Pityriasis Rotunda

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Pityriasis rotunda (PR) is an uncommon dermatosis characterized by perfectly round, scaly patches. Thus, it has been considered by some to be a dermatophyte infection. PR has also been associated with a variety of underlying systemic diseases. A case is reported, herein, of PR associated with Paget's disease of the bone. Potassium hydroxide (KOH) examination of scale from the lesions was negative. Histologically there was orthokeratotic hyperkeratosis, a normal granular layer, and a mild lymphohistiocytic perivascular infiltrate in the superficial dermis. Sections stained with methenamine silver were negative for fungus. These findings support the theory that PR is not a dermatophyte infection, but a variant of acquired ichthyosis. Treatment with an alpha hydroxy acid lotion is discussed.
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Key Words: Dermatophyte infection, Paget's disease of the bone, Pityriasis rotunda

Pityriasis Rotunda (PR) is an uncommon eruption characterized by asymptomatic, perfectly round, scaly, non-inflammatory patches. These lesions have been reported in association with a number of systemic diseases. Swift and Saxe[1] feel the etiology may be genetic with environmental factors superimposed, especially malnutrition which is primary or secondary to systemic disease or to malignancy. In 1986, DiBisceglie and his associates[2] proposed that PR was a paraneoplastic disorder. The following year, Lewis[3] questioned this premise and suggested, instead, that PR was a clinical variant of tinea corporis. I would like to present a case of PR with negative fungal studies that give support to the views that PR is not caused by a dermatophyte.

REPORT OF A CASE

The patient is a 48-year-old black man having an 18 year history of slowly progressive, asymptomatic, round, scaly skin lesions with the evolution of new lesions over the years.

His past medical history is significant in that 20 years ago he had a positive PPD tuberculin test without clinical evidence of active tuberculosis; at that time he was treated with a one year course of isoniazid. He has had Paget's disease of the bone for ten years; this has caused extensive deformity of his pelvis and right femur. He currently is being treated with etidronate disodium; this has slowed the progression of his Paget's disease but has not improved his cutaneous lesions.

Cutaneous examination shows well defined, circular, hypopigmented patches with fine scale (Fig. 1). He had several lesions on both thighs as well as his trunk; they were from 5 to 10 cm in size. Potassium hydroxide (KOH) preparation of the scale was negative for fungus.

The patient had a normal serum alkaline phosphatase, serum calcium, and serum phosphorus at the time of his visit to the dermatology service. However, review of his records showed that prior to his starting therapy with etidronate disodium, he had a markedly increased serum alkaline phosphatase level, a normal serum calcium and a slightly increased serum phosphorus.

The biopsy shows orthokeratotic hyperkeratosis,

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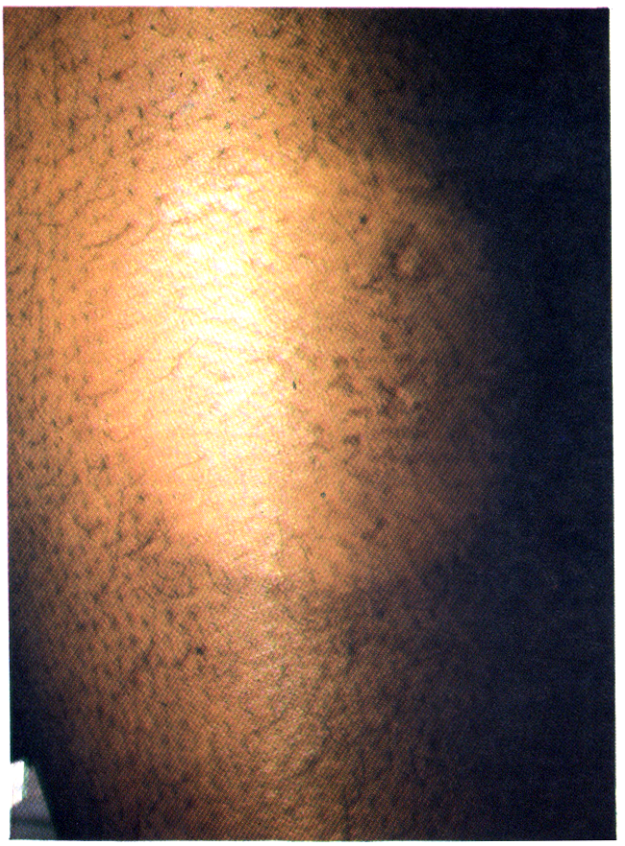

Fig. 1. A well defined, circular, hypopigmented patch with fine scale.

