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ACTINIC CHEILITIS – A CASE REPORT

Oral Medicine

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ABSTRACT

Actinic cheilitis (AC) is a chronic inflammatory disorder that occurs mainly occurring in the lower lip in susceptible individuals. The susceptible individuals include people with fair complexion, people engaged in more of outdoor activities and those with eversion of lips. It is usually caused by chronic and excessive exposure of the lips to solar ultraviolet (UV) radiation. The lesion is potentially malignant and may transform into squamous cell carcinoma (SCC). The Clinical features involve diffuse and poorly demarcated atrophic, erosive or keratotic plaques which may affect a little or the entire vermilion border of the lower lip. This is a case report of actinic cheilitis, its clinical features and treatment options.

KEYWORDS

Actinic cheilitis, UV-B, Squamous cell carcinoma.

INTRODUCTION

Actinic cheilitis (AC) is a chronic inflammatory disorder of the lips that exclusively occurs on the vermillion regions of the lower lip. It is caused due to regular and prolonged exposure to sunlight in susceptible individuals. Actinic cheilitis is procured from the Greek words "aktis" meaning "ray" and "cheilos" meaning "lips".[1] It is studied as a potentially malignant lesion by the World Health Organization in the year of 1997.[2] The vermilion border has increased susceptibility to the effects of UV rays because of thinner epithelium, low melanin content, and less sebaceous and sweat secretion.[3] Other names of actinic cheilitis include solar keratosis, actinic keratosis, actinic cheilosis, and cheilitis exfoliativa.

Case Report

A 58-year-old South-Indian female patient presented with a chief complaint of pain and soreness of the lower lip for the past 1 year followed by bleeding for the past 1 month. The pain was dull, continuous, and aggravated on eating hot and spicy foods. The pain was associated with itching and a burning sensation. The patient gives a history of bleeding from the lower lip during the opening, and closing of the mouth and during the speech for the past 1 month. There was no history of prodromal symptoms of fever or malaise. The lesion increased in size and severity after exposure to the sun. No similar lesions were noticed throughout the body. Her personal medical history was significant only for Diabetes mellitus for the past 7 years and under medication. The patient had good oral hygiene, with no adverse habits. On general physical examination, the patient was poorly nourished and weak, with signs of pallor. Hard tissue examination revealed missing teeth of 31 and 41. Soft tissue examination revealed edematous and erythematous lower labial mucosa. A diffuse ulcer is noted in the entire lower labial mucosa. The periphery of the lesion appears to be bright red when compared to the center of the lesion. The margins are irregular with a smooth surface. Palpation of the lesion revealed tenderness. The ulcer was soft in consistency and bleeds on touch (Figure 1). On correlating the chief complaint and examination; a differential diagnosis of Actinic Cheilitis of lower labial mucosa or Discoid Lupus Erythematosus of lower labial mucosa was given. The patient was convinced to undergo an excisional biopsy; prior to which all the routine investigations were done.

The hematological investigation revealed a lower Hb concentration of 11.4gms/dl. The biochemical investigation of Fasting blood glucose revealed 150 mg/dl and Postprandial blood glucose revealed 238mg/dl. An excisional biopsy was done concerning the left lower lip region. The hematoxylin and eosin-stained histopathological section showed para-hyperkeratotic stratified squamous epithelium with underlying connective tissue stroma. The epithelium is atrophic and exhibits a supra-basilar split in one area. The connective tissue is mildly collagenised with diffuse dense chronic inflammatory cells infiltrated predominantly by lymphocytes and plasma cells. Deeper stroma exhibits normally appearing fat cells and muscle fibers. Vascularity is moderate (Figure 2). On correlating the chief complaint, examination, and histopathological examination; a differential diagnosis of Actinic Cheilitis of lower labial mucosa or Discoid Lupus Erythematosus of lower labial mucosa was given.

