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DARIER'S DISEASE AND DEPIGMENTED MACULES

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A case of Darier's disease with depigmented macules; an extermely rare feature of the disease is reported. A familial occurrence of these lesoins is highlighted. The probable pathogenesis and some unusual characteristics of these leukodermic macules is discussed.

Key Word : Darier's disease

Introduction

The distinctive lesions of Darier's disease are firm, greasy, crusted papules in a seborrhoeic distribution. Coalescence of such lesions in the flexures to form warty excrescences is also commonplace.[1] However, the disorder rarely presents alongwith a myriad of unusual cutaneous lesions. Linear, unilataral, bullous, cornifying or solitary hypertrophic lesions are some such varieties. [1] "Small leukodermic macules" are one such extremely rare manifestation of Darier's disease. They were first described by Goddal and Richmond in 1965.[2] Since then only 10 further cases have been reported. We describe a familial occurrence of such macules in our patients.

Case Report

A 42-year-old unmarried Muslim male presented with classical crusted follicular papules on his face, V area of chest and upper back. He also had acrokeratosis verruciformis-like lesions on the dorsum of his hands. (Figs. 1,2). But it was striking to observe the numerous, discrete, depigmented macules scattered over his chest, abdomen, back, buttocks and things. The macules ranged from 1mm to 4mm in size. Some were perifollicular (Fig.1). They occurred in areas where the follicular papules were absent or sparse. Both, the papulo-follicular, and the leukodermic elements were of long duration and had erupted almost simultaneously in early childhood. The macules were totally asymptomatic. The "papular elements" exacerbated in summer when they became numerous and confluent, but such seasonal variation was not noted of the "macular leukodermic" lesions. The oral mucosa, the nails and palms and soles were normal.

Biopsies were done from the papular and depigmented lesions. The histology of the papular lesion revealed the classic features of Darier's disease viz. suprabasal clefts, dyskeratotic "corps ronds" and

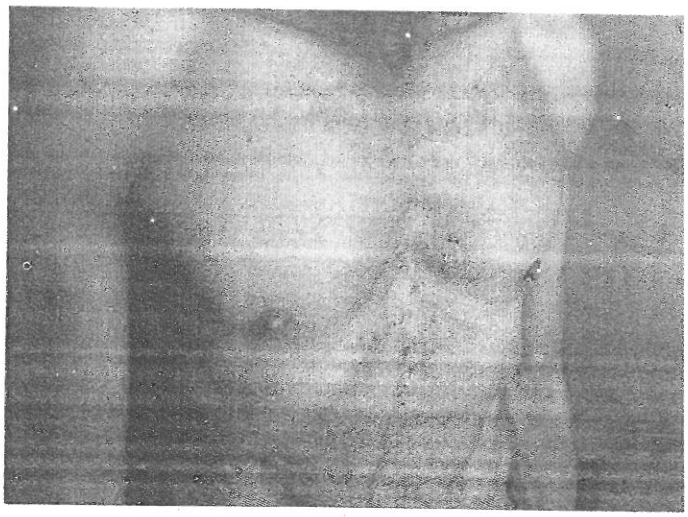

Fig. 1. Numerous, discrete, perifollicular depigmented macules of Darier's disease

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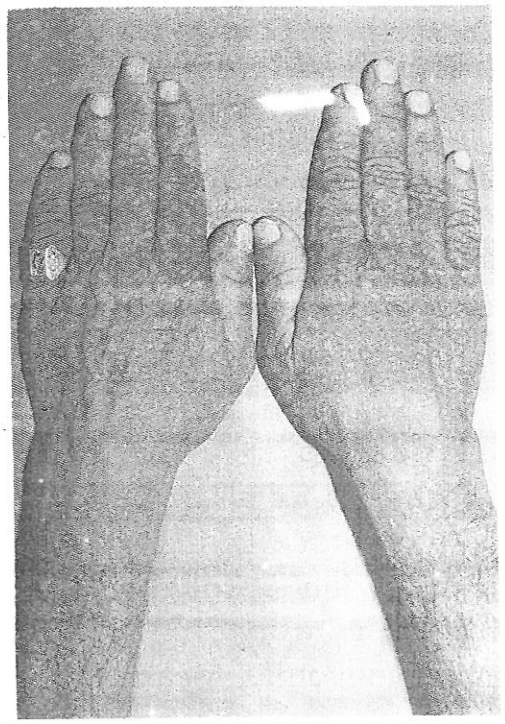

