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Criteria for diagnosing pemphigus vulgaris and pemphigus foliaceus by reflectance confocal microscopy.

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ABSTRACT

BACKGROUND: Pemphigus is an autoimmune, bullous disease affecting the skin and mucous membranes. The aim of the study was to evaluate whether pemphigus vulgaris (PV) and pemphigus foliaceus (PF), may be diagnosed using reflectance confocal microscopy (RCM).

METHODS: Thirty patients (18 with PV and 12 with PF) were included into the study. In total, 36 PV lesions and 29 PF lesions were examined. Healthy-appearing skin adjacent to skin lesions and not adjacent to skin lesions was also investigated. **RESULTS:** Intraepidermal clefts (bullae) with acantholytic cells were observed in 47% of PV lesions and 59% of PF lesions. Multiple dilated blood vessels in the upper dermis were observed using RCM in 61% of PV lesions and in 86% of PF lesions. RCM features of pemphigus also included presence of inflammatory infiltrates, loss of typical honeycomb pattern of the epidermis, and detachment of the outer root sheath in hair follicles. In 20-64% of cases, RCM features, which are characteristic for PV and PF lesions were also observed in the proximity of these lesions within the healthy-appearing skin. Following criteria for RCM diagnosis of pemphigus were developed: (i) acantholytic clefts in RCM of a lesion, (ii) acantholytic clefts in RCM of healthy-appearing skin adjacent to a lesion, (iii) multiple-dilated blood vessels in RCM of a lesion. Fulfillment of two of these three criteria is sufficient to establish a RCM diagnosis of pemphigus. These criteria do not differentiate between PV and PF.

CONCLUSIONS: RCM is useful for rapid, non-invasive, in-office differential diagnosis of pemphigus. RCM does not replace immunologic and histopathologic examinations, which remain the gold standard for establishing the final diagnosis of PV and PF.