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PHOTOLETTER TO THE EDITOR

Pityriasis Rotunda

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Abstract

Pityriasis rotunda is described as persistent, large, sharply defined circular patches of dry ichthyosiform scaling with no inflammatory changes. Pityriasis rotunda may be associated with systemic diseases (eg. hepatocellular carcinoma). We report a case of pityriasis rotunda in a 19-year-old, otherwise healthy male. The condition started one year prior to his referral. Lesions were distributed over the trunk and upper extremities. Histopathological examination revealed hyperkeratosis, absent granular layer, pigmented basal layer, pigmentary incontinence and perivascular lymphocytic infiltrate. PAS staining for fungi was negative. Treatment of pityriasis rotunda in this case was challenging. When there's an underlying disease, successful treatment of the original disease leads to clearance of pityriasis rotunda lesions. (*J Dermatol Case Rep*. 2012; 6(3): 90-92)

Key words:

pityriasis, rotunda, ichthyosiform scaling

Pityriasis rotunda is a rare disorder of keratinization characterized by hyper- or hypopigmented, geometrically perfect circular sharply defined patches of dry ichthyosiform scaling.[1] The condition was initially described in Japan by Toyama in 1906.[2] It was described initially as pityriasis circinata and acquired pseudoichthyosis.[1]

A 19-year-old male presented by a persistent, large, sharply defined circular patches of dry ichthyosiform scaling with no inflammatory changes of one year duration. There was no history of itching or oozing from the lesions. There was no history suggestive of a systemic illness or drug intake. Family history was negative.

Cutaneous examination revealed slightly pigmented well defined circular patches varying in size from 7-10 cms in diameter present on the sides of the trunk and both upper limbs. The lesions

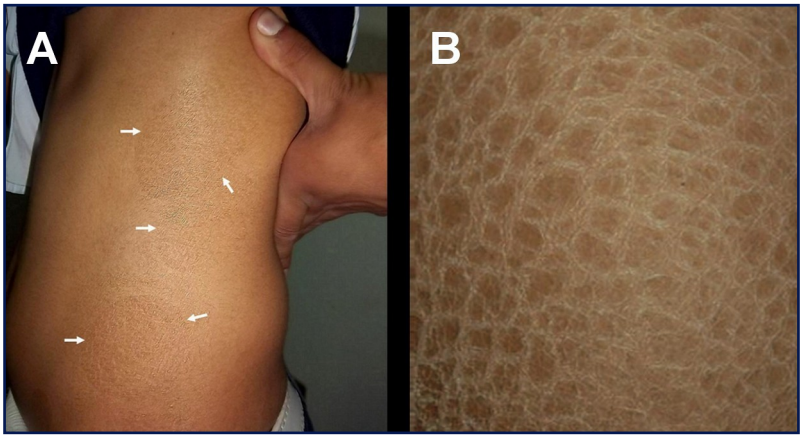

Figure 1

A case of pityriasis rotunda showing (A) hyperpigmented, well defined, dry, icthyosiform scaly lesions on the trunk, (B) close up view of one lesion demonstrating the adherent icthyosiform scales.

were sharply outlined, dry and scaly (Fig. 1A,B). Erythema and induration were absent. Examination of the mucous membranes, hair and nails did not reveal any significant finding. The patient's general physical examination revealed no abnormality.

Routine investigations including complete blood count, urine analysis, liver function tests and renal function tests were within normal limits. Chest X-ray and abdomino-pelvic ultrasonography were normal. Direct microscopic examination of scales prepared with 10% potassium hydroxide was negative. Skin biopsy was taken after taking patient's consent. Histopathologic examination of hematoxylin and eosin-stained section revealed psoriasiform epidermal hyperplasia with pigmented basal cell layer (Fig. 2A), orthokeratotic hyperkeratosis and melanin incontinence (Fig. 2B), diminshed granular layer (Fig. 2C) and perivascular lymphocytic infiltrate (Fig. 2D). PAS staining was negative for fungi. So the diagnosis of pityriasis rotunda was made.

