

Actinic Keratosis Involving Right Vermilion Border of Lower Lip

Supriya Vijay Gupta¹, Jaideep Sur¹, Samiksha Acharya², Shashwati hargovind Choube³, Rakashree chakraborty⁴

¹Department of Oral Medicine and Radiology, Rungta College of Dental Sciences and Research Center, Chattisgarh, India,

²Department of Oral Medicine and Radiology, Sharad Pawar Dental College and Hospital, Maharashtra, India, ³Department of Oral

Medicine and Radiology, VYWS dental college, Maharashtra, India, ⁴Saroj Gupta cancer Hospital, West Bengal, India

Abstract

Actinic keratoses are slowly growing intraepithelial neoplasms in skin constituted by a typical increase in keratinocytes. They develop in sun-exposed skin areas; and are induced mainly by ultraviolet radiation, so considered as cutaneous markers of exposure to sunlight for a long duration. They are basically slow growing papules, less than 1 cm in diameter. The clinical presentation reveals a dry, erythematous, pigmented lesion with telangiectasias, covered by yellow or brown adherent scales. They may further progress to develop squamous cell carcinoma. We reported a case of actinic keratosis in right vermilion border of the lower lip. The patient was an operated case of lip cancer, 12 years back. The lesion was healed by topical antibiotics, natural product (Aloe Vera) and multivitamins. Skin cancer prevention campaigns must encourage medical and population education on various skin lesions like actinic keratosis etc. Also, proper medications with counseling and follow up should be taken care to prevent their a progression to skin cancer.

Key Words: Actinic keratosis, Squamous cell carcinoma, Solar keratoses

Introduction

Actinic keratoses (AKs), also known as Solar keratoses are common skin lesions heralding an increased risk of developing Squamous Cell Carcinoma (SCC). They are mostly found in fair-skinned individuals and are dangerous among immunosuppressed ones. It arises principally due to excessive ultraviolet light (UV) sun exposure [1]. The natural history of actinic keratoses is particularly recognizable and reducible because of the natural resources devoted worldwide to their etiology. As with other pre-malignant lesions, such as those of the other body part like cervix, their natural history is relatively not clear. Spontaneous remission of these solar keratoses lesions has been documented by reducing the sun rays or quantitatively the ultraviolet exposure in the population [2].

Actinic keratoses are lesions with keratinocytes showing dysplastic behavior confined to the cutaneous epidermis. They are caused by excessive absorption of ultraviolet radiation [3]. Normal-appearing sun-exposed human epidermis level shows a relatively increased number of TP53-mutated keratinocytes (skin cells). For the initiation of carcinogenesis, sunlight may act as an agent that increases the chance of tumor proliferation by favoring the clonal expansion of TP53-mutated keratinocytes. Premalignant changes in solar keratosis lesion (i.e., UV-damaged skin demonstrating skin-damage and photo-aging at the molecular level, cellular level and at the gross level) can be clinically identified and treated before the development of Squamous cell carcinoma [4]. Solar keratosis is potential “the key event in the progression to epithelial cell carcinoma. It commonly presents as red to white hyperkeratotic plaques with scales over the skin surface. It accounts in individuals who works or lives with photo-aged skin due to long-term sun exposure. Because actinic keratoses and squamous cell carcinoma have similar histologic and genetic mutation profiles, it has been widely stated that these two neoplasms are inter-related [5].

The case report states the diagnosis, differential diagnosis, treatment and prognosis of one actinic keratoses lesion in an elder male patient occurring over lower lip. Natural medicines (Aloe Vera) are used from the ancient times and till date to heal various cutaneous and mucosal premalignant lesions

Case Report

A 70 years old male reported to our department with a chief complaint of ulcer in the right side of tongue for 2 months and a lesion in the right side of lower lip since 15 days. Lesions were initially small in size which gradually increased as shown in *Figure 1*.



Figure 1. Lesion in the right lateral border (First visit).

Corresponding author: Dr. Supriya Vijay Gupta, Department of Oral Medicine and Radiology, Rungta College of Dental Sciences and Research Center, Chattisgarh, India, Tel: 9425610532; E-mail: supriya.gupta130@gmail.com

Patient history

The Patient was suffering from burning sensation within both the lesion since 8 days. The lesion of lower lip was bleeding due to any minor trauma or accidental pressure. Found difficulty in chewing food. Stress and lack of sleep for 1 month as the patient was scared of again recurrence of malignancy. No fever. No paresthesia/anesthesia. No difficulty in swallowing. No difficulty in opening mouth. No lethargy, tiredness, weakness or any weight loss.

The patient was an operated case of well-differentiated squamous cell carcinoma of lip region and also underwent surgery with radiotherapy cycles after it. The patient was a tobacco and chronic bidi (cigarette made of unprocessed tobacco wrapped in leaves) smoker for 30 years and had left the habit 12-13 years back when he was diagnosed with lip cancer. The patient is currently and also in past was working as a labor in Road Construction Company.



Figure 2. Lesion first recall visit.

On General examination, built was average and gait was normal. All vital signs (blood pressure, Pulse rate, Respiratory rate) were within the normal limits.

