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58 Morphologic Features of Melanophages Under In Vivo Reflectance Confocal Microscopy

Pascale Guitera, Ling-Xi L. Li, Richard A. Scolyer, Scott W. Menzies; Arch Dermatol. 2010;146(5):492-498

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 lowreflectance round-oval structures) were visible in only16% (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).Comparedwith 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.