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Reflectance confocal microscopy as a non-invasive diagnostic tool for Hailey-Hailey disease.

Kurzeja M, Czuwara J, Rakowska A, Sicińska J, Maj M, Nasierowska-Guttmejer A, Rudnicka L, Olszewska M., *Skin Res Technol.* 2014 Feb 17. doi: 10.1111/srt.12146.

ABSTRACT

BACKGROUND/PURPOSE: Reflectance confocal microscopy (RCM) is a non-invasive method for high-resolution, in vivo imaging of the epidermis and upper dermis. The purpose of the study was to evaluate the potential usefulness of RCM as a non-invasive diagnostic tool for Hailey-Hailey disease (familial benign chronic pemphigus). **METHODS:** Four patients with Hailey-Hailey disease were examined by RCM. Subsequently, punch biopsies were taken to compare RCM images with corresponding histopathologic findings. **RESULTS:** On RCM images, the most striking feature was acantholysis at the level of the granular and spinous layer, resembling a 'dilapidated brick wall'. We suggest the term 'dilapidated brick wall RCM sign' to describe this feature and to distinguish from the corresponding histopathology finding. Other RCM features included: epidermal disarray, intraepidermal clefts, inflammatory cells in the epidermis and in the superficial dermis. These RCM abnormalities correlated with analogous histopathology findings. **CONCLUSION:** Reflectance confocal microscopy is a promising non-invasive diagnostic tool for Hailey-Hailey disease. The method may also be considered useful for choosing the best site for biopsy, which may aid pathology evaluation and spare time needed to establish the diagnosis.