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CASES FOR DIAGNOSIS

Multiple Acrokeratotic Papules

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Clinical History

We present the case of a 58-year-old man, with no past history of interest, who was seen for skin lesions on the dorsum of the hands and feet, the legs, and the forearms. The lesions had been present for approximately 20 years and were completely asymptomatic; they became more prominent in the summer, due to pigmentation of the surrounding skin. Their number and the area affected had increased in recent years. There was no history of skin diseases in the patient's family.

Physical Examination

On physical examination there were multiple, clearly delimited, brownish papules of 3 to 4 mm diameter and with a keratotic appearance, affecting the dorsum of the hands and feet, the legs, and the forearms (Figures 1 and 2). There were no abnormalities of the rest of the skin, mucosa, or nails.

Additional Tests

The complete blood count and routine biochemistry that the patient brought with him were entirely normal. A biopsy was taken of one of the lesions.

Histopathology

Histological study showed marked hyperkeratosis with hypergranulosis, acanthosis, and papillomatosis, giving a wavy appearance to the surface, described as "church spires." There was no parakeratosis, dyskeratosis, or epidermal vacuolization (Figure 3).

What Was the Diagnosis?

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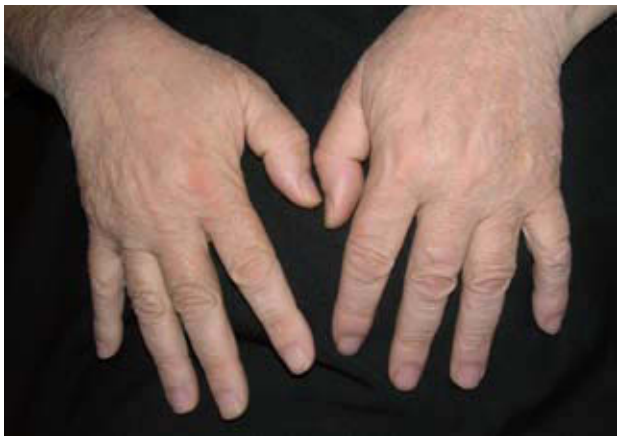

Figure 1.

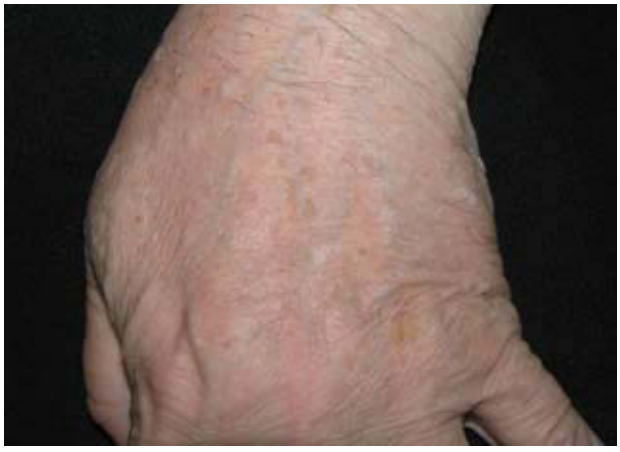

Figure 2.

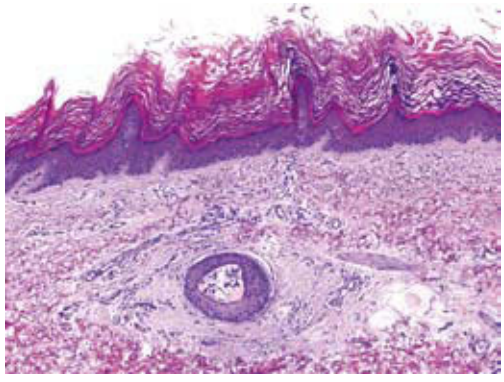

Figure 3. Hematoxylin-eosin, ×10.

Diagnosis

Acrokeratosis verruciformis of Hopf.

Discussion

Acrokeratosis verruciformis is a rare disorder of keratinization first described by Hopf in 1931.[1] It is a hereditary disorder of autosomal dominant transmission,[2] although sporadic cases have also been reported.[3] It is usually present at birth or develops during infancy, although it can appear in individuals in their the 40s.[2]

It is characterized by the presence of multiple, small, skin colored papules of verrucous appearance, found mainly on the dorsum of the hands and feet and on the extensor surfaces of the forearms and legs. Punctate palmoplantar keratoderma and nail involvement may also be observed.[3]

Confirmation of the diagnosis requires biopsy with histological examination; this reveals hyperkeratosis, papillomatosis, and acanthosis, often but not always forming circumscribed elevations of the epidermis that are described as having the appearance of church spires.[2]

Acrokeratosis verruciformis and Darier disease are often associated and have similar clinical features.[4] These similarities have led many authors to suggest a relationship between the 2 diseases. Recently, Dhitavat et al[5] identified a heterozygotic mutation (P602L) in gene *ATP2A2*, which codes for the calcium ATPase pump of the sarcoplasmic reticulum; this gene is also defective in Darier disease. This might suggest that the 2 diseases are different phenotypes of the same genetic abnormality. However, Wang et al,[6] studying a Chinese population with acrokeratosis verruciformis, found no mutations of gene *ATP2A2* in any of their patients, though they did identify 2 new mutations in cases of Darier disease in a family and in a sporadic case. This demonstrates the marked genetic heterogeneity of the 2 conditions and that further studies are necessary to establish any possible relationship between the 2 disorders.

However, although the 2 diseases can be clinically similar, acrokeratosis verruciformis and Darier disease can be distinguished by the histological findings: hyperkeratosis, acanthosis, and papillomatosis are present in acrokeratosis verruciformis but there is no parakeratosis or dyskeratosis, which are present in Darier disease.[3] Basically, in acrokeratosis verruciformis the keratinization process is exaggerated but normal, whereas in Darier disease it is not only increased but also abnormal.[2]

Apart from Darier disease, other diseases that must be included in the differential diagnosis of acrokeratosis verruciformis are epidermodysplasia verruciformis, flat warts, Unna nevus, and seborrheic keratosis.[2,4]

Although the lesions of acrokeratosis verruciformis do not generally require treatment, this may be undertaken for cosmetic reasons, and is then performed by destruction (topical retinoids, cryotherapy, laser) or surgical excision. A number of cases with a good response to acitretin have also been reported.[3]

Conflicts of Interest

The authors declare no conflicts of interest. .

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