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14 Confocal laser-scanning microscopy of capillaries in normal and psoriatic skin.

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ABSTRACT

An important and most likely active role in the pathogenesis of psoriasis has been attributed to changes in cutaneous blood vessels. The purpose of this study was to use confocal laser-scanning microscopy (CLSM) to investigate dermal capillaries in psoriatic and normal skin. The structures of the capillary loops in 5 healthy participants were compared with those in affected skin of 13 psoriasis patients. The diameters of the capillaries and papillae were measured for each group with CLSM. All investigated psoriasis patients showed elongated, widened, and tortuous microvessels in the papillary dermis, whereas all healthy controls showed a single capillary loop in each dermal papilla. The capillaries of the papillary loop and the dermal papilla were significantly enlarged in the psoriatic skin lesions (diameters 24.39±2.34 and 146.46±28.52???m, respectively) in comparison to healthy skin (diameters 9.53±1.8 and 69.48±17.16???m, respectively) (P<0.001). CLSM appears to represent a promising noninvasive technique for evaluating dermal capillaries in patients with psoriasis. The diameter of the vessels could be seen as a well-quantifiable indicator for the state of psoriatic skin. CLSM could be useful for therapeutic monitoring to delay possible recurrences.