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Reflectance confocal microscopy in the daily practice.

Ahlgrimm-Siess V, Hofmann-Wellenhof R, Cao T, Oliviero M, Scope A, Rabinovitz HS.; Semin Cutan Med Surg. 2009 Sep;28(3): (S1085-5629(09)00069-8), DOI: 10.1016/j.sder.2009.06.008.2009: 180-9.

ABSTRACT

Reflectance confocal microscopy (RCM) allows noninvasive imaging of the epidermis and superficial dermis. Like dermoscopy, RCM acquires images in the horizontal plane (en face), allowing assessment of tissue pathology underlying dermoscopic structures of interest at a cellular-level resolution. Thus, clinicians using dermoscopy may find RCM to be particularly useful. Our aim was to show the value of RCM for diagnosis and management decisions related to pigmented and nonpigmented skin neoplasms seen in daily practice. Six cases of clinically and dermoscopically equivocal skin lesions, for which RCM facilitated making the correct diagnosis, are presented. Final diagnoses were made based on histopathologic analysis. Three flat pigmented skin lesions with dermoscopic signs of regression showed distinct RCM features that allowed their correct classification as pigmented basal cell carcinoma, pigmented actinic keratosis, and melanoma on sun-damaged skin. A flat nonpigmented skin lesion on the face, which did not show distinct clinical or dermoscopic features, was correctly diagnosed as basal cell carcinoma based on RCM findings. In addition, the response of a pigmented actinic keratosis and a melanoma in situ on sun-damaged skin to noninvasive topical treatment was monitored using RCM. RCM is a promising and practical imaging tool for the diagnosis and follow-up of pigmented and nonpigmented skin lesions.