To differentiate the diagnosis; indirect immunofluorescence was carried out. The immunoassay was negative for antinuclear antibody in 1:100 dilution. The final diagnosis of Actinic cheilitis of the lower lip was given. The Patient is advised to avoid exposure to sunlight. The Patient is advised for the application of 0.1% Triamcinolone acetonide ointment 5 times/day for 2 weeks and application of candid mouth paint 3 times/day for 2 weeks. The patient was asked to review after 2 weeks and the lesion regressed gradually on the consecutive follow-up (Figure 3).

DISCUSSION

Ultraviolet (UV) B rays range from 290nm to 320nm wavelength causing the superficial burning of the skin that leads to sunburn. The predominance of UV-A rays causes mutations in the basal cell layer reinforcing the malignant transformation of human skin. Hence it is imperative to assure the populace not just from UV-B but also from UV-A irradiation. 95% of Squamous Cell Carcinomas on the lip occur on preexisting Actinic Cheilitis.[4] Actinic cheilitis was believed most frequently in fair-skinned people, but also found in dark-skinned people of India. Risk factors include outdoor activity, skin type, smoking, dietary habits, and genetic predisposition. The differential diagnosis includes actinic lichen planus, herpes simplex lesions, exfoliative cheilitis, contact cheilitis, autoimmune blistering disease including pemphigus vulgaris, lichenoid drug eruptions, cheilitis granulomatosa, cheilitis grandularis, and early carcinoma in situ.[5,6] Few studies have reported the epithelial expression of P53 and Murine Double Minute (MDM2) gene was significantly increased in Actinic cheilitis.[7,8] Thus, p53 and MDM2 proteins in Actinic cheilitis can be an important indicator in lip carcinogenesis, regardless of the degree of epithelial dysplasia.

In this case, the patient was a farmer which causes prolonged exposure to sunlight. Since there was no deleterious habit and trauma from the opposing tooth was also ruled out, a diagnosis of Actinic Cheilitis was given. Treatment encompasses prophylactic measures like avoiding exposure to the sun, covering the skin surfaces, and applying sunscreen lotions with relevant sun protection factors. The treatment options can be broadly branched into surgical and non-surgical methods. Surgical procedures include vermilionectomy, cryotherapy, laser ablation, and Mohs Surgery; whereas conservative modalities include topical treatment using imiquimod, 5-fluorouracil, diclofenac, ingenol mebutate and photodynamic therapy.[9,10]

CONCLUSION

The intimate association of the disorder with exposure to sunlight is an

important factor to be noted in history. Early diagnosis is of paramount importance as increased susceptibility to turning out into squamous cell carcinoma; may deteriorate the prognosis of the treatment outcome. Chemical and physical sunscreens will help to lower the risk of damage caused by radiation to the skin. This case gives us an insight into the importance of clinical examination combined with occupational history, the synergistic combination of which helps us to arrive at the diagnosis. Hence early intervention can be done to prevent harmful outcomes like squamous cell carcinoma that may cause unfavorable prognosis to the patient.

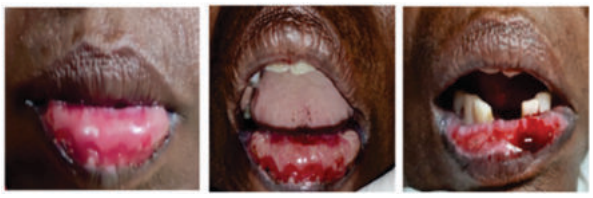

Figure - 1 shows edematous and erythematous lower labial mucosa

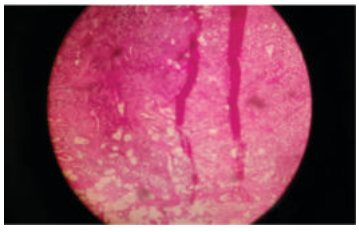

Figure - 2 shows histopathological section of the lesion

Figure - 3 shows healing of the lesion in the consecutive follow up

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