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Morphologic criteria of vesiculobullous skin disorders by in vivo reflectance confocal microscopy.

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ABSTRACT

BACKGROUND AND OBJECTIVES: Reflectance confocal microscopy (RCM) may be a useful method for accurate, rapid, and noninvasive bedside diagnosis of vesiculobullous skin diseases (VSD). The main outcome measure of this study was a descriptive statistical analysis of RCM features associated with selected group of VSD. **PATIENTS AND METHODS:** Single-center, observational study at a university-based dermatology department. Forty skin lesions in 24 patients with bullous pemphigoid (BP), varicella zoster virus infection (VZI), or allergic contact dermatitis (ACD) were assessed. **RESULTS:** Patients with BP, VZI, and ACD were assessed for the presence of a large spectrum of RCM features, among others including histopathological correlates for spongiosis, vesicles/blisters, epidermal necrosis, pleomorphic ballooned keratinocytes, and inflammatory infiltrate. The three conditions showed distinct patterns of occurrence with respect to these RCM features. Using a multivariate regression model, we identified sets of morphologic features in BP (vesicles/blisters at the dermoepidermal junction, inflammatory infiltrate within blisters and basal epidermal layers, spongiosis in basal epidermal layers), VZI (acantholysis in the stratum spinosum, epidermal necrosis, pleomorphic ballooned keratinocytes, multinucleated giant cells), and ACD (microvesicles, spongiosis, and prominent inflammatory infiltrate in the stratum granulosum/spinosum). **CONCLUSIONS:** RCM seems to be a useful tool in the evaluation and differentiation of a selected group of VSD, and offers a good correlation with histopathological findings. © 2016 Deutsche Dermatologische Gesellschaft (DDG). Published by John Wiley & Sons Ltd. PMID:27509415 DOI:10.1111/ddg.13058