Medical > In Vivo > Melanoma & Pigmented Lesion Research

24 Morphological classification of melanoma metastasis with reflectance confocal microscopy.

Farnetani F, Manfredini M, Longhitano S, Chester J, Shaniko K, Cinotti E, Mazzoni L, Venturini M, Manganoni A, Longo C, Reggiani-Bonetti L, Giannetti L, Rubegni P, Calzavara-Pinton P, Stanganelli I, Perrot JL, Pellacani G.
J Eur Acad Dermatol Venereol. 2018 Nov 5. doi: 10.1111/jdv.15329.

ABSTRACT

BACKGROUND:Cutaneous malignant melanoma metastases differential diagnosis is challenging, as clinical and dermoscopic features can simulate primary melanoma or other benign or malignant skin neoplasms, and in-vivo reflectance confocal microscopy could assist. Our aim was to identify specific reflectance confocal microscopy features for cutaneous malignant melanoma metastases, and epidermal and dermal involvement. METHODS:A retrospective, multicentre observational study of lesions with proven cutaneous malignant melanoma metastases diagnosis between January 2005 and December 2016. Lesions were retrospectively assessed according to morphological features observed at reflectance confocal microscopy. Potential homogeneous subgroups of epidermal or dermal involvement were investigated with cluster analysis. RESULTS:Cutaneous malignant melanoma metastases (51 lesions in 29 patients) exhibited different frequencies of features according to metastasis dermoscopy patterns. Lesions classified at dermoscopy with nevus-like globular and non-globular patterns were more likely to be epidermotropic, showing characteristics of epidermal and dermal involvement at reflectance confocal microscopy. Other dermoscopy pattern classifications were more likely to be dermotropic, showing characteristics od dermal involvement at reflectance confocal microscopy. Distinguishing features at reflectance confocal microscopy included irregular (78%) and altered (63%) epidermis, pagetoid infiltration (51%), disarranged junctional architecture (63%), non-edged papillae (76%), dense and sparse, and cerebriform nests in the upper dermis (74%), and vascularity (51%). Cluster analysis identified three groups, which were retrospectively correlated with histopathological diagnoses of dermotropic and epidermotropic diagnoses ($P < 0.001$). The third cluster represents lesions with deep dermis morphological changes, which were too deep for evaluation with reflectance confocal microscopy.
CONCLUSIONS:Specific reflectance confocal microscopy features of cutaneous malignant melanoma metastases for correct diagnosis, and subtype diagnosis, seem achievable in most cases where morphological alterations are located above the deep dermis. © 2018 European Academy of Dermatology and Venereology. PMID: 30394598 DOI: 10.1111/jdv.15329