

eosinophil granule proteins, reportedly, are distributed extensively in the lesional dermis in atopic dermatitis (7).

In the present study, we clearly demonstrated that large numbers of eosinophils, seen in both the acute and the subacute skin lesions of atopic dermatitis, are activated. Our present results may provide further evidence for eosinophil involvement in the formation of both acute and subacute skin lesions in atopic dermatitis.

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Accepted January 3, 2001.

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Acral Darier's Disease Successfully Treated with Adapalene

Sir,

Acral involvement is present in over 90% of the cases in Darier's disease, including keratotic papules, nail dystrophy, palmar pits and lesions closely resembling acrokeratosis verruciformis. Isolated papular acral lesions may represent an early and mild feature of the disease. However, reports in which acral lesions are the only manifestation are very rare: we have found only 4 reported cases in the literature (1–4). Therapeutic approach to Darier's disease with topical or systemic retinoids is usually effective, but these treatments are not always well tolerated (5). We report a case of isolated acral Darier's disease successfully treated with adapalene 0.1% gel.

CASE REPORT

A 22-year-old girl showed multiple, moderately itchy, keratotic papules on the back of both hands persisting since she was 10 years old. The slightly raised, skin-coloured, warty papules, 3–5 mm in diameter, associated with hyperkeratosis of the soles, worsening during summer season, were the only skin manifestations (Fig. 1). Nail changes and oral lesions were absent. A biopsy specimen from a papular lesion revealed hyperkeratosis, focal parakeratosis and suprabasal acantholytic lacunae and dyskeratotic cells with formation of round bodies and grains. An ultrastructural study showed intraepidermal suprabasal lacunae with reduced or absent desmosomal structures and altered desmosomal tonofilaments. In the granular layer, keratinocyte perinuclear vacuolization with peripheral tonofilament margination (round bodies) and subcorneal keratinocytes with intracytoplasmic tonofilament aggregates (grains) were observed, suggesting Darier's disease features. No changes characteristic of this condition were observed in the family of this patient. Systemic retinoids were not administered due to the limited disease extension and the young age of the girl. Since treatment with topical steroids was ineffective and topical isotretinoin was too irritating, we started therapy with adapalene gel 0.1% once at bedtime. On the soles application of adapalene gel was preceded by a 7-day course of keratolytic topical therapy. Hand



Fig. 1. Acral Darier's disease: hyperkeratotic papules on the back of the left hand before therapy.

lesions cleared after 4 weeks of therapy, and the soles after 6 weeks of therapy, without any side effects. Application of adapalene was stopped after 2 more months of maintenance therapy without relapse. One month later a mild hyperkeratosis of the soles slowly appeared, which promptly resolved after a new cycle of therapy.

DISCUSSION

Acral keratotic papules are frequently seen on the dorsa of hands and on the soles in Darier's patients; however, acral papules without other cutaneous manifestations are definitively rare (3–5). Our patient's family members showed no evidence of Darier's disease and the evolution of skin lesions during the years was steady. The acral Darier's disease first described in 1988 has been suggested as frusted form of Hopf acroker-

atosis verruciformis. Both these conditions have been described in members of the same family in some cases but many authors consider the 2 diseases as separate entities (1, 5–6). In our case, the pathological and ultrastructural features were characteristic of Darier's disease.

The therapeutic approach for Darier's disease includes topical keratolytics and retinoids, as well as oral retinoids (5). Systemic side effects limit the use of oral retinoids, while topical isotretinoin commonly causes erythema, burning sensation and irritation; furthermore, the response rate for Darier's disease to topical isotretinoin is below 50% (7, 8). Recently, a new generation of topical retinoids has been introduced with success. Sporadic reports indicates adapalene and tazarotene as useful tools in this genodermatosis (9–11). Often tazarotene requires concomitant use of topical steroids in order to prevent irritation (10). In our case, adapalene alone, once a day for 6 weeks, showed good efficacy and, as expected from the existing literature, good tolerability (12). The synthetic retinoid adapalene acts as a modulator of keratinization and cellular differentiation, in addition to having a strong anti-inflammatory activity (13–14). Its activity is mediated through the selective binding to the RAR nuclear receptor. The lack of irritation, and other side-effects, and the clinical efficacy of adapalene gel 0.1% makes it an ideal treatment of localized Darier's disease, but further studies on a larger population of patients are necessary before its full therapeutic benefit can be appreciated.

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Accepted January 2, 2001.

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