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Potentially Malignant Disorders of Oral Cavity and their Management

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1. Introduction

In majority of cases invasive oral Squamous cell carcinoma (SCC) arises from a previously diagnosed potentially malignant oral disorders (OPMD). OPMD denotes clinically obvious, morphologically altered oral mucosa, in which cancer is more likely to occur and may show dysplasia or carcinoma on histology examination.

Common OPMD
Leukoplakia
Erythroplakia
Oral Submucous fibrosis
Ca. Traumatic ulcer
Lichen Planus

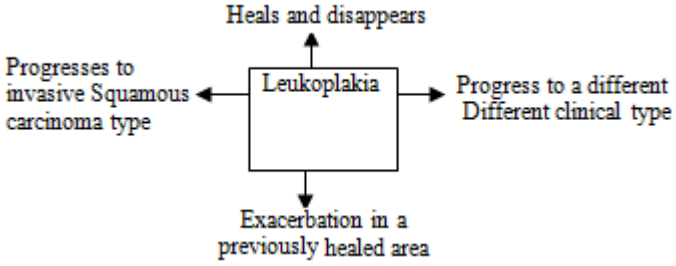
Oral Cancer Screening Study

- A Community based cluster randomized controlled study started in 1995-2006.
- 191873 subjects aged 35 and above participated in the study participated in the study participation rate of 91%. 3 rounds of screening each lasting 3 years
- Oral inspection in study areas by trained health workers.
- Referable lesion examined by a specialist in the field clinic. OPMD treated in the clinic
- Any malignancy referred to Regional Cancer Centre for treatment.

Proportion of OPMD[1]
Leukoplakia
Homogenous 41%
Ulcerated 27%
Nodular 39%
Veruccous 2%
Oral submucous fibrosis 18.6%
Erythroplakia 4.3%
Others

Rate of malignant transformation[2]
Leukoplakia in 10 year follow up
Homogenous Leukoplakia 9%
Ulcerated Leukoplakia 39%
Nodular Leukoplakia 22%
Verrucous Leukoplakia 11%

2. Natural History of Leukoplakia



Homogenous Leukoplakia
White patch with a uniform intact flat surface. The surface can be wrinkled corruglaed or pumice like.

Ulcerated Leukoplakia
While patch with areas of ulceration or erosion in the centre.

Nodular Leukoplakia
White patch with characteristic white nodules on an erythematous back ground. The nodular appearance in often due to candidial infection.

Verrucous Leukoplakia
White patch with multiple fungus like projections within the patch.

Clinical presentation
The lesions can be single or multiple. More than one clinical type can be present in a person's mouth.

Management[4]

Erythroplakia
Pedominant red areas interspaced with white areas. It is also termed as Erythroleukoplakia. 4.3% of the OPMD in TOCS was Erythroplakia. Rate of malignant transformation in 10 year follow up 86%

Clinical signs of malignant Transformation[3]

- Development of an exophytic growth
- Painless ulceration not responding to treatment
- Granular –nodular areas from atrophic sites.

Attributable clinical features for high risk

- Red and white lesions
- Multiple lesions
- Lesion larger than 200mm
- Lesions that do not regress after habit cessation
- Long standing lesions
- Legume in non-habitures and women
- Lesions in high risk anatomic sites (floor of the mouth, undersurface single and lateral margins of tongue).

3. Molecular Markers for Predicting MT

Oral Submucous fibrosis

- Blanching of oral mucosa
- Vesicles appear after a spicy meal
- Difficulty to tolerate spicy food
- Difficulty to open mouth and protrude tongue
- Loss of elasticity of buccal mucosa
- De-papillation of tongue
- Atrophy of Uvula and nasal voice

- Difficulty in swallowing

Etiology of OSMF

- Produced by progressive hyalinization of juxta epithelial collagen fibres
- Arecolin present in areca nut in the major causative factor
- Interferes with collagen metabolism
- Abnormal collagen interferes with vascular supply to epithelia regular in atrophy
- Minor salivary glands gets atrophied resulting in sticky saliva

Lichen Planus

It is an auto immune mucocutaneous disease which affect skin, oral, genital mucosa scalp and nails. Usually Oral lesions appear before skin lesion. In the mouth 4 different clinical presentations

- Reticular
- Erosive
- Papular
- Plaque like

Erosive has highest rate of MT to be treated by a specialist

Trauma leading to keratosis and ulceration caused by sharp cusps, root stumps unscientifically fabricated appliances. An ulcer that do not heal within a mouth even after treatment has to be viewed with caution.

After removal of traumatic agent if the ulcer has not healed within 2 weeks, a biopsy is indicated to rule out malignancy

4. Conclusion

- Any person above the age of 35 with one or more of the smoking, Tobacco chewing, alcohol or arecanut habit is a high risk person for oral cancer.
- Whenever you get a chance to interact with a high risk person examine the oral cavity for OPMD in cancer. If OPMD is diagnosed treat locally. If cancer is diagnosed refer directly to a cancer centre.
- Teach the patient with OPMD the clinical signs of malignant transformation. When such a change is noticed the patient should report for follow up to the dentist or family doctor.
- Advise patients with OPMD to stop tobacco/alcohol/arecanut habits and take daily green leafy vegetables.

References

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