

Rapid Response to Acitretin in Unilateral Chronic Actinic Dermatitis: First Yemeni Case Report

Mohammad Ali Alshami¹, Hadeel Mohammad Alshami², Mona Jameel Mohana³

^{1,2,3}Department of Dermatology, Faculty of Medicine and medical sciences, Sana'a University, Sana'a, Madhbab, Shamlan Street 125, Sana'a 1064, Yemen.

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INTRODUCTION

Chronic actinic dermatitis (CAD) is a rare immunologically mediated photodermatosis characterized by pruritic eczematous lesions mostly on sun-exposed areas but to a lesser extent on non-sun-exposed areas.¹ Older men who work outdoors are preferentially affected.¹

CASE REPORT

A 75-year-old Yemeni male sanitation worker with skin phototype V presented to our hospital with a 20-year history of severe eczematous eruptions, mainly on the sun-exposed skin. He also had a history of atopic dermatitis since childhood. Cutaneous examination revealed lichenified hyperpigmented plaques on the forehead, nose, and neck (Figure 1A-D). The left side of the upper chest was similarly affected, but the right side was not (Figure 1D). The extensor surface of both upper and lower limbs was similarly involved (Figure 2A). Both palms were hyperkeratotic and eczematous (Figure 2B). Psoriasiform

plaques and areas of scarring alopecia admixed with hemorrhagic crusts were visible over the scalp (Figure 2C). However, the periocular, submental, and retroauricular regions and skin creases were spared (Figure 1A-D).

The initial differential diagnosis was photodermatitis due to the distribution of the lesions. Airborne contact dermatitis was also considered; however, the sparing of the upper eyelids excluded this possibility. Photo, photopatch, and patch tests would have assisted in confirming the diagnosis, but they were unavailable. Therefore, the patient was diagnosed with CAD based on only the clinical findings and response to topical steroids and sun protection.

The patient was treated with oral acitretin 25 mg once daily, a topical combination of clobetasol and mupirocin ointment twice daily, oral levocetirizine in the morning, and ketotifen at night, resulting in a rapid and exceptional response without serious adverse effects after only 1 week (Figure 2D).

***Corresponding Author:** Prof. Mohammad Ali Alshami, Department of Dermatology, Faculty of Medicine and Medical Sciences, Sana'a University, Sana'a, Yemen



Figure 1. Clinical presentation of chronic actinic dermatitis (CAD)

(A) Scaly lichenified plaques over the face. Sparing of the periocular region can be observed, which differentiates CAD from airborne contact dermatitis. (B) Left lateral view of the head and neck. The spared areas in the retro-auricular area, infra-auricular area, skin creases, and geographically shaped areas on the left side of the neck are depicted. (C) Posterior view of the scalp and neck. Psoriasiform plaques with sparing of the horizontal skin creases and geographically shaped areas on the nape of the neck and the upper back are visible. (D) Lichenified plaques over the neck and the left side of the chest. Sparing of the submental area and skin creases are shown.



Figure 2. Clinical presentation and response to treatment of chronic actinic dermatitis (CAD)

(A) Dorsal aspects of the hands and extremities of the arms. Spared geographically shaped area over the lateral aspect of the left hand and sparing of the finger webs bilaterally can be observed. (B) Lichenified plaques over the palms and volar aspects of arms. (C) Scalp with cicatricial area excoriations and hemorrhagic crusts. (D) Same view as that in Figure 1C, showing the almost complete disappearance of CAD 1 week after treatment.

DISCUSSION

CAD was first described by Haxthausen in 1933 in a 52-year-old woman with psoriasis who developed photosensitivity after an intravenous injection of tryptaflavine, a photosensitizing dye used to treat psoriasis.²

A delayed-type hypersensitivity reaction to photoinduced endogenous cutaneous allergens has been postulated to trigger CAD.³ Although common in regions with a temperate climate, CAD has been reported globally.⁴

Although it typically presents in older men, as in the present case, onset in younger individuals, accompanied by an association with atopic eczema, has been reported.⁵ It affects men more than women; any skin phototype can be affected.⁶ In most patients, it is associated with contact and/or photocontact allergy and develops in those with pre-existing dermatitis; our patient had a history of atopic dermatitis with an elevated immunoglobulin E level of 1,450 IU.⁷

The histology of CAD is not specific. Approximately 80% of patients have a history of dermatitis, mostly atopic, contact allergic, seborrheic, or endogenous hand eczema, often over many years, making pinpointing the history of photosensitivity difficult.

The term CAD encompasses four previously reported diagnoses: 1) actinic reticuloid, with pseudolymphomatous infiltrative changes; 2) photosensitive eczema—photo-exposed-site dermatitis and ultraviolet B photosensitivity; 3) photosensitivity dermatitis/actinic reticuloid, with both photo-exposed-site dermatitis and actinic features; and 4) persistent light reactors, with photocontact allergy and positive photopatch tests.⁸

The sun-exposed skin is generally the most affected, particularly on the face, scalp, back, sides of the neck, upper chest, and dorsal aspects of the forearms and hands, often with sharp demarcations at the lines of clothing.^{3,9} Certain areas are frequently spared, including the skin creases, upper eyelids, finger webs, skin under the ear lobes, and, sometimes, other geographically shaped, variable areas on the face or elsewhere (Figure 1A-D).^{3,9} Palmar or plantar eczema is also possible (Figure 2B). Eyebrow and scalp hair may be spiky or lost from uninterrupted scraping (Figure 2C), and erythroderma may sometimes develop.^{3,9} Unilateral presentation of CAD has not been reported

previously. Treatment options include topical steroids, topical tacrolimus, and systemic immunosuppressant medications, such as azathioprine, cyclosporine, and mycophenolate mofetil.¹⁰

Our case is unique, as the patient presented with unilateral chest involvement, which has not been reported previously. To our knowledge, this is the first report of CAD being successfully treated with acitretin. Further large scales studies are required to assess the safety and efficacy of acitretin in the treatment of CAD, which may revolutionize its treatment strategy.

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