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Reflectance confocal microscopy of facial lentigo maligna and lentigo maligna melanoma: a preliminary study

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ABSTRACT

BACKGROUND: Facial lentigo maligna (LM) and lentigo maligna melanoma (LMM) may be difficult to diagnose clinically and dermoscopically. Reflectance confocal microscopy (RCM) enables the in vivo assessment of equivocal skin lesions at a cellular level.

OBJECTIVES: To assess cytomorphological and architectural RCM features of facial LM/LMM.

METHODS: Four women and eight men aged 58-88 years presenting with facial skin lesions suspicious of LM/LMM were included. In total, 17 lesion areas were imaged by RCM before biopsy. The histopathological diagnosis of LM was made in 15 areas; the other two were diagnosed as early LMM.

RESULTS: A focal increase of atypical melanocytes and nests surrounding adnexal openings, sheets of mainly dendritic melanocytes, cord-like rete ridges at the dermoepidermal junction (DEJ) and an infiltration of adnexal structures by atypical melanocytes were found to be characteristic RCM features of facial LM/LMM. Areas with a focal increase of atypical melanocytes and nests surrounding adnexal openings were observed at the basal layer in three cases. The remaining cases displayed these changes at suprabasal layers above sheets of mainly dendritic melanocytes. Cord-like rete ridges at the DEJ and an infiltration of adnexal structures by atypical melanocytes were observed in all cases. Previously described criteria for RCM diagnosis of melanoma, such as epidermal disarray, pleomorphism of melanocytes and pagetoid spreading of atypical melanocytes, were additionally observed.

CONCLUSIONS: We observed a reproducible set of RCM criteria in this case series of facial LM/LMM.