

Letters to Editor

Nail involvement in degenerative collagenous plaques of the hands

Sir,

Degenerative collagenous plaques of the hands is a rare variant of marginal papular acrokeratodermas.¹ The lesions are usually seen as linear bands principally around the web of the thumb and index finger at the margin of the volar and dorsal surfaces.² We report a unique case where the thumbnails were also involved.

A 65-year-old male agricultural laborer presented with a one year history of asymptomatic nicking of both the thumbnails. He had also noticed asymptomatic skin lesions on the sides of the index fingers and thumbs. He had no history of Raynaud's phenomenon. He was a farmer and was involved in hard manual labor. No family member had a similar disorder.

Physical examination revealed skin-colored to yellowish-white, firm, waxy papules and plaques, bilaterally symmetrically distributed along the margins of the thumb and index fingers, ulnar sides of the hands, and middle and ring fingers. The same lesions were seen extending to the nail bed via the hyponychium, producing V-shaped nicking of nail plate of the thumbs on both sides (Figure 1). The soles were normal. Systemic examination was unremarkable.

Routine hematological and biochemical investigations were within normal limits. Nail clippings were negative for fungi. Histological examination of two fragments of the lesional tissue, one from the radial margin of the index finger and the other from the thumb nail bed (Figure 2), revealed hyperkeratosis and acanthosis. The dermis showed dense collagen bundles arranged in a haphazard fashion, some running perpendicular to the surface from the papillary dermis to the deep dermis. Staining with Verhoeff-van Gieson stain revealed degeneration of collagen and elastic fibres. These features were consistent with the diagnosis of degenerative collagenous plaques of the hands.



Figure 1: Distal 'V' shaped nicking of the thumbnails and linear bands of degenerative collagenous plaques along the margins of the thumb and index fingers of both hands

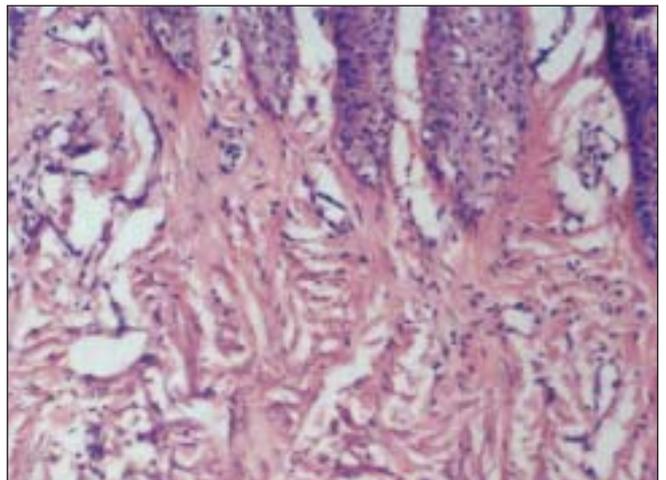


Figure 2: Photomicrograph from biopsy taken from affected nail bed showing acanthosis along with dense, slightly basophilic altered collagen bundles in the dermis (H & E x 100)

The term 'degenerative collagenous plaques of the hands' refers to a rare acquired skin disorder localized to the hands.³ It mainly affects elderly individuals exposed to chronic sun exposure and trauma to the hands.⁴ It has been described in Indian housewives, in whom household trauma has been incriminated as the precipitating factor.^{5,6} These lesions morphologically resemble those of acrokeratoelastoidosis, but there is no involvement of the feet and no familial predisposition.^{7,8} In a fully developed case, both hands

are symmetrically involved. The lesions are wrinkled or depressed, scaly or smooth, yellowish waxy papules, which may coalesce to form band-like firm linear plaques that extend from near the base of the thumb around the web distally to the side of the index finger at the junction of the palmar and dorsal skin. The ulnar sides of the hands, and less commonly the medial and lateral sides of the middle and ring fingers, may be involved in a similar fashion.³ Histologically, a distinctive deposition of dense collagen and degenerated elastic fibers in the reticular dermis is seen.⁸ Because of different pathogenic interpretations, this entity has also been reported as limiting or marginal keratodermas of the palms, keratoelastoidosis marginalis of the hands, marginal collagen degeneration, and digital papular calcific elastosis.

