ABSTRACT

**Objectives**: To determine morphologic features of melanophages under in vivo reflectance confocal microscopy (RCM) and to highlight morphologic features that are important in distinguishing melanophages from melanocytes.

**Design**: Consecutive retrospective study.

**Setting**: Referral center for pigmented lesions.

**Patients**: The study group retrospectively constituted 20 consecutive patients having biopsy-proven lichen planus-like keratoses that dermoscopically and histopathologically showed many melanophages and that had been imaged under RCM before biopsy.

**Main Outcome Measures**: The RCM characteristics of isolated dermal bright cells were scored blinded to dermoscopic features and histopathologic diagnosis.

**Results**: Under RCM, melanophages were significantly smaller than melanocytes (mean [SD] cell diameter, 13.6 [1.6] vs 18.2 [2.9] µm, \( P = .006 \)). Nuclei (intracellular low-reflectance round-oval structures) were visible in only 16% (29 of 184) of the cells in melanophages vs 57% (28 of 49) of the cells in melanocytes \( (P < .001) \). When identified, nuclei were smaller in melanophages than in melanocytes (mean [SD] diameter, 3.2 [1.2] vs 6.4 [0.7] µm, \( P < .001 \)). Compared with melanocytes, melanophages were significantly more ill defined (76% [140 of 184] vs 18% [9 of 49], \( P < .001 \)), less round (23% [42 of 184] vs 69% [34 of 49], \( P < .001 \)), and less dendritic (1% [2 of 184] vs
12% [6 of 49]) (P=.001).

**Conclusion**: Observed differences in morphologic features should enable distinction between melanophages and melanocytes under RCM, thereby improving the accuracy of skin lesion diagnosis using this technique.