

Management of Premalignant Oral Cavity lesions: A Radiation Oncologist Prospective

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ABSTRACT

Sir James Paget first described malignant transformation of an oral lesion into tongue carcinoma way back in 1870, Squamous cell carcinomas SCC is the most common cancer of the oral cavity. Normal tissues progress to dysplasia or carcinoma due to multiple genetic mutations. Precancerous lesions of oral mucosa, known as potentially malignant disorders in recent years, are consists of a group of diseases, which should be diagnosed in the early stage. Oral leukoplakia, oral submucous fibrosis, and oral erythroplakia are the most common oral mucosal diseases that have a very high malignant transformation rate. Oral lichen planus is one of the potentially malignant disorders that may be seen in six different subtypes including papular, reticular, plaque-like, atrophic, erosive, and bullous type, For oral cavity premalignant lesions reported possible factors are tobacco use, alcohol drinking, chewing of betel quid containing areca nut . Early diagnosis is very important and can be lifesaving, because in late stages, they may be progressed to severe dysplasia and even carcinoma in situ and/or squamous cell carcinoma.

Keywords: Squamous cell carcinoma, Leukoplakia, Lichen planus

DISCUSSION

A precancerous lesion is morphologically altered tissue in which oral cancer is more likely to occur than its apparently normal counterpart , precancerous lesions of oral cavity are , Leukoplakia, Erythroplakia, Oral sub mucous fibrosis , lichen planus, Chronic hyperplastic candidiasis ,Plummer wilson syndrome .

Leukoplakia ,Erythro leukoplakia, are kind of lesion that can be appreciated on clinical examination and needs further diagnostic steps to confirm whether its limited to dysplasia or its invasive carcinoma. Biopsy remains the Gold standard procedure to diagnose such lesions, Incisional biopsy may underdiagnose underlying invasive carcinoma henceforth excisional biopsy should be obtained whenever feasible. Staining with toluidine blue helps in selection of the site for biopsy, these dye can identify lesions that are at higher risk for malignant transformation , hence staining with toluidine blue could prove to be helpful in the diagnosis of premalignant lesions of oral cavity.

In Leukoplakia rate of malignant transformation occurs in 3% to 6% cases and its most common site is oral commisure there are three kind of leukoplakia first is leukoplakia simplex this having lowest propensity of malignant transformation in invasive carcinoma , second is leukoplakia erosive type and third is leukoplakia nodular type this is having highest rate of malignant transformation , the most common site of leukoplakia are buccal mucosa and oral commissar , if person stop smocking for 1 year leukoplakia would be disappear in 60% of the cases .the rate of malignant transformation of oral leukoplakia are higher in given below conditions.

- 1-Non homogenous leukoplakia.
- 2-Lesions size is more than 200mm²
- 3- Lesion is on tongue.
- 4- Lesion that demonstrate severe dysplasia.



Figure-1, Leukoplakia under surface of tongue.

Staging of Leukoplakia is being described as Stage one / phase one when the lesion is white, slightly translucent and non palpable type, Stage two , when the lesion is opaque and white slightly elevated plaque along irregular margin , Stage three is being described as thickened white lesion that shows fissuring , indurations as well as ulcer formation .

ORAL LEUKOPLAKIA MANAGEMENT

Treatment options are nonsurgical as well as surgical options If person stop smocking for 1 year leukoplakia would be disappear in 60% of the cases, So far as treatment of leukoplakia is concern high dose of vitamin A decreases leukoplakia in 60% cases other treatment option is laser excision. If a causative factor is identified , than life style modifications should be encouraged along with 4-6 weeks observations period is given to determine any spontaneous regression of the lesion other non surgical medications used are vitamin C, A, Beta carotene , Lycopene , Bleomycin etc.

Vitamin A as retinol, caratenoids and beta carotene have been used and showing response rate 52% to 71% , Vitamin C used as monotherapy , Bleomycin is a chemotherapeutic agent , topical use of 1% bleomycin showed almost 75% cases as complete response.

Surgical Therapies are wide local excision of the lesion with a cuff of normal tissue is the standard of care for smaller lesions, Laser ablation is done for wider / larger lesions when large resection could compromised , morbidity for laser ablation therapies are minimum .

ERYTHROPLAKIA: Erythroplakia found as red velvety plaque lesion in oral cavity with most common site is gingival mucosa its almost 8% to 15% and its most common site is gingival mucosa chances of getting converted in invasive carcinoma since area of erythroplakia are generally small less than 1.5 cm with clear margin hence are good for surgical resection treatment .



Figure-2, Erythroplakia lateral border of tongue

ORAL SUBMUCOUS FIBROSIS

Oral submucous fibrosis OSF is a chronic condition characterized by alteration in the normal fibroelastic qualities of the submucousal tissues of oral cavity, the commonest site of OSF is buccal mucosa on clinical examination shows dense fibrotic bands which are painful to touch, there is evidence that OSF is caused by Areca nut customarily chewed, Betel nut and Gutkha are the products contain Areca nut causes OSF.



Figure-4, Oral submucous fibrosis with Trismus

Oral submucous fibrosis under goes malignant formation at rate of 7 % up to 30%. Management of OSF are stopping the chewing of areca nut, steroids with or without hyaluronidase may be injected into fibrotic scar bands it helps in reducing the pain as well as effect on fibrosis and trismus, adding antioxidants also helpful, The administration of vitamin A,B,E with or without micro nutrients like zinc, magnesium, iron calcium proven to be helpful.

LICHEN PLANUS: Lichen planus LP is an inflammatory condition of skin and oral cavity mucosa, there is proven association between hepatitis C and lichen planus but yet exact cause remains unknown, pathological studies suggest that it is a T-Cell mediated autoimmune disorder, Oral lichen planus present as symmetric lesion on the buccal mucosa other sites of LP are tongue and gingival, there are six types of oral lichen planus out of that

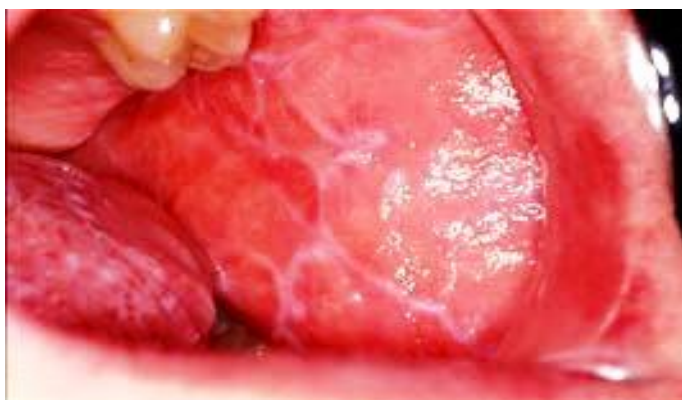


Figure-3, Lichen planus in oral cavity

Reticular variety is the most common it usually presents as symmetric, fine white or grey raised lesions on buccal mucosa known as **Wickham striae**. So far as the treatments are concerned, topical application of steroid are useful to relieve symptoms, systemic steroids are needed if topical steroids does not leads to improvements, lycopene and curcumin extracts in high doses are also useful most important part of management remains regular followup of the patients.

Conflict of interest: None.

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