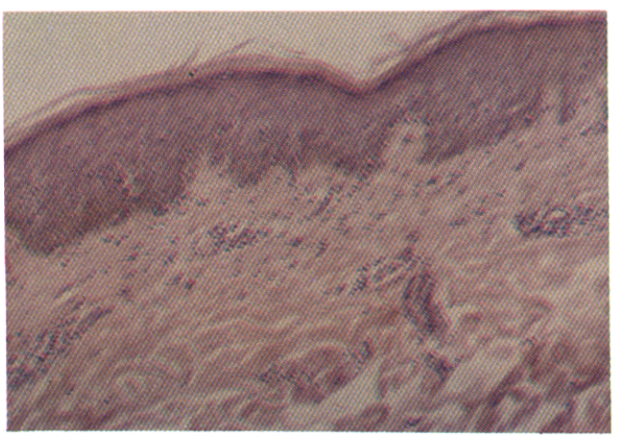

Fig.2. Orthokeratotic hyperkeratosis, a normal granular layer, and a mild lymphohistiocytic perivascular infiltrate in the superficial dermis. (H & E ×40)

a normal granular layer and a mild lymphohistiocytic perivascular infiltrate in the superficial dermis (Fig. 2). Sections stained with methenamine silver were negative for fungus.

Treatment with a 12% ammonium lactate lotion resulted in decreased scale and an improved cosmetic appearance.

DISCUSSION

Pityriasis rotunda is an uncommon eruption manifested by asymptomatic, perfectly circular patches, which have a uniform, fine scale. A slight increase of the pigment in the patches has been noted, but they also may be hypopigmented. The patches are usually found on the trunk and extremities. There is a slight female preponderance in the ratio of 1.5 to 1; the age range is from 7 to 76 years, with the majority of patients being 20 to 45 years old.[4] Cases to date have been in Orientals and Blacks only.

PR can occur in healthy people, but has been associated with numerous underlying disorders: infectious diseases such as tuberculosis, leprosy, syphilis, and dysentery; hormonal disorders such as endometriosis and pregnancy; malignancies such as squamous cell carcinoma; and various other chronic disorders such as liver disease, cardiac disease, nutritional disease, pulmonary disease, chronic renal failure, chronic diarrhea, osteitis (type not specified), and scleroderma.[1] A review of Korean literature show reports of association of PR with tuberculous pleurisy and tuberculous meningitis,[5] cirrhosis (3 cases), [6,7] and one familial cluster, [8] and pancreatic carcinoma[9] as well as many cases in normal, otherwise healthy individuals. Leibowitz et al.[10] believe that PR is a form of acquired ichthyosis and may be a cutaneous marker for systemic malignancy. As previously mentioned, PR has been though to be a variant of tinea corporis by Lewis. Various treatment modalities including topical tars, corticosteroids, and emollients have been tried with little success. Recently, alpha hydroxy acid preparations such as ammonium lactate lotion have been found to help the skin retain moisture and to decrease the thickness of the scale.[11] This helps the skin remain soft and pliable; there is also a resultant decrease in the contrast of color with the adjacent normal skin. Tretinoin cream (0.1%) has also been of value. In some, treatment of the underlying disease has resulted in improvement of the skin lesions.

The case presented in this discussion is the first reported association with Paget's disease of the

bone (osteitis deformans). The KOH examination of scale showed no fungus. Examination of a biopsy specimen stained with methenamine silver also revealed no evidence of fungal hyphae. Thus the diagnosis of a superficial dermatophyte infection cannot be supported in this patient.
Histologically it is compatible with an ichthyosis and it should be categorized with the acquired ichthyosis. As such, it is often a non-specific marker for systemic disease and should prompt a thorough history, physical examination and, if these are normal, periodic reevaluation.

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