ABSTRACT

BACKGROUND: Lichen planus-like keratosis (LPLK) may be difficult to differentiate from melanoma and other skin cancers on sun-damaged skin based on clinical and dermoscopic examination. Reflectance confocal microscopy (RCM) allows evaluation of skin lesions at high resolution.

OBJECTIVES: The aim of this study was to identify criteria for specific diagnosis of LPLK using in vivo RCM.

METHODS: Lesions included in the study were derived from patients presenting for skin examination at a private dermatology practice specializing in skin cancer. We retrospectively analysed RCM features of 28 biopsy-proven LPLK and compared them to RCM findings in skin cancers on sun-damaged skin, including five in situ squamous cell carcinomas, six actinic keratoses, seven superficial basal cell carcinomas and eight melanomas.

RESULTS: The main RCM features of LPLK and their relative frequencies were: (i) typical honeycomb pattern of the spinous layer (78.6%); (ii) elongated cords and/or bulbous projections at the dermal-epidermal junction (75%); and (iii) numerous plump-bright cells and/or bright stellate spots in the superficial dermis (92.9%). These RCM features correlated with the following histopathological findings respectively: (i) spinous-granular layers without significant atypia of keratinocytes; (ii) elongated, bulbous rete ridges; and (iii) dense infiltration of melanophages and lymphocytes in superficial dermis. We propose diagnostic criteria that classify correctly 71.4% of LPLK, while avoiding misclassification of any of the skin cancers in the present series as LPLK.

CONCLUSIONS: We identified RCM criteria for diagnosis of LPLK that correlate well with histopathological findings and that allow differentiation of LPLK from skin cancer.