Pityriasis rotunda was initially described in Japan but has since been demonstrated in the South African Bantu and in caucasians. Lesions tend to be hypopigmented in Caucasians and hyperpigmented in black-skinned people. Incidence is equal between males and females.[2]

Lesions are commonly situated on the buttocks, thighs, abdomen, back or upper arms. The number of lesions may range from one to greater than 100, with a diameter that may exceed 20 cm in some cases. They develop between the age of 25 and 45 (7 and 76 are the reported extremes) and remain unchanged throughout life with reports of exacerbation during winter months. The age of onset, distribution, circular outline and complete lack of inflammatory changes usually suggest the diagnosis.[1]

The etiology of pityriasis rotunda remains unknown. Most authors believe that it is a form of acquired ichthyosis, a delayed presentation of congenital ichthyosis, or a cutaneous manifestation of systemic disease. It has been associated with a variety of conditions including tuberculosis, malnutrition and malignancy, although many cases occur in the absence of underlying disease.[3]

Familial cases have also been described in which an autosomal dominant inheritance appears to be present.[1]

A classification has been proposed to encompass all reported cases of pityriasis rotunda.[3] Type I: includes Black or Asian patients with fewer than 30 hyperpigmented lesions, non-familial incidence and an association with malignant conditions or systemic diseases in 30% of cases. Type II: occurs in Caucasian patients, and the lesions are usually hypopigmented, familial, numerous (greater than 30), and are not associated with a chronic illness. Since the development of this classification, there have been a few case reports that describe patients that display characteristics of both type I and type II.[2]

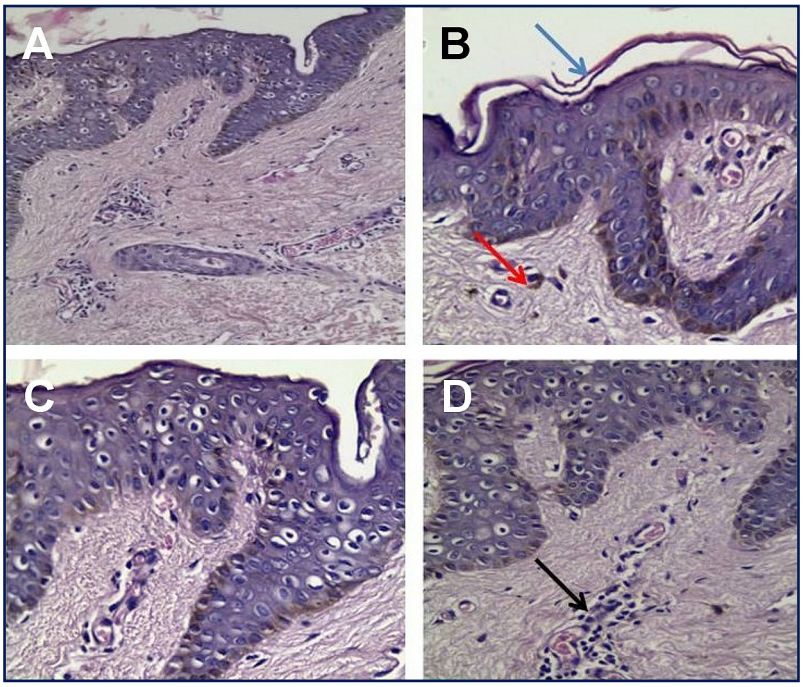

Figure 2

A photomicrograph showing (A) psorisiform epidermal hyperplasia with prominent hyperpigmented basal cell layer (H&E x100), (B) compact orthokeratosis (blue arrow) and melanin incontinance (red arrow) (H&E x 200), (C) Diminished granular cell layer (H&E x400), (D) perivascular lymphocytic infiltrate (black arrow) was also detected (H&E x400).

Clinically, the differential diagnoses include tinea versicolor, tinea corporis erythrasma, fixed-drug eruption and pityriasis alba.[4]

Histopathology of lesional skin revealed variable changes including a moderate degree of compact hyperkeratosis with follicular plugs seen within hair follicles, absent granular layer, slight spongiosis, pigmented basal layer and pigmentary incontinence.[3] Few keratohyaline granules were detected in the affected areas by electron microscopy but unaffected areas showed keratohyaline granules of normal size and number.[4] The dermis may show mild perivascular lymphocytic infiltrate. The clinical phenotype and histology of the eruption resemble those of autosomal dominant ichthyosis vulgaris.[5]

Multiple agents are tried for treatment including topical glucocorticoids, antifungal agents, salicyclic acid, topical retinoids, tar, lactic acid lotion and oral vitamin A. But none of these agents was satisfactory. When there's an underlying disease, treatment of the original disease leads to clearance of pityriasis rotunda lesions.[4]

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