

Medical > In Vivo > Inflammatory Disease Research > Psoriasis

19

Characterization of psoriasis in vivo by reflectance confocal microscopy.

González S, Rajadhyaksha M, Rubinstein G, Anderson RR.; J Med. 1999;30(5-6):337-56.

ABSTRACT

Among available non-invasive imaging tools, confocal reflectance microscopy (CM) provides the highest-resolution optical sectioning of skin in vivo, to a controlled depth of 200-350 microns, the level of the upper reticular dermis. In this study, CM was used to view the histological features of psoriasis in vivo in lesional and non-lesional skin of five patients with stable psoriasis vulgaris. Stereohistological analysis of non-invasive confocal sections, and the correlation with transverse (en face) hematoxylin- and eosin-stained sections from biopsies, was also performed. In psoriatic lesions, nucleated corneocytes and collections of infiltrating inflammatory cells were clearly seen. Morphometric parameters such as epidermal height, length of papillary dermis, and the count of dermal papillae were also easily quantified. In the upper dermis, dilated capillary loops were always present. Since CM sections are en face, the presence or absence of the granular layer could not be visualized in single frames, but could be monitored in a sequence of real-time videotaped images. In summary, CM provides a new technique for histologically evaluating psoriasis in vivo.