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Combined in vivo reflectance confocal microscopy and digital dermoscopy for follow up of patients at high risk of malignant melanoma: A prospective case series study.

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ABSTRACT

Digital dermoscopy (DD) follow up is a useful strategy for monitoring patients at high risk of melanoma. Reflectance confocal microscopy (RCM) is a valuable second-level examination after dermoscopy for the evaluation of difficult to diagnose lesions. The aim of this study was to assess the value of RCM in routine DD monitoring of patients at high risk of melanoma. In this prospective study, performed over 22 months, changing melanocytic lesions were detected by DD and excised. RCM imaging was performed before surgical excision of all the lesions, and histopathology used as the gold standard diagnostic test. Eighty-seven lesions, including 11 thin melanomas, were studied. Dermoscopic evaluation at follow up revealed a significant association between melanoma and asymmetry in two axes ($P = 0.035$). Enlargement and other changes in structure or color did not significantly differ between nevi and melanomas. Widespread pagetoid cells, non-edged papillae, irregular and dishomogeneous junctional clusters, and sheet-like structures were significantly associated with malignancy ($P < 0.001$). RCM allowed accurate diagnosis of melanoma in 10 of 11 cases (90.9%). The remaining case was classified as a dysplastic nevus. Forty-six lesions (52.8%) in which RCM revealed no atypia were deemed unnecessarily removed. This study was limited by sample size. In conclusion, combined DD and RCM facilitates the recognition of thin malignant melanomas and reduces unnecessary excisions. © 2017 Japanese Dermatological Association. KEYWORDS: confocal microscopy; dermoscopy; dysplastic nevus syndrome; melanoma; nevi PMID:28191661DOI:10.1111/1346-8138.13743