Case No. 15

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Patient: A 66-year-old Thai woman from Samut Prakan

Chief complaint: Bilateral symmetrical linear firm plaques on the radial side of the index fingers for 10 years

Present illness: The patient developed bilateral asymptomatic symmetrical plaques on the distal part of radial side of both index fingers for 10 years. The lesions gradually extended to the proximal part of radial side of both index fingers.

Past history: The patient denies any underlying diseases

Family history: No family members experienced with this condition similar to the patient.

Physical examination: Unremarkable

Dermatologic examination: Bilateral symmetrical ill-defined border glistening skin color hyperkeratotic plaques distributed in linear pattern along the radial side of the index fingers and extended to the ulnar side of both hands.

Histopathology: Slide No. 58-3275, 58-3275 *
Sections display slightly acanthotic acral epidermis with hyperkeratosis. Neither spongiosis nor interface change is seen. The dermis shows increased bluish material with entrapped collagen bundles. No cellular component is observed. Verhoeff van Gieson demonstrates decreased numbers of elastic fibers.

Diagnosis: Degenerative collagenous plaques of the hands

Treatment: Topical treatments with retinoids, urea and salicylic acid creams have been applied and avoiding sunlight and wearing gloves were also advised. Avoidance of repetitive pressure or friction is suggested to prevent disease progression.

Discussion:
Degenerative collagenous plaques of the hands (DCPH) develop in the sixth to seventh decade of life. Men are more predominantly affected than women. A high proportion of cases are reported in Caucasians. There is no familial predisposition. The clinical manifestations are bilateral with symmetrical linear plaques at the junction of the dorsal and palmar skin from the medial aspect of the thumb distally onto the lateral aspect of the index finger. The lesions extend to the distal interphalangeal joint of the index finger. The ulnar side of the hand and other sites on the fingers are rarely involved. The course of this disease is slowly progressive and asymptomatic.

The pathological findings of DCPH show an acellular zone of haphazardly arranged collagen with some bundles running perpendicular to the epidermis. The bundles of collagen are admixed with fragmented elastic fibers and distinctive angulated amorphous basophilic elastotic masses in the upper dermis. These masses are composed of degenerative elastic fibers and calcium. Chronic actinic damage and repetitive long-term trauma and pressure inducing degenerative collagenous and elastotic processes are implicated in the pathogenesis.

Acrokeratoelastoidosis (AKE) and focal acral hyperkeratosis are two important entities in the differential diagnosis of DCPH.

Table 1. The differential diagnosis of DCPH

<table>
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<tr>
<th>Disorder</th>
<th>Clinical features</th>
<th>Histologic features</th>
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<tbody>
<tr>
<td>Degenerative collagenous plaques</td>
<td>More common in older patients (40-60 years), usually associated with chronic sun exposure</td>
<td>Marked degeneration of collagen and elastin fibers</td>
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<tr>
<td>Acrokeratoelastoidosis (AKE)</td>
<td>Small round-oval to rhomboid-shaped, yellowish papules on palmar/plantar surfaces of the hands and feet</td>
<td>Hyperkeratosis, epidermal hypertrophy, and decreased elastic fibers in the dermis</td>
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<tr>
<td>Focal acral hyperkeratosis (FAH)</td>
<td>Identical to AKE, except it is more common in blacks</td>
<td>Lack of elastorhexis in the dermis, elastic tissue is intact</td>
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According to the table shown above, this case is clinically and histologically compatible with DCPH.
References: