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Title

"Lambs" in wolves' clothing: when basal cell carcinoma mimics melanoma, but it is detected by the use of reflectance confocal microscopy.

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Keywords

Basal cell carcinoma, dermoscopy, reflectance confocal microscopy

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Abstract

Background Basal cell carcinoma (BCC) is the most frequent non-melanoma skin cancer. There are some cases in which clinical and dermoscopic examinations do not allow to formulate a unique diagnosis and in particular can be difficult the differential diagnosis with melanoma[1,2]. Reflectance confocal microscopy (RCM) is a non-invasive technology, which allows an in vivo imaging of the skin with high resolution.

Objectives We addressed our research to evaluate the reliability of the well-known RCM criteria for classic BCCs in a group of lesions with atypical dermoscopy presentation, possibly mimicking melanoma.

Methods We retrospectively analyzed at RCM excised lesions presenting in dermoscopy ≥1 score at revisited 7-point checklist[3]. The study population consisted of 177 cases showing no melanocytic RCM findings. Lesions were investigated for distinct non-melanocytic RCM features[4], while blinded from histopathology. Histopathology matching was performed before statistical analysis.

Results Among the lesions classified at RCM with no-melanocytic characteristics, we recognized 34 cases, histopathological confirmed as BCCs (21 nodular BCCs and 13 superficial BCCs) and 143 cases classified as other lesions (DFs, SebKs, SCCs and others). The main features of nBCCs (with histopathological confirm) at RCM are peritumoral clefts (20/21 95,2%; p=0,037), peripheral palisading (19/21 90,5%; p=0,001), increased vascularization (20/21 95,2%; p=0,004). In sBCCs we found mild keratinocytic atypia (13/13 100%; p=<0,001), solar elastosis (12/13 92,3%; p=0,002), cords connected to epidermidis (9/13 69,2%; p=<0,001). Dendritic structures, nests of basaloid cells, inflammatory infiltrate can be seen in all tumors.

Conclusions RCM classification proved high agreement with histopathology for BCCs with atypical dermoscopy presentations, allowing an early differential diagnosis and even identification of BCCs subtypes. RCM features in this group of lesions were similar to those described for typical cases of

BCCs, and may drive clinicians decisions, helped them in the recognition of melanocytic and non melanocytic lesions, increasing the rate of accurate diagnoses and allowing better therapeutic management[5].

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