



Oral lesions associated with Tobacco

L. Aravindh¹, P. Jagadhesh², P. Mahesh kumar³, Ramasubramaniam⁴, N. Raj vikram^{5*}

¹Department of oral medicine, Sri venkateswara dental college & Hospital, Chennai-603 103

²Department of oral medicine, Vyas dental college & hospital, Jodhpur-342 003

^{3&4}Department of oral medicine, Ragas dental college & hospital, Chennai-600096

Department of orthodontics and dentofacial orthopaedics, Thai Moogambigai Dental college and Hospital, Chennai-600095
n_rajvikram@yahoo.com*

Abstract

Many are unaware of the impact of tobacco in the oral cavity on general health, which may develop precancerous condition or lesion or some periodontal diseases.

Keywords: Leukoplakia, Erythroplakia, Reverse smokers.

Introduction

Tobacco is hazardous to general health, affecting oral cavity, which is like a mirror of the body. Because of tobacco usage number of systemic diseases will reveal their presence as lesions in the oral cavity. Tobacco used in any form produces localized lesions in the oral cavity. The lesions are classified as

- Precancerous condition
- Precancerous lesion
- Other pathology

The preparation of tobacco, duration and frequency influences the pathological lesion encountered.

Pre cancerous (malignant) lesion

Pre cancerous lesions, a localized tissue alteration, by contact with existing carcinogens in tobacco, can manifest as

- Leukoplakia
- Erythroplakia
- Palatal changes in reverse smokers.

Leukoplakia

Leukoplakia presenting as patches on the tongue, mouth, or inside of the cheek is the most common pre cancerous lesion occur in response to long-term irritation. It is visualized

as adherent white patches on the mucous membrane of oral cavity. In India, Leukoplakia has rarely been reported among non users of any form of tobacco -prevalence rate varies from 0.2% to 5.2% (India). Leucoplakia may regress spontaneously or persist, recur or progress to cancer (Axell & Henricsson, 1981). Regression seen more significantly in lesions associated with the chewing of tobacco or betel quid (Gutka), than in tobacco smokers (Silverman *et al.*, 1963; Shafer & Waldron, 1961).

Erythroplakia

Erythroplakia manifests as a flat red patch and is associated with tobacco smoking and alcohol or lesion in the mouth. This red patch cannot be explained or attributed to any other pathology- prevalence rate is 0.02% (India). Erythroplakia represents the most severe oral premalignant lesion and carries a much greater risk of cancer than leukoplakia (Shear, 1972).

Palatal changes in reverse smokers

Reverse smoking has detrimental effects on the palatal mucosa, which results in red areas, ulceration, pigmentation, excrescence patches

and palatal keratosis. The frequency of palatal cancer in reverse smokers is more in the oral cavity, than other parts of body (Van Wyk, 1967; Pindborg *et al.*, 1971).

Pre cancerous condition

Premalignant condition is more generalized and widespread with significant systemic involvement. Some of the precancerous condition is:

- Oral lichen planus
- Oral submucous fibrosis

Oral lichen planus(OLP)

OLP is a chronic mucocutaneous pathology categorized as precancerous. OLP may present in one of three forms (Scully & El-kom, 1985)

- The reticular form is the most common presentation and manifests as white lacy streaks on the mucosa or as smaller papules.
- The bulbous form presents as fluid-filled vesicles projecting from the surface.

The erosive forms present are erythematous (red) areas that are erosion of the thin epithelium resulting in painful ulcerations. They may occur in multiple areas of the mouth (Black, 1986; Conklin & Blasberg, 1987).

Oral submucous fibrosis (OSMF)

Oral submucous fibrosis is a premalignant condition characterized by slowly progressive chronic fibrotic disease resulting in formation of fibrous bands within the oral cavity and oropharynx, resulting in loss of elasticity and develops, leading to trismus (lockjaw). Several aetiological factors have been postulated but now accepted that OSMF is caused by areca nut chewing- prevalence ranges from 0.03% to 3.2% (India). OSMF is a high-risk precancerous condition as 4.5% to 7.6% of OSMF lesions progress to oral cancer. The increased malignance is due to generalized epithelial atrophy (Rajendran, 1994; Sinor *et al.*, 1990).

Other tobacco related oral mucosal lesions

Other common oral mucosal lesions reported from India include leukoedema, tobacco lime users lesion, OLP-like lesion, central papillary atrophy of the tongue, palatal

erythema per se or with papillary hyperplasia, periodontal disease, localized gingival recession, increased caries, halitosis, discolouration of teeth and excessive wear on the teeth due to abrasives in the tobacco (Norton, 1998).

Conclusion

Tobacco in any form has ill effects on oral cavity. All the lesions developed due to tobacco are significantly potential for malignancy. So tobacco to be avoided in any form and persons already using tobacco must be weaned away by suitable methods .This reduces the incidence of cancer in the oral cavity due to tobacco usage.

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