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Diagnostic accuracy of reflectance confocal microscopy for lesions typified by dermoscopic island.

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ABSTRACT

INTRODUCTION: Dermoscopic island (DI) is a dermoscopic clue for the diagnosis of thin melanoma (MM). However, its positive predictive value is about 50% and several naevi with DI are unnecessarily excised. Reflectance confocal microscopy (RCM) is a second level non-invasive imaging tool that increases diagnostic accuracy for MM. OBJECTIVE: To evaluate diagnostic RCM features of pigmented lesions typified by the presence of DI and calculate RCM diagnostic accuracy for MM diagnosis. METHODS: All lesions with DI were retrieved from a database of 1964 cases. RCM diagnoses were given without being aware of the histopathological diagnoses. The number of MMs among lesions presenting with DI and the sensitivity and specificity of RCM for MM were assessed. The frequencies of dermoscopic and RCM features were calculated to evaluate significant differences in naevi and MMs showing DI (Chi-square test). Independently significant RCM criteria for MM were identified by discriminant analysis. RESULTS: Sixty-three (3.2%) out of 1964 lesions presented DI. Among them, 30.2% were in situ MMs and 12.7% invasive MMs. Sensitivity and specificity of RCM for the diagnosis of MM in case of DI was 88.9%. Pagetoid cells (Wilks' lambda .804, P < 0.001) and atypical cells at dermo-epidermal junction (Wilks' lambda .762, P < 0.001) were identified to differentiate MM from naevi. CONCLUSION: Our study confirmed that DI could be a sign of early MMs and underlined that RCM could be a good tool to discriminate MMs and naevi in the presence of DI because it can identify the presence of cytological atypia.© 2016 European Academy of Dermatology and Venereology. PMID:27109574