

Overview

32

A four-phase strategy for the implementation of reflectance confocal microscopy in dermatology.

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ABSTRACT

BACKGROUND: Reflectance confocal microscopy (RCM) is gradually implemented in dermatology. Strategies for further implementation and practical 'hands on' guidelines are lacking. **OBJECTIVE:** The primary outcome was to conduct a general strategy for further implementation of RCM. The secondary outcome was the diagnosis of psoriasis and differentiation of stable from unstable psoriatic plaques by means of the 'hands on' protocol, derived from the strategy. **METHODS:** We used a four-phased model; an exploring phase, a systematic literature search, a clinical approach and, finally, an integration phase to develop a clinical guideline for RCM in psoriasis. Receiver operating characteristic curve statistics was applied to define the accuracy for the diagnosis of unstable psoriasis. **RESULTS:** A general strategy for further implementation of RCM and practical approach was developed to examine psoriasis by RCM and to distinguish stable from unstable psoriasis. Unstable psoriasis was diagnosed by epidermal inflammatory cell counts with a sensitivity and specificity of 91.7% and 98.3%, respectively, and with an accuracy of 0.92 (area under the curve). In addition, a monitoring model was proposed. **CONCLUSION:** This is the first study that shows a method for implementation of RCM in dermatology. The strategy and hands on protocol for psoriasis may serve as a model for other dermatological entities and additionally may lead to specialized ready-to-use RCM protocols for clinical dermatological practice. © 2016 European Academy of Dermatology and Venereology. PMID:27038136