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CASE FOR DIAGNOSIS

Linear Keratotic Plaques on Both Hands

Placas queratósicas lineales en ambas manos

Medical History

A 67-year-old woman with no past history of interest was seen for lesions on the sides of the thumb and index fingers of each hand; the lesions had been present for 15 years.

Physical Examination

Linear groups of yellowish papules with a central depression and keratotic edges were observed bilaterally on the radial border of the index finger and ulnar border of the thumb (Figure 1). No lesions were present at other sites.

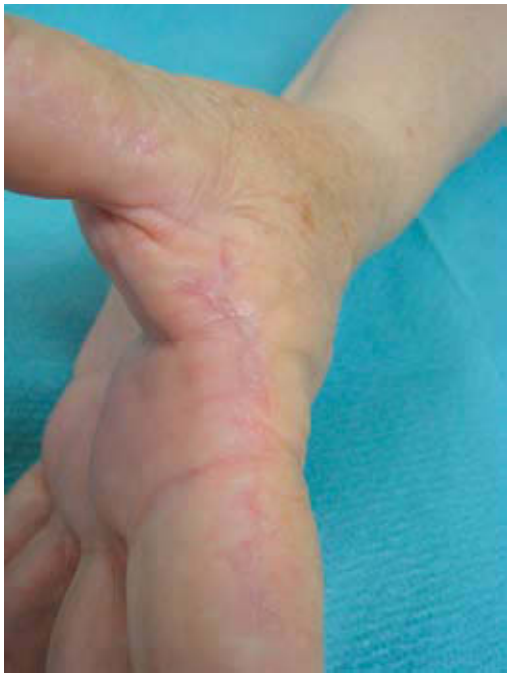

Figure 1

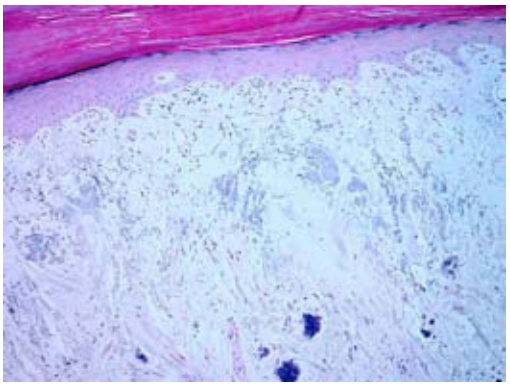

Figure 2 Hematoxylin-eosin, original magnification ×20.

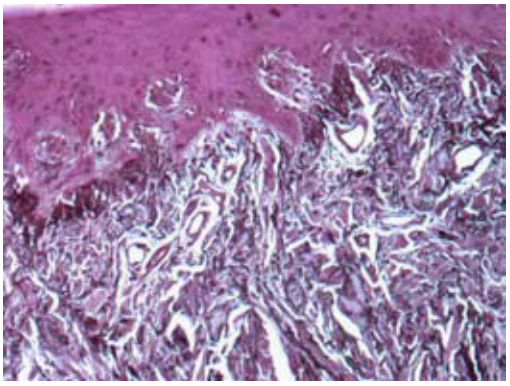

Figure 3 Orcein, original magnification ×40.

Histopathology

The epidermis showed orthokeratotic hyperkeratosis. In the reticular dermis there was marked collagen degeneration, with almost acellular areas separated by vertical clefts containing disorganized collagen bundles, elastic fibers, and elastotic material (Figures 2 and 3); calcium deposits were also observed.

What Is Your Diagnosis?

Diagnosis

Degenerative collagen plaques of the hands (keratoelastoidosis marginalis or digital papular calcific elastosis).

Clinical Course and Treatment

In view of the minimal symptoms and the absence of any treatment of demonstrated efficacy, we prescribed topical emollients and keratolytics.

Discussion

Marginal papular acrokeratodermas are a subgroup of the palmar-plantar keratodermas and are characterized by the presence of keratotic papules and plaques in a linear distribution in the area between the skin of the dorsum of the hand or foot and the skin of the palm or sole. Though classification is complex and there are several pathologic and clinical variants, it can be simplified into 2 clearly differentiated groups: acrokeratoelastoidosis and degenerative collagenous plaques of the hands.[1]

Acrokeratoelastoidosis is a genodermatosis that often shows family grouping; it usually develops in young people and can affect hands and feet. It is characterized by well-defined, encrusted, translucent papules that are more evident on the radial border and dorsum of the fingers. Histologically there is marked hyperkeratosis, reflecting the papular nature of the disease, and the dermis presents a reduced number of elastic fibers with elastorrhexis (acrokeratoelastoidosis of Costa)[1-3] or no elastorrhexis (acrokeratoelastoidosis of Matthews and Harman, or focal acral hyperkeratosis).[1,4]

Degenerative collagenous plaques on the hands, also known as keratoelastoidosis marginalis or digital papular calcific elastosis, indicate a late-onset (40 years onwards), acquired dermatosis (although a number of familial cases have been described) that could be related to skin trauma or chronic sun exposure; the feet are seldom affected. Clinically, the lesions manifest as flattened papules that coalesce to form plaques and adopt a cobblestone appearance, with accentuation of normal skin folds. Unlike acrokeratoelastoidosis, the lesions are more common on the ulnar border of the thumb and the radial border of the index finger, extending onto the interdigital fold.[1,5,6] The histologic changes in the epidermis are identical to but less intense than those of acrokeratoelastoidosis.[1,4,5] The dermis, however, has a band of degenerated elastotic collagen that may show a degree of calcification.[1,5,6]

A new variant of acquired marginal papular keratoderma, clearly related to chronic skin trauma, was described in 1998 and subsequently named lenticular acral keratosis in washerwomen.[6] Histologically there were no elastotic changes in the collagen but the elastic fibers were increased in number and were coarse, tortuous, and focally interrupted.[7]

Apart from other marginal papular keratodermas, degenerative collagenous plaques on the hands must be differentiated from flat warts, acrokeratosis verruciformis of Hopf, pitted or reticulated keratoderma, colloid milium, senile elastosis, hyalinosis cutis, amyloid, lichen planus, and psoriasis.[1]

Treatment for marginal papular acrokeratodermas is not usually necessary, given the limited symptoms of the lesions. Poor results have been obtained with emollients, keratolytics, topical and systemic retinoids, 5-fluorouracil, and cryosurgery.[1] Photoprotection and the avoidance of skin trauma could be useful for acquired forms.[1]

Conflict of Interest

The authors declare that they have no conflicts of interest.

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