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Actinic Chelitis

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Abstract: ***ACTINIC CHELITIS is a premalignant condition of concern. Caused mainly due to UV rays. This article goes through an proper clinical findings and treatment.***

Keywords: Actinic chelitis, premalignant

1. Introduction

Actinic chelitis is a common premalignant alteration of the vermillion border of the lower lip that results from chronic UV light exposure. This type of lesion is more common in western countries and people in developing countries like India are not aware and less concerned about this lesion. The aim of this article is to establish awareness about the aetiology, pathogenesis, clinical features and treatment of this disease.

Actinic cheilitis is a pathological condition that most frequently affects the vermilion border of the lower lip.[1–3] In persons with everted lower lips, as a racial characteristic or as an inherited trait, the mucosal surface of the lower lip, which is partly exposed to sunlight, is also affected. When both the upper and lower lips are prominent, as in bimaxillary protrusion, the upper lip may also be more vulnerable to sunlight exposure. In the past, actinic cheilitis was regarded as being potentially malignant, with not infrequent transformation into invasive, metastasizing squamous cell carcinoma.

An alternative view states that the keratinocytes in actinic cheilitis have already undergone ultraviolet light-induced molecular and genetic transformation into neoplastic keratinocytes, that actinic cheilitis is in fact the result of clonal expansion of the transformed keratinocytes,[3–7] and that it should be considered from its initiation to be an in-situ squamous cell carcinoma.[8]

2. Synonyms

1) Actinic Cheilosis
2) Solar Cheilosis
3) Actinic Keratosis
4) Farmer's Lip
5) Sailor's Lip.

Etiopathogenesis
On direct chronic UV exposure from sunlight, mutations can occur in tumour suppressor gene TP53.The exact mechanism of development of actinic chelitis is unclear. It is considered to be potentially malignant.

Risk Factors
Fair Skin, Old Age, Immunosuppression, Genetic Abnormalities Like Albinism, Rothmund – Thompson Syndrome, Cockayne Syndrome , Xeroderma Pigmentosum.

Clinical Features

Site: Actinic chelitis occurs most commonly in Vermillion border of lower lips due to thinner epithelium, lower melanin content and lower sebaceous and sweat secretion.

Gender Prediction: It has strong male prediction with reported male female ratio as 10:1. Which may reflect more outdoor occupational activity and less frequent use of lip protective agents among men compared to women. It occurs more commonly in older individuals.

Onset: Gradual in Onset.

Early Clinical Findings
Atrophy characterized by smooth, blotchy, pale reddish areas. Dryness and fissures of the lower lip vermillion, with blurring of the margin between the vermillion and the adjacent skin. As lesion progresses, rough scaly areas occur on the dried portion of the vermillion. If scales are removed tiny bleeding points are revealed. Later, these Areas May Thicken To Form Leukoplakic Lesions At Wet Line Of The Lip.

The affected person complains of an inelastic or tight sensation in the lip. On examination one finds mottling of the lip with atrophic areas or shallow erosions and rough, scaly, flaky keratotic patches on some parts, or on the entire exposed portion of the lip and sometimes with small wrinkles in the vermilion border.[2,3] When the surface of the lesion is palpated, there is a fine sandpaper-like feeling.[2] The keratotic patches progress to palpable thickening and induration, and eventually one or more of them may become clearly demarcated or may ulcerate. Such changes are suggestive of invasive squamous cell carcinoma.[10,11,12]

Eventually, Chronic Ulceration May Develop And Lasts For Months And Progress To Squamous Cell Carcinoma.

Signs of Malignant Transformation

1) Ulceration in actinic chelitis
2) Red and White Blotchy Appearance.
3) Indistinct Vermillion Border.
4) Generalised Atrophy
5) Focal Areas of Whitish Thickening

Histopathologic Features

The Surface Epithelium Usually Shows Hyperkeratosis, Atrophic Or Acanthotic Changes. Underlying Connective Tissue Demonstrates A Band Of Amorphous, Acellular, Basophilic Changes Known As Solar Elastosis. A Chronic Inflammatory Cell Infiltrate And Dilated Blood Vessels May Be Present

Treatment

Patients should be encouraged to reduce sun exposure to prevent further damage. Biopsy should be done to rule out carcinoma.

In mild cases, application of 5 % fluorouracil thrice daily for 10 days. Rapid freezing with CO2 snow or liquid nitrogen on swab stick is use to remove the superficial lesions

In severe case without malignant transformation, vermillenectomy may be performed.

Alternative Treatments:

(Er: YAG) Laser Ablation, Electrodessication, Cryotherapy, Photodynamic Therapy.

Prognosis: Good

Prevention: Prevention of actinic chelitis can be achieved by avoiding mid-day sunlight, use of lip balms with anti UVA and UVB ingredients. Use of sun screens prior to sun exposure.

3. Conclusion

In our country people are less aware of the lesion and fail to undertake treatment thereby. So, proper education and awareness is essential to revert from the ill effects of this disorder. Hence immediate treatment is necessary because of the potential for malignant transformation of the lesion.

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