ABSTRACT

Pigmented squamous cell carcinoma in situ (pSCCis) is difficult to diagnose based on clinical and dermoscopic examination. Reflectance confocal microscopy (RCM) allows noninvasive differentiation between malignant and benign pigmented skin lesions. We determined the frequency of key RCM features of pSCCis and correlated the RCM criteria with the corresponding dermoscopic and histopathologic criteria. The study included 28 lesions with biopsy-proven diagnosis of pSCCis derived from 28 patients. Clinical, dermoscopic, and RCM images of these lesions were retrospectively analyzed by 3 independent observers. Assessment for the presence of RCM criteria revealed scale or parakeratosis (20/28; 71%); irregular honeycomb pattern in the spinous-granular layer (28/28; 100%); spindle-shaped cells with dendritic branches infiltrating the epidermis (12/28; 43%); edged papillae (24/28; 86%), and dilated looped blood vessels within the papillae (18/28; 64%). Fifty-three percent of the cases displayed at least 4 RCM criteria and 96% of cases displayed at least 3 RCM criteria. We propose that the diagnosis of pSCCis could be established based on 1 major criterion-irregular honeycomb pattern-and 2 of the following minor criteria-scale or parakeratosis, spindle-shaped cells with dendritic branches infiltrating the epidermis, edged papillae, and dilated looped blood vessels within the papillae. PMID: 28816741 DOI: 10.1097/DAD.0000000000000938