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223 Multimodal In Vivo Optical Imaging, Including Confocal Microscopy, Facilitates Presurgical Margin Mapping for Clinically Complex Lentigo Maligna Melanoma

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ABSTRACT

Knowledge of the accurate margins of a lentigo maligna melanoma (LMM) is crucial in the presurgical evaluation of the patient. Towards this end clinicians have utilized the Wood's lamp and dermoscopy to help delineate the borders of the LMM. However, many LMMs arise on photodamaged skin, making it difficult to determine the border of the LMM and separate it from the background lentiginous skin. We present a case of a patient with a recurrent LMM on the scalp that developed in a background of photodamage with diffuse melanocytic atypia and lentiginosities, making it virtually impossible to determine the precise margins of the LMM by clinical, Wood's lamp or dermoscopic examination. To avoid subjecting the patient to multiple staged excisions we attempted to determine the margins of the LMM by utilizing in vivo confocal laser scanning reflectance microscopy. Using this, it was apparent that there were increased numbers of atypical/dendritic intraepidermal melanocytes in all layers of the epidermis within the LMM. In contrast, skin not involved with the LMM, as viewed under confocal laser examination, had normal honeycomb architecture and no abnormal melanocytes. The confocally determined border was further confirmed by obtaining multiple punch biopsies that were evaluated by haematoxylin and eosin histology and immunohistochemistry. Based on this information, the presurgical margins were marked and the tumour excised accordingly. The excised tissue was examined with multiple-step sections and the margins were determined to be clear. There has been no evidence of tumour recurrence after 1 year. In conclusion, this case illustrates that confocal reflectance microscopy, in conjunction with other in vivo optical instruments, can be utilized to enhance the accuracy for the presurgical margin mapping of LMM.