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Reflectance confocal microscopy analysis of equivocal melanocytic lesions with severe regression.

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ABSTRACT

BACKGROUND: The differential diagnosis between regressing nevi and melanoma might be challenging; regressing areas can represent a confounding factor for the diagnosis and the histology still remain mandatory to rule out melanoma. Reflectance confocal microscopy may add valuable information by revealing features suggestive of the nature of the melanocytic proliferation. **OBJECTIVE:** To assess the impact of confocal microscopy in the management of regressive melanocytic lesions. **METHODS:** The dermoscopic analysis of 92 melanocytic lesions showing that more than 30% of regressions have been retrospectively considered, among them, 32 melanocytic lesions with a 7 check point list ?3 they were assessed at the rcm and subsequently excised. For each selected lesion, dermoscopic features of regression (white scar-like areas, blue areas, blue white areas), distribution of regressing areas (central, peripheral, or both) and the percentage of regression have been examined by an expert in dermoscopy, blinded to the histological and confocal diagnosis. Subsequently, two experts in confocal microscopy reevaluated, blinded from histology, RCM images. **RESULTS:** Of the 32 lesions analyzed, 23 (71.5%) were diagnosed histologically as nevi, and 9 (28.5%) as melanomas. 26 of 32 lesions (81.5%) exhibited regression >50% of the overall. On RCM, 11 lesions have been interpreted as malignant and 21 as benign. On RCM the majority of nevi exhibited regular architecture without cytological atypia. Epidermal disarray, pagetoid infiltration, disarranged dermo-epidermal junction architecture and atypical nests were considered as suspicious for malignancy. Good concordance between confocal readers has been detected. **CONCLUSION:** A combined dermoscopic/confocal approach can be used for the management of lesions exhibiting dermoscopic features of regression in order to provide a more conclusive pre-histological diagnosis avoiding a high number of unnecessary excisions. Limits of this study were represented by the relatively small number of lesions and the retrospective approach. Further, prospective studies on a larger number of cases, will be necessary in order to compare the efficacy of dermoscopy alone versus dermoscopy in combination with RCM for the evaluation of regression, suspected pigmented lesions. © 2017 John Wiley & Sons A/S. Published by John Wiley & Sons Ltd. **KEYWORDS:** dermoscopy; histology; melanoma; reflectance confocal microscopy; regression PMID:28543606 DOI:10.1111/srt.12382