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## Derma-Sifiliográficas

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### CASE AND RESEARCH LETTER

#### Erythema Annulare Centrifugum Responding to Natural Ultraviolet Light

#### Eritema Anular Centrífugo con Respuesta a Radiación Ultravioleta Natural

To the Editor:

Erythema annulare centrifugum (EAC) is a disease of unknown etiology, although it has been variously associated with hypersensitivity reactions, infections, hormonal disorders, rheumatological and liver diseases, dysproteinemias, drugs, and occult tumors.

García-Muret et al described a subtype of EAC with annual relapses that occurred in the summer.<sup>1</sup> Nonetheless, in our hospital we have observed how 2 patients with longstanding EAC presented a clear clinical improvement in response to natural exposure to sunlight during the summer months.

The first patient was a woman aged 22 years, with no known diseases, who presented an 8-year history of lesions on the trunk and upper and lower limbs. The asymptomatic and sometimes slightly pruritic lesions underwent episodes of centrifugal spread in winter. Examination revealed several erythematous plaques varying in size between 2 cm and 8 cm. The larger lesions were annular, with erythematous borders that were slightly more raised and trailing scale (Figure 1). A culture of scales from the lesions was negative on 2 occasions. The Spanish Contact Dermatitis and Skin Allergy Research Group (GEIDAC) standard battery of patch tests were all negative. Complete blood count, basic blood chemistry, antibody test, chest x-ray, and abdominal ultrasound results were normal. Superficial perivascular dermatitis was reported on the 2 occasions biopsies were performed. The patient had failed to respond to treatment with topical corticosteroids and antifungal agents. To prevent possible postinflammatory hyperpigmentation the patient had avoided sunbathing during the summer months. However, her last revision revealed that the lesions had completely disappeared following continuous sun exposure during her holidays (Figure 2).

The second patient was a man aged 27 years. Since the age of 16 years he had presented with occasional flare-ups, on the trunk and limbs, of erythematous lesions

with centrifugal spread and a scaly border. Routine blood tests and antinuclear antibodies were normal or negative, cultures were negative, and a histopathology study merely showed nonspecific chronic dermatitis. Flare-ups were not associated with any triggering factor, and the lesions had not responded to treatment with antifungal agents or topical corticosteroids. Nonetheless, the patient's condition had improved during the summer, coinciding with exposure to sunlight.

EAC, which was originally described by Darier in 1916, presents as annular plaques with clear central areas and slightly raised erythematous borders with trailing scale. Centrifugal growth gives rise to polycyclic patterns in the plaques. The disease follows a chronic course marked by exacerbations and remissions. The most frequent lesion



**Figure 1** Annular plaques on the back of the left thigh, showing centrifugal spread and elevated erythematous borders with trailing scale.



**Figure 2** Lesions showing significant improvement following continuous exposure to sunlight.

sites are the trunk and the roots of the limbs. Diagnosis is based on the clinical presentation and histopathology. Cultures are consistently negative.

There are 2 subtypes of EAC. Superficial EAC typically presents with a scaly, noninfiltrated border, with optical microscopy revealing lymphohistiocytic cuffing around the superficial dermis vessels and varying degrees of edema of the papillary dermis, spongiosis, epidermal hyperplasia, and parakeratosis. Deep EAC is characterized by lesions with a nonscaling infiltrated border. The lymphohistiocytic infiltrate affects the reticular dermis, and melanophages, necrotic keratinocytes, and vacuolar changes may be evident at the dermal-epidermal junction.<sup>2</sup>

Differential diagnosis is based on the exclusion of erythema marginatum, chronic migratory erythema, and erythema gyratum repens. Other diseases with an annular morphology, such as pityriasis rosea, subacute lupus,

psoriasis, granuloma annulare, tinea, leprosy, urticaria, polymorphous erythema, and sarcoidosis, must also be excluded. The clinical context, additional tests, and histopathology enable these alternative diagnoses to be excluded.<sup>3</sup>

The therapeutic options are many, but results are variable, and relapses are frequent when treatment is withdrawn. The triggering or related factor, if known, should be addressed. Topical treatments that have been prescribed include corticosteroids, calcipotriol,<sup>4</sup> tacrolimus, and metronidazole<sup>5</sup>; systemic treatments that have been prescribed include corticosteroids, antihistamines, and even etanercept.<sup>6</sup>

We have described 2 patients whose lesions failed to respond to medication but did respond to natural phototherapy. This conclusion is consistent with the good response, in some cases of EAC, to therapy with narrowband UV-B radiation and topical calcitriol.<sup>7</sup> However, further studies are required to confirm this observation, given that the possibility of spontaneous remission of the disease in our isolated cases cannot be ruled out.

## References

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