Eosinophilic Cellulitis in a Child Successfully Treated with Cetirizine

Sir,

Eosinophilic cellulitis was first described in 1979 by Wells & Smith (1) as a recurrent granulomatous dermatitis with eosinophilia. It is a rare skin condition usually affecting adults and only a few cases have ever been reported in children.

CASE REPORT

A 12-year-old girl presented with an erythematous, papular, occasionally pruritic eruption covering both her legs. Her main complaint was aesthetic. The rash consisted of grouped red papules 10-15 mm in size. The patient was afebrile and reported no arthralgia or any other systemic symptoms. She denied any recent arthropod bite, viral or fungal infection, or ingestion of any kind of drug. The eruption had been recurrent since the age of 4 years. Originally only the shins had been affected but gradually, on successive eruptions, the lesions were extending to the thighs.

There was no personal or family history of atopy. The physical examination and haematological and biochemical evaluations were normal apart from blood eosinophilia. IgE value and standard RAST tests were normal. The patient had been using topical steroids for nodular prurigo with no benefit.

Histopathological examination revealed hyperkeratosis in the epidermis and necrosis of the epidermal cells. Marked oedema and focal formation of subepidermal eosinophilic pustules were seen at the papillary dermis. Both normal and basophilic degenerated collagen fibres were observed in the dermis covered by eosinophilic granules, i.e. foci consistent with "flame figures". Inflammatory infiltrate of eosinophils, a few neutrophils, nuclear debris, lymphocytes and histiocytes, the latter forming focal aggregates, was detected among the altered collagen fibres. There was also similar perivascular infiltrate, although no signs of vasculitis were recognized. PAS stain for fungi was negative.

Our patient with a body weight of 49 kg was treated with cetirizine tablets. The initial dose was 10 mg three times daily and 2 weeks later this was reduced to 10 mg once daily for 4 more weeks. The girl felt mild sleepiness only at the beginning of the course. Full recovery was noticed by the end of the fourth week of treatment and some residual hyperpigmentation was the only complaint, which responded quickly to topical treatment with 10% AHA (alpha-hydroxy acids). On follow-up the skin remained clear over a period of 18 months. However, 12 months after discontinuation of the treatment the patient developed insulin-dependent diabetes mellitus type 1.

DISCUSSION

Despite the atypical clinical course, eosinophilic cellulitis (Wells' syndrome) was diagnosed on the grounds of histopathology (2). Blood eosinophilia is common but not a prerequisite for the diagnosis (3).

No treatment of choice has been established so far. Topical steroids may sometimes help. Interferons alpha and gamma inhibit chemotaxis of eosinophils; however, their toxicity is always a problem, especially in children (4). Systemic steroids may help when systemic symptoms are prominent (5). Dapsone alone or in combination with systemic steroids and antihistamines may occasionally be successful treatment (6, 7).

In choosing cetirizine alone we considered previous reports mentioning that this second-generation H1 antihistamine inhibits both eosinophil and neutrophil chemotaxis. (8) We found that in our case this drug of low toxicity was well tolerated even on high dose, gave quick response and offered prolonged remission.

REFERENCES

- Wells GC, Smith NP. Eosinophilic cellulitis. Br J Dermatol 1979; 100: 101–109.
- Madden J, Lichenstein R, Alonsozana E, Gilbert-Barness E. Pathological case of the month. Am J Dis Child 1993; 147: 1337–1338.
- Arberer W, Konrad K, Wolff K. Wells' syndrome is a distinctive disease entity and not a histologic diagnosis. J Am Acad Dermatol 1988; 18: 105-114.
- Husak R, Goerdt S, Orfanos CE. Interferon alpha treatment of a patient with eosinophilic cellulitis and HIV infection. N Engl J Med 1997; 337: 641–642.
- Zloczower M, Zur Nedden D, Helweg G, et al. Eosinophilic cellulitis (Wells' syndrome) with involvement of para-articular muscles and fascia. Hautarzt 1994; 45: 551–553.
- Fisher JB. Eosinophilic cellulitis (Wells' syndrome). Int J Dermatol 1985; 24: 101.
- Lee MW, Nixon RL. Eosinophilic cellulitis case report: treatment options. Australas J Dermatol 1994; 35: 95–97.
- Kontou-Fili K, Maniatakou G, Demaka P, Gonianakis M, Palaiologos G, Aroni K. Therapeutic effects of cetirizine in delayed pressure urticaria: clinicopathologic findings. J Am Acad Dermatol 1991; 24: 1090–1093.

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Kyriaki Aroni¹, Markos Aivaliotis², Anna Liossi¹ and Pangiotis Davaris¹

¹Department of Pathology, Medical School, University of Athens, 75 Mikras Asias str., GR-11527, Athens, Greece and ²Department of Dermatology, Glasgow Royal Infirmary, Glasgow, UK.