Case Report:

Actinic cheilitis: a potentially malignant disorder a case report

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ABSTRACT

Actinic cheilitis is not an uncommon disease and it is usually considered to be an occupational hazard, particularly in those geographic areas such as India, with a great deal of sunshine. In actinic cheilitis, the current view is that the keratinocytes have undergone transformation forming a field of epithelium with the potential for neoplastic transformation. Clinical features include diffuse and poorly demarcated atrophic, erosive or keratotic plaques that may affect some parts of, or the entire vermilion border. It is common in fair-complexioned people, those with albinism and people with eversion of the lip. This condition has definite tendencies toward the development of carcinoma. Careful counselling and observation are necessary and occasionally vermilionectomy may be indicated. Prophylactic measures against all forms of sunlight-induced lesions must include limitation of exposure to the sun during peak sunlight hours, the use of appropriate protective clothing, and the use of a sunscreen cream. We present a case of such lesion in which chronic exposure to sun has caused changes leading to actinic cheilitis even in dark coloured skin .

Keywords : actinic cheilitis , vermilionectomy, occupational hazard

INTRODUCTION

Actinic cheilitis (AC) is a clinical term for an ulcerative, sometimes crust-forming lesion of the mucosa of part or entire vermillion border of the lower lip.(1) It is a potentially malignant disorder with a histopathological spectrum varying from hyperkeratosis with or without epithelial dysplasia to early squamous cell carcinoma in the presence of basophilic changes in the lamina propria. Thus, Actinic Keratoses (AK) is a histopathological term.(1)Actinic cheilitis is a pathological condition that most frequently affects the vermilion border of the lower lip.(2-4) 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, are more prone to develp such changes.

An alternative view states that the actinic cheilitis is in fact the result of clonal expansion of the transformed keratinocytes in which the keratinocytes have already undergone ultraviolet light-induced molecular and genetic transformation into neoplastic keratinocytes, (5,6) and that it should be considered to be an in-situ squamous cell carcinoma and dealt in the same way.(7) The major etiological factor is ultraviolet rays while old age (due to diminished cellular DNA repair mechanisms), immunosuppression and tobacco are considered to be important contributing factors.(8)

The chief complains of the patient are 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.(3,4)

On palpation, there is a fine sandpaper-like feeling.(3) The keratotic patches progress to palpable thickening and induration, and eventually one or more of them may become clearly demarcated or may ulcerate. When such changes are evident then one should be suspicious as they are indicative of squamous cell carcinoma.(9,10)

CASE REPORT

A 65 years old female patient came to dental OPD with the chief complain of swelling of lower lip, which was non tender since 1 year with no history of pus or mucous or any other kind of discharge from the lip. She had difficulty in mastication and in speech. She complained of loss of elasticity of lip and sensation of tightness was felt in lower lip. There was no numbness in the lower lip. She complains of gradual onset swelling and it was consistent in size with feeling of dryness and cracking with occasionally episode of bleeding from the site. She never complained of any fever. There were no erosions , ulcers or vesicles on lips . She was asked about any cosmetic products that she was using or started using she refused. There was no any change in dietary habits either. The swelling was consistent with her increased outdoor activity especially during summers. She was farmer by profession. None of the family member had such condition. No other skin or mucosal lesion was present. Systemic evaluation revealed no difficulty in digestion or nay other gastrointestinal abnormality. No history of coughing and further blood, GI, respiratory investigations were advised . Extraoral examination (Fig 1) showed eversion of lower lip, keratotic band at vermillion border giving the appearance of wrinkling, areas of crustation with associated bleeding spots (Fig 2), blurring of interface, no mucous/serous discharge, on palpating an indurated band was felt at vermillion border, lips were firm and non tender and on applying pressure there was no discharge.

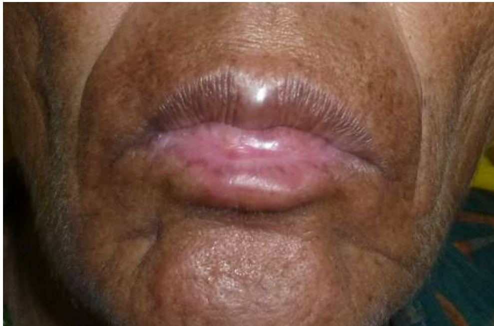

Fig 1 Keratotic bands on lower lip

Fig 2 Areas of crustation associated with bleeding spots

Based on the clinical picture and history provisional diagnosis of Actinic cheilitis with differential diagnosis of Cheilitis glandularis and Cheilitis granulomatosa . Histological section showed hyperkeratosis, dyskeratosis, acanthosis, dysplasia and chronic inflammatory infiltrate; however no evidence of malignant cell transformation were found.

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Patient declined any invasive surgical procedure. Patient was educated about the condition was advised local non steroidal inflammatory drugs , retinol ointment and sun protective lip balms for 1 month. Patient was told to avoid sun exposure . Regular follow up was advised.

DISCUSSION

AC is a preneoplastic lip lesion associated with significant risk of progression to lip squamous cell carcinoma.[12,13] It predominantly occurs in males, middle-aged, poorly educated and lower socioeconomic status. Clinically , AC is of two types acute and chronic. Chronic cheilitis is characterized by atrophy of the lower lip vermilion, white plaques and erythematous areas, loss of elasticity and ulcerations. However, in acute form may be detected with lip edema, redness, bubbles formation and crusts. In our case, chronic AC was observed with the classic symptoms including white plaques surrounded by erythema, crusting, ulceration and pain.

Actinic keratosis of the skin is primarily UVB-induced intra-epithelial neoplasm, when the lesion is associated with vermilion border of the lip it is called actinic cheilitis.[14]

The literature has reported patient at high risk for actinic cheilitis as Caucasian man above 50 years of age, with tobacco abuse and a chronic history of exposure to sunlight .[1]Our patient in her old age and have been exposed to sunlight for a longer duration since her childhood. The literature have stated that the eversion of the lips increases the exposure of thin epithelium (with low keratin and melanin) as in current case further increases the risk of developing AC.

The histopathologic aspects of AC is varied including hyperplasia, acanthosis or atrophy of the epithelium, thickening of the keratin layer, and/or dysplasia, which may range from mild to severe. In connective tissue, basophilic degeneration of collagen fibers is usually detected.[15] . Depending upon the histological picture treatment plan is framed.

It is important to monitor periodically AC patients and perform incisional biopsies

in lesions with any suspicious clinical picture in order to prevent their malignant transformation. The various treatment modes of AC, include application of anti neoplastic drug(5-fluorouracil), peeling with trichloroacetic acid 50%, imiquimod 5%, electrosurgery, photodynamic therapy, CO2 laser, vermilionectomy, cryosurgery, and dermabrasion.[16] In cases involving severe epithelial dysplasia surgical excision (vermilionectomy), cryosurgery and laser surgery should be performed.[17]

Studies have shown vermilionectomy as a well-recognized technique and an excellent alternative for treatment of AC providing satisfactory aesthetic results.[18]

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