Overview

31 | Dermoscopy and in vivo confocal microscopy are complimentary techniques for the diagnosis of difficult amelanotic and light colored skin lesions.

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ABSTRACT

BACKGOUND: Amelanotic melanomas are often difficult to diagnose. OBJECTIVES: Find and test best diagnosis methods with dermoscopy and reflectance confocal microscopy (RCM) tools. METHODS: We selected consecutive, difficult-to-diagnose, light-colored and amelanotic skin lesions from three centers (in Australia and Italy). Dermoscopy and RCM diagnostic utility were evaluated under blinded conditions utilizing 45 melanomas (16 in situ, 29 invasive), 68 nevi, 48 BCC, 10 AK, 10 SCC and 13 other benign lesions. RESULTS: Sensitivity and specificity for melanoma with dermoscopy pattern analysis by two blinded observers and their "confidence in diagnosis" were low. The amelanotic dermoscopy method had the highest sensitivity (83.3%) for a diagnosis of malignancy (melanoma, BCC or SCC) but the specificity was only 18%. Multivariate analysis confirmed the utility of RCM features previously identified for the diagnosis of BCC and melanoma (highest OR for melanoma: epidermal disarray, dark and/or round pagetoid cells). RCM sensitivity was 66.6% and 72.9% for melanoma and BCC diagnosis, respectively and its specificity for non-malignant lesion diagnosis was 56.1%. RCM reader confidence was higher than for dermoscopy; 84.4% of melanomas would have been biopsied and biopsy avoided in 46.9% of benign lesions. All melanomas misclassified by either dermoscopy or RCM were detected by the other tool. CONCLUSION: Dermoscopy and RCM represent complimentary/synergistic methods for diagnosis of amelanotic/lightly-colored skin lesions.
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