

Case Report on Chronic Actinic Dermatitis

Arathi Thekke Veedu, Tonya Clara Thomas*, Gopika Konattu Shaijan, Maneesha Thazhayil, Kabeer Parayil Karuvanvalappil

Department of Pharmacy Practice, KMCT Medical College Hospital, Calicut, Kerala, INDIA.

ABSTRACT

Chronic Actinic Dermatitis (CAD) or Chronic Photosensitivity Dermatitis is an immunologically mediated photodermatosis which is characterized by pruritic eczematous lesions, severely itchy, red, inflamed and thickened dry skin of sun exposed areas. The other term of chronic actinic dermatitis is Actinic reticuloid. It is usually seen in patients older than 50 years of age. The etiology of chronic actinic dermatitis is not identified until now. The diagnosis of chronic actinic dermatitis is based on patient history, cutaneous findings and histological features (biopsy). Photo protection measures are a central management of chronic actinic dermatitis. Other therapeutic remedies include immunosuppressive agents and antihistamines. Here we reported a case of chronic actinic dermatitis presenting with long history of itching and reddish lesions, multiple hyper pigmented and erythematous papules and plaques present over the body. On the scalp there is multiple well defined de-pigmented and erythematous plaques were present. The patient condition improved with the use of steroids, antihistamines and sunscreens.

Key words: Chronic actinic dermatitis, Photodermatosis, Photoprotection, Photopatch, Photosensitive.

INTRODUCTION

Chronic Actinic Dermatitis is defined as the persistent eczematous eruption which mainly affects photo exposed sites with the evidence of broad-band photosensitivity.¹ It is a rare and severe idiopathic photodermatosis classified under the term immunologically mediated photodermatosis. It typically affects men in the fifth decade of life or older and is characterized by pruritic eczematous and lichenified plaques sharply defined to sun exposed areas. The diagnosis is based on clinical, histopathological and photo biological features.²⁻⁶ Photosensitive eczema in combination with predominantly UVB sensitivity was identified as occurrence of eczema on photo exposed sites. Photo exposed site dermatitis and isolated UVA photosensitivity are also included in the concept of chronic actinic dermatitis in the absence of photoactive drugs, although much less common. Positive patch and/or photo patch results are found in the majority of identified patients. Photo testing and photo patch analysis facilities are not freely available and the histopathology is not

comprehensive, the clinical characteristics remain the most important tool in chronic actinic dermatitis. The chronic actinic dermatitis treatment is generally divided into preventive, behavioral and environmental avoidance approaches to restrict photosensitivity clinical manifestations and suppressive methods to reduce the immune and inflammatory nature of the disease.

CASE REPORT

A 68 year old man with long history of itching and reddish lesions over the scalp, forearm, shoulders, abdomen and back for 10 years. Dermatologic examination revealed multiple hyper pigmented and erythematous papules and plaques present over the body. On the scalp there is multiple well defined de-pigmented and erythematous plaques were present (Figure 1). Biopsy demonstrated, an epidermis of irregular thickness, spongiosis, edema telangiectasia with inflammatory infiltrate of the dermis. As well as, actinic elastosis with mononucleated

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Address for correspondence:

Dr. Tonya Clara Thomas
Department of Pharmacy Practice, KMCT Medical College Hospital, Calicut-670602, Kerala, INDIA.

Phone no: +91-9744021226

Email Id: tonyaclara18@gmail.com



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inflammatory infiltrates in the deep dermis. The upper dermis may contain large activated lymphocytes with some pleomorphism with eosinophils, plasma cells and scattered stellate fibroblasts embedded in reticular fibroplasias. A treatment with topical corticosteroids has been initiated along with antihistamines and broad spectrum sunscreens. Following lesions reappeared after 2 weeks, which later progressed to forearm, back, trunk and lower limb (Figure 2). IV corticosteroid was given for sudden relief and by avoiding exposure to sunlight, the patient reports a significant reduction of disease progression.

DISCUSSION

CAD is common eczematous photodermatitis, ie, an itchy,



Figure 1: Depigmented and erythematous plaques present on shoulder and back.



Figure 2: Hyper pigmented and erythematous papules and plaque present on both arms.

inflammatory skin disorder caused due to sun exposure persisting for long term. This condition is previously known as actinic reticuloid, photosensitivity dermatitis and photosensitive eczema. It is a rare inflammatory dermatosis characterized by dermatitis involving UV light. The prevalence rate is higher in men older than 50 years of age and those are exposed to sunlight. Chronic actinic dermatitis is a disease that is generally thought to deteriorate during the summer month or after excessive sunlight exposure. The pathogenesis of CAD is not well defined. During the time of biopsy, specimen shows more CD8+ (cytotoxic) cells than CD4+ (helper) cells at different stages of disease, which is similar to late stage allergic contact dermatitis. Some potential phototoxic contact allergens, such as fragrance materials and colophony, may be able to convert endogenous proteins into allergens¹. Another hypothesis suggests that the normal suppression of delayed type hypersensitivity by UV irradiation may fail. It is likely that the pathogenesis of chronic actinic dermatitis can be explained by combinations of certain aspects.⁷ The major symptom of CAD is seasonal intolerable itching. In chronic CAD lichenification, alopecia, ectropion and pigmentary changes can occur. It is usually seen in the back of the hands, nose, forehead, scalp and top of the ears.¹ Differential diagnostic features of CAD include photo testing, patch testing/photo patch test and biopsy. All CAD patients should be informed to avoid UV exposure and contact with associated allergens and photo allergens. The topical treatment is more effective in CAD patients. The main therapeutic management includes topical corticosteroids and successful responses are reported by the use of topical tacrolimus and pimecrolimus.⁷ Other measures are application of broad-spectrum sunscreens and emollients. A recent study describes brisk lymphoid infiltration of eosinophils, plasma cells and prominent dermal dendrocytes with multinucleated cells and reticular fibroplasia as main histological diagnostic clues.⁶ CAD is usually refractory for care. CAD patient management includes sunlight avoidance, sunscreen protection topical emollients and topical steroids.

CONCLUSION

Actinic dermatitis is most severe of idiopathic photodermatitis. We report a new case confirmed histological and had well responded to photo protection measures and topical corticosteroid.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

ABBREVIATIONS

CAD: Chronic actinic dermatitis; **UV:** Ultraviolet; **UVA:** Ultraviolet A; **UVB:** Ultraviolet B; **CD4:** Cluster of differentiation 4; **CD8:** Cluster of differentiation 8.

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