On extraoral examination, there was facial asymmetry due to surgical defect is seen in a left lower vermilion border of the lip. Scarring of lip lesion covered by yellowish plaque seen in a right vermilion border of the lower lip of size 2×1 cm approximately, shape roughly oval, margins ill-defined there was the presence of black scab on its surface. Also, the scab was dislodged in the center. On palpation, there was tenderness elicited and no bleeding and pus discharge on manipulation.

On Intraoral examination, a single ulcer is seen in the right lateral border of tongue of size 0.5×0.5 cm shape roughly oval surface covered by the yellowish slough. The patient was

completely edentulous. There was diffuse multifocal melanin pigmentation seen in right and left buccal mucosa.



Figure 3. Lesion second recall visit.



Figure 4. Lesion third recall visit.

A Provisional diagnosis of actinic keratosis in right vermilion border of the lip was made. Differential diagnosis may include erythema multiforme, pemphigus. The latter two presents overall bleeding encrustations in the lower lip region with the presence of skin lesions around the palms, knee, neck etc. A complete blood count was performed which was within the normal limits.

The patient was advised for complete stoppage of habit and covering of face with cloth in sunlight. Local application of Candid Mouth paint (anti-fungal) 4-5 times daily intraorally for 5 days and Aloe E cream (natural gel) local application over lip 4-5 times daily for 5 days was advised. During 1st

recall visit after 5 days, Patient gave a history of 50% relief from burning sensation over the lesions (*Figure 2*).

The patient also complained of lesion bleeding on accidental trauma. The patient was advised to take similar medications for 5 days with added Syrup Becozinc (multivitamin syrup) two teaspoons, two times daily for 5 days. During 2nd recall visit, Patient gave 60% relief from burning sensation over the lesion (*Figure 3*). During 3rd recall after 15 days. The patient gives 90% relief from burning sensation over the lesion (*Figure 4*). The patient was advised similar medications for a month. And follow up visits were taken care.

Discussion

Solar Keratoses are one of the most common premalignant lesions, diagnosed and treated by oral physicians and dermatologists. These superficial lesions generally are considered premalignant, and it is believed that they result from a clone of abnormal squamous cells caused by Ultraviolet light-induced gene alteration, although some investigators summarize that they already contain the characteristics of malignancy and should be classified as such [3].

Primary prevention of Solar keratoses includes sun-protective behavioral measures, such as covering the face and other sun-exposed areas with a cloth, avoidance of excessive sun exposure, particularly between 11 a.m. and 3 p.m.; use of broad and wide sunglasses; avoidance of artificial UV sources, such as tanning beds and prolonged ultraviolet light treatments; application every 3 to 4 hours of a broad-spectrum sunscreen with UVB protection of at least 30 Sun Protection Factor (SPF) and high and extended UVA protection; reapplication of sunscreen in cases of excessive sweating or swimming; and the use of protective clothing. Multivitamins are prescribed to increase the general health of the patient, promote immune growth and proper healing [6]. The alternative treatment can be photodynamic therapy, 3.75 to 5% imiquimod, 0.5 to 5% 5-fluorouracil, 3% diclofenac, 0.1% topical tretinoin, 10% masoprocol and 0.5 to 1% colchicine. Medium peels, laser re-surfacing, and epithelial derma abrasion are also described in the treatment of multiple lesions [7].

Secondary prevention includes a full body examination for early detection and several treatment modalities that may prevent further development and recurrence of such skin lesions. Among these treatments, topical and systemic retinoids have demonstrated their efficacy in decreasing the risk of developing Basal cell carcinoma and Squamous cell carcinoma [6].

The Aloe Vera gel itself forms glue-like viscous substance on the skin which acts as a natural "band-aid", sealing in the nutrients and allowing them to adhere tightly. It helps in avoiding any bacteria or other agents (virus, fungi, protozoa helminths and dust allergies) that could slow down the healing mechanism. It softens the normal skin and also used in diseases in psoriasis, eczema, herpes, mycosis, keratosis, red spots, fever blisters, areas of skin irritation. It provides protection to the skin against pollutants, irritants, allergies, sunburn etc. Aloe Vera acts as a cleanser, moisturizer,

astringent and humidifier. Also, it is ideal for sunburns, fragile skin, and for removal and repair of dead skin and cells. So, it's the key medicine that helped in the healing of the premalignant lesion in our present case [8].

The decision to treat such premalignant lesions can be based on cosmetic reasons as well as to avoid the risk of increase; symptom relief; or, most importantly, the prevention of malignancy and metastasis. Treatment options include curettage with electro-surgery, photodynamic therapy, and ablative (destructive) therapies such as cryosurgery. Topical therapies are used in patients with multiple lesions. Fluorouracil has been the traditional topical treatment for actinic keratoses, although imiquimod 5% cream and clotrimazole 3% gel are effective alternative therapies. They help to break the cell membrane of fungus, kill the essential mitochondria and prevent further fungal growth. Antifungal antibiotics are given to reduce the superseded superinfection in the lesion [9].

Conclusion

To conclude, actinic keratoses once diagnosed should be primarily treated to avoid transformation and the periodic follow-up of patients should be taken to re-examine the patients, promote good skin health conditions and encourage photo-protective measures. Skin cancer prevention campaigns must encourage education in the community for the diagnosis of Solar keratoses like lesions with the goal of increasing the patients and doctors perception to skin lesions, which indirectly would increase the number of skin related diagnosis in the population, reducing the morbidity from diseases which occur due to delayed diagnosis.

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