

Hands with a marginal keratotic furrow

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A 53-year-old woman has persistent linear keratotic furrows localised to the first web space of both her hands. What is this skin condition?



Figure 1. Fissured keratotic bands localised to the sides of the fingers in the first interspace.

Case history

A 53-year-old woman gave a four-year history of persistent linear keratotic furrows localised to the first web space of both hands (Figure 1). The rough keratotic ridges were limited to the medial aspect of her thumbs and lateral aspect of her index fingers at the junction of the ventral and dorsal skin of the hands. Skin biopsy showed a thick keratin layer, and the underlying dermis had broad bands of collagen and thickened elastic fibres, some of which were orientated towards the surface (Figure 2).

Differential diagnosis

The differential diagnosis for this linear keratotic furrow may include the following conditions.

- **Epidermal naevi** are often distributed in a linear or whorled pattern and have an early age of onset. Such naevi can extend over the sides of fingers. Skin biopsy usually shows epidermal hyperplasia, often with a wart-like appearance, and the underlying dermis lacks the thick collagen and elastotic bands seen in this case.
- **Solar keratoses** may develop along the margins of fingers. They are unlikely to coalesce to form continuous linear bands. Skin biopsy shows an epidermis that has atypical keratinocytes and a disorganised architecture with underlying sun-damaged skin containing large irregular clumps of elastotic material.
- **Marginal keratoderma** (degenerative collagenous plaques, keratoelastoidosis marginalis) is the correct diagnosis. It is seen mainly in elderly men, but it may have an onset in the fifth decade and can occur in women. It is an acquired disorder and has been linked to chronic sun exposure leading to dermal damage. Chronic repeated occupational trauma and pressure have also been implicated as a factor. The process may be more marked in the dominant hand.

- **Porokeratosis** is a term used to describe a distinct keratotic rim that usually outlines round rather than linear erythematous scaly lesions. It may be familial and may be either solitary or multiple. Porokeratosis will involve the palms and fingers, but it is usually not restricted to the web spaces. Skin biopsy demonstrates characteristic columns of parakeratosis and retained nuclei (cornoid lamella) in the stratum corneum.



Figure 2. Skin biopsy demonstrating a thick keratin layer, normal epidermis and thick vertical bands of collagen and elastic fibres in the dermis.

Keypoint

Marginal keratoderma is a distinctive acquired disorder of keratinisation that may be due to alteration of the dermal connective tissue in the first web space. **MT**

Treatment

Emollients and urea-based keratolytic agents may provide some physical benefit but do not entirely clear these changes.

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