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The invisible basal cell carcinoma: how reflectance confocal microscopy improves the diagnostic accuracy of clinically unclear facial macules and papules.

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ABSTRACT

Difficult to diagnose and early non-melanoma skin cancer lesions are frequently seen in daily clinical practice. Besides precancerous lesions such as actinic keratosis, basal cell carcinomas (BCCs) score the highest frequency in skin tumors. While infiltrative and nodular BCCs require a surgical treatment with a significant impact on the patients' quality of life, early and superficial BCCs might benefit from numerous conservative treatments, such as topical immune-modulators or photodynamic therapy. Dermoscopy has shown a high sensitivity and specificity in the diagnosis of early BCCs, and non-invasive imaging techniques like reflectance confocal microscopy (RCM) have proven to be helpful. The aim of our study was to investigate the importance of RCM in the diagnosis of BCCs with indistinct clinical and dermoscopic features. We retrospectively examined 27 histologically proven BCCs in which diagnosis was not possible based on naked eye examination; we separately reviewed clinical, dermoscopic, and confocal microscopy features and evaluated the lesions meeting the common diagnostic criteria for BCCs, and our diagnostic confidence. All lesions were clinically unclear, with no characteristic features suggestive for BCC; dermoscopy showed in most cases unspecific teleangiectasias (74 %) and micro-erosions (52 %). Confocal microscopy revealed in most of the cases the presence of specific criteria: peripheral palisading of the nuclei (89 %), clefting (70 %), stromal reaction (70 %), dark silhouettes (70 %), inflammatory particles (70 %), and tumor islands (67 %). In the absence of significant diagnostic clinical signs and with unclear dermoscopic features, specific confocal patterns were present in most of the lesions and enabled a correct diagnosis. In the absence of significant clinical features of BCC and in the case of uncertain dermoscopy, striking confocal features are detectable and easy to recognize in most cases. Confocal microscopy can therefore be instrumental in the diagnosis of the so-called invisible BCCs. **KEYWORDS:** Basal cell carcinoma; Dermoscopy; Facial papules; Pink lesions; Reflectance confocal microscopy PMID:27492373 DOI:10.1007/s10103-016-2043-3