The exact pathogenesis of this condition is unknown, but probably a combination of long-term trauma and pressure together with some degree of actinic damage is responsible for the localization of lesions in these sites.⁹ In our case, these factors have not only produced lesions on the border of the fingers and palms, but also the thumbnail beds, leading to V-shaped nicking of the nails. To the best of our knowledge, such a nail change in association with this disorder has not been described earlier.

REFERENCES

- Rongioletti F, Betti R, Crosti C, Rebora A. Marginal papular acrokeratodermas: a unified nosography for focal acral hyperkeratosis, acrokeratosis, acrokeratoelastoidosis and related disorders. *Dermatology* 1994;88:28-31.
- Griffiths WAD, Judge MR, Leigh IM. Disorders of keratinization. In: Champion RH, Burton JL, Burns DA, Breathnach SM, editors. *Textbook of dermatology*. 6th ed. Oxford: Blackwell Science; 1998. p. 1483-588.
- Burks JW, Wise LJ, Clark WH. Degenerative collagenous plaques of the hands. *Arch Dermatol* 1960;82:362-6.
- Ritchie EB, Williams HM Jr. Degenerative collagenous plaques of the hands. *Arch Dermatol* 1966;93:202-3.
- Sehgal VN, Singh M, Korran RV, Nayyar M, Chandra M. Degenerative collagenous plaque of the hand (linear keratoelastoidosis of the hands). A variant of acrokeratoelastosis. *Dermatologica* 1980;161:200-4.
- Mittal R, Chopra A, Gupta K. Degenerative collagenous plaques of the hands. *Indian J Dermatol* 1984;29:47-51.
- Johnson B Jr, Honig P. Congenital diseases (Genodermatoses). In: Elder D, Elenitsas R, Jaworsky C, Johnson B Jr, editors. *Histopathology of the skin*. 8th ed. Philadelphia: Lippincott-Raven; 1997. p. 117-50.
- Abulafia J, Vignale RA. Degenerative collagenous plaques of the hands and acrokeratoelastoidosis: pathogenesis and relationship with knuckle pads. *Int J Dermatol* 2000;39:424-32.
- Mehregan AH. Degenerative collagenous plaques of the hands. *Arch Dermatol* 1966;93:633.

B. Jeevankumar, D. M. Thappa, S. Jayanthi*

Departments of Dermatology and STD, and *Pathology, Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER), Pondicherry - 605006, India.

Address for correspondence: Dr. D. M. Thappa, Professor and Head, Departments of Dermatology and STD, JIPMER, Pondicherry - 605006, India. E-mail: dmthappa@vsnl.net

Insulin induced lipoatrophy

Sir,
Insulin induced lipoatrophy is becoming increasingly uncommon.¹ We came across a 14-year-old girl with insulin induced lipoatrophy presenting as depressed atrophic plaques over thighs and abdomen at the site of repeated self-administered insulin injections.

The patient suffered from insulin dependent diabetes mellitus (DM) since the age of 6 years. Her random blood sugar level at first presentation was 380 mg%. She was initially treated with bovine insulin injections, initially short acting, then long acting, for 3 years. However she developed dimpling and depressed plaques over the anterior aspect of both thighs at the site of the injections, suggestive of insulin lipoatrophy. Since the therapeutic response to bovine insulin injection was unsatisfactory, she was treated with a long acting porcine insulin preparation for the next 2 years. However, she continued to develop bilaterally symmetrical, unsightly depressed plaques over both thighs (Figure 1). She was advised to change the injection site to the abdomen to avoid repeated injections in the thighs. She then developed similar atrophy of the subcutaneous fat on either side of the midline on the abdomen (Figure 1). She has subsequently been using a purified human insulin preparation (a mixture of long acting and short acting insulins) since the