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230 Microscopic In Vivo Description of Cellular Architecture of Dermoscopic Pigment Network in Nevi and Melanomas

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ABSTRACT

OBJECTIVE: To characterize the microscopic aspects of the dermoscopic pigment network in vivo, by means of confocal scanning laser microscopy.

DESIGN: Confocal imaging was performed on melanocytic lesions characterized by pigment network at dermoscopy. Some confocal architectural and cytologic features, as observed at the dermoepidermal junction, were morphologically described and quantified by means of a dedicated program.

SETTING: University medical department.

STUDY POPULATION: We studied confocal images of 15 melanomas, 15 dermoscopic atypical nevi, and 15 common nevi.

MAIN OUTCOME MEASURES: Features referring to aspect, size, regularity, homogeneity, and infiltration of dermal papillae and to cellular size, regularity, and atypia were described by 2 observers on confocal images. Mean dermal papillary diameter, mean cell area, and shape irregularity were quantified by drawing papillae and cell contours on confocal images and measured with the use of a computer program.

RESULTS: Pigment network in melanomas consisted of large basal cells that circumscribed small to medium-sized dermal papillae with marked cellular atypia, sometimes infiltrating dermal papillae. On the other hand, common acquired nevi were characterized by lack of atypical cells and edged dermal papillae. Atypical nevi presented intermediate characteristics between clearly benign and malignant lesions.

CONCLUSION: Cellular atypia was the most sensitive feature for melanoma diagnosis, whereas the presence of nucleated cells infiltrating dermal papillae was the most specific one.

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