DERMOSCOPY AND SKIN IMAGING

CIRCUMSCRIBED PALMAR HYPOKERATOSIS: FIRST EXAMINATION WITH LINE-FIELD CONFOCAL OPTICAL COHERENCE TOMOGRAPHY AND COMPARISON WITH DERMOSCOPY, HIGH RESOLUTION ULTRASOUND AND HD-OCT

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Background: First described by Pérez et al in 2002, Circumscribed palmar hypokeratosis (CPH) is a recently described benign entity that consists in a reduction in thickness of the stratum corneum with a thinning of the stratum granulosum, that typically develops on the palms of middle-aged women as a solitary depressed patch with well-demarcated raised border. Although several etiopathogenetic hypothesis have been formulated, the exact physiopathologic alteration is still unknown. Line-field confocal optical coherence tomography (LC-OCT) is a new imaging technique that delivers vertically oriented sectional images with a spatial resolution of ~1µm and with a high penetration depth of ~500µm in real time mode.

Observation: We here report two otherwise healthy woman of 37 (case 1) and 57 years (case 2) with a solitary lesion on the thenar prominence of their right hand : case 1 had an asymptomatic roundish lesion of 1.5x1cm occurred 1 year before; case 2 presented with a moderately symptomatic inflamed lesion of 4.5x3cm. Lesions were examined with non polarized dermoscopy, high-frequency ultrasound (HFUS) 50MHz, OCT (HD-OCT Skyntell) and LC-OCT. Biopsy for histological examination was performed in one case. Polarized dermoscopy revealed clear-cut interruption of the stratum corneum and in case 2 allowed to visualize dermal papillae capillaries. HFUS showed both the stair-like appearance of the epidermis and dilated capillaries in the upper dermis. LC-OCT allowed to obtain high quality vertical images with better visualization of skin layer morphology and cellular resolution, compared with HD-OCT.

Key-message: Here in these cases, LC-OCT images first demonstrated not only to strongly correlate with histopathological images, but to provide a vertical image that closely resemble the in vivo lesion morphology. Indeed, histopathological imaging can be affected by artifacts slide preparation in cases with thin specimen and/or delicate biopsy areas.