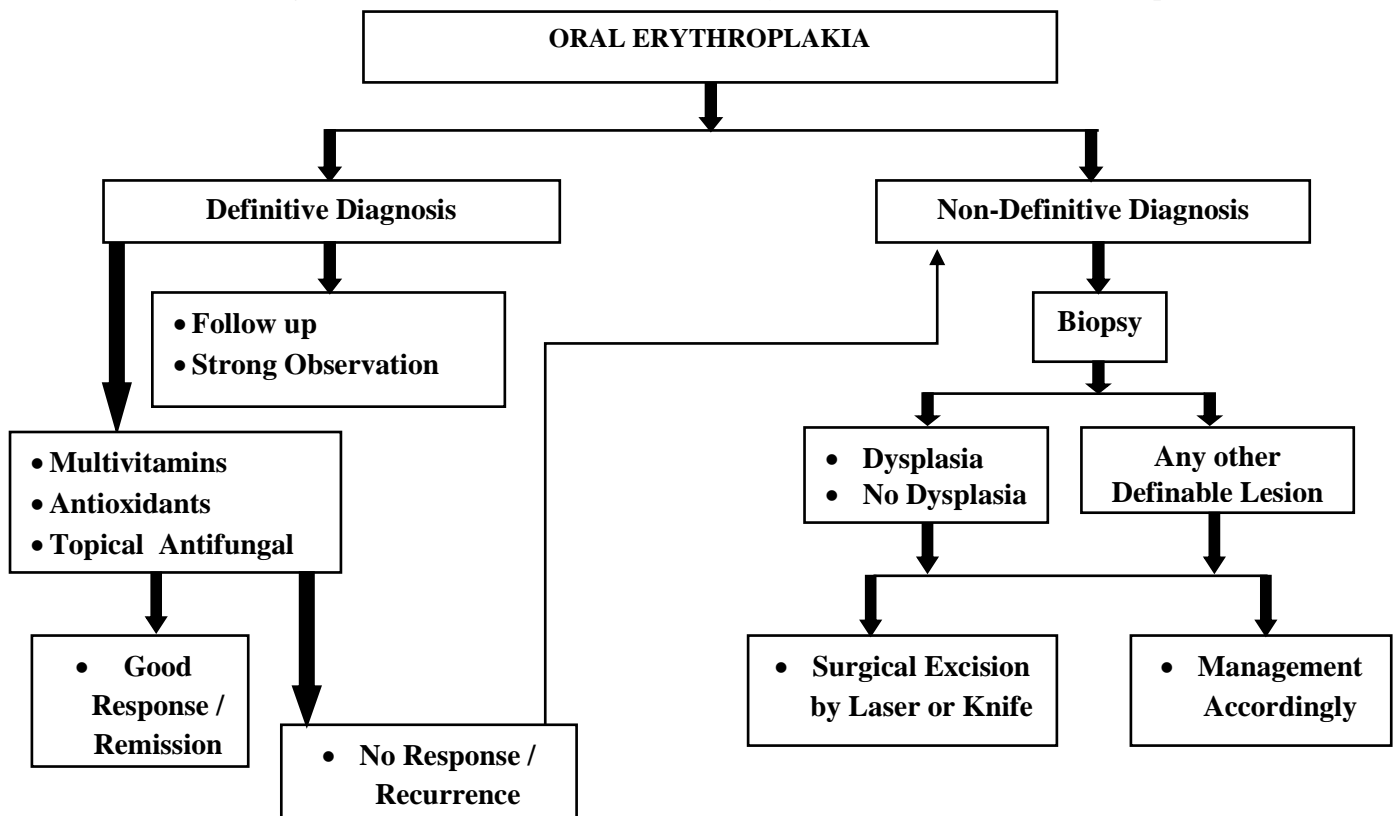


Fig. 2: Flowchart showing Management of Oral Erythroplakia¹¹⁻²⁴

4. CONCLUSION

Prevention is better than cure” Despite the different treatment modalities for Oral Cancer, such as surgery, radiotherapy, chemotherapy, chemo-radiation and immunotherapy, the five-year survival rate has not improved in recent years. Thus, there is a vital need for effective and reliable diagnosis of oral Precancer for early detection and subsequent effective management and eventually improvement in the quality of life. So this review articles provide us diagnostic criteria for oral Erythroplakia which is helpful in the early management of lesion.

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