Fig. 2. Acrokeratosis verruciformis-like lesions on the dorsum hands

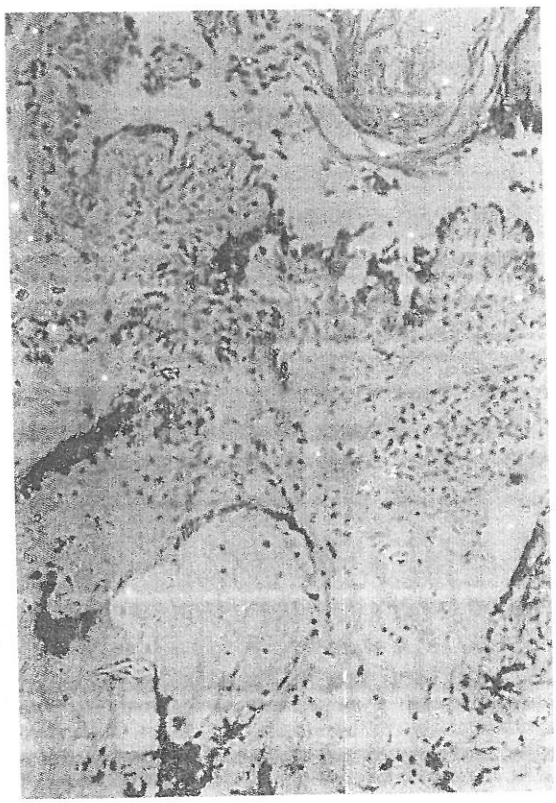

Fig. 3. Papular lesion with suprabasal cleavage and dyskeratosis

"grains"; and an acanthotic epidermis topped by a hyperkeratotic, parakeratotic stratum corneum (Fig.3). Histology of leukodermic macules was interesting. The pathognomic "lacuna" or "fissure" was present in each lesion, which contained a few dyskeratotic "corps ronds". But acanthosis, hyperkeratosis and parakerarosis were absent. Melanocytes, though sparse, were definitely present in the residual basal cells beneath the "clefts" (Fig. 4).

Fig. 4. Macular lesion shows "lacuna" with acantholytic dyskeratotic cells

A family history revealed that several members from three generations (vertical transmission) were similarly affected. Reportedly, all those affected had the truncal leukodermic macules in addition to the classical seborrhoeic lesions (Fig. 5). The proband's elder brother and two nephews were traced and were found to

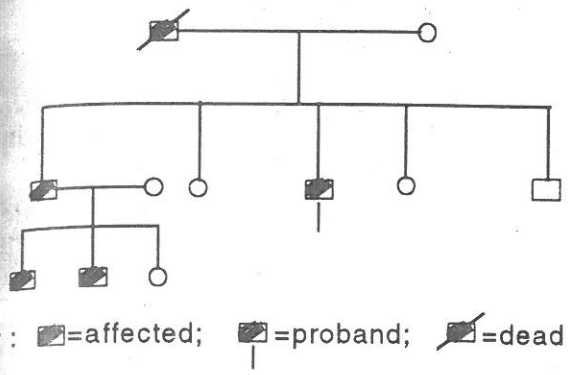

Fig. 5. Pedigree of affected family members with keratosis follicularis and leukodermic macules

have leukodermic macules of a similar morphology and distribution.

Comments

The early onset ot the leukodermic macules, their eruption concomittant with papular lesions, and the "suprabasal clefts" seen histologically, leave no doubt that these macules are a manifestation of Darier` s disease.

A comparison of our cases with previoulsy reported patients highlights several interesting features : (a) This is the first report of a "familial occurrence" of leukodermic macules. Each affected individual seems to have inherited the leukodermic macules along with the classic lesions. Previously reported cases were sporadic, with no family history either of Darier` s disease, or of leukodermkic macules.[3-6] (b) In all previous cases macules were distributed on the chest, abdomen and things; but spared the back and buttocks.[3] We found profuse lesions on the back and buttocks in all our cases. (c) Nail changes, oral mucosal "cobbling" or palmar pits were features associated consistently with leukodermic macules in previous reports.[3] We found the nails, mucosa, and palms unaffected in all our patients.

Though the pathogenesis of macular depigmentation remains obscure, its epidemiology, clinical features, histology and ultrastructural findings afford certain clues.

Cattano [4] attributes them to a "post-inflammatory" change, but this seems unlikely. The depigmentation is never preceded by the papular lesions and occurs over "non-seborrhoeic" areas. Moreover remission of the papular lesions either seasonally or therapeutically [3,5] does not leave depigmented residual lesions.

It is interesting to note a racial predilection of the leukodermic macules. They appear only in dark skinned individuals. All cases (including ours) were either Negroes, Asians or Latin Americans.[3] Berth-Jones and Hutchinson[6] view the leukodermic macules as a "subclinical" form of the disease. We would partly support this view and further propose that the depigmented macules are "forme-fruste" of Darier` s disease exclusive to the dark skinned, heavily melanized races. Thus, an examination of family members of a dark-skinned patient of Darrer` s for the leukodermic macules may be worth while.

The status of the melanocytes in keratosis follicularis has been a subject of several studies.[3] A decrease in their numbers has been demonstrated, not only from the macular depigmentation but also from early papular lesions.[3] Electron microscopy has demonstrated an absence of heavily melanized melanosomes(Stage III, IV) from the leukodermic lesoins.[3] The scarcity of melanocytes and scanty melanosomes may not be the only factors responsible for clinical hypopigmentation. A faulty keratinization interfering with

melanosome transfer and an overall disruption of the "epidermal melanin unit" may contribute to this strange focal, macular depigmentation of Darier`s disease.

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