ABSTRACT

BACKGROUND: Reflectance confocal microscopy (RCM) is a noninvasive imaging technique. Currently, RCM is mainly used for the diagnosis of melanoma and nonmelanoma skin cancer including basal cell carcinoma (BCC). Until now, it has not been possible to distinguish between subtypes of BCC using RCM.

Objective: To establish the RCM features for subtypes of BCC.

METHODS: 57 lesions were selected for RCM imaging. Clinical and dermatoscopic pictures were taken and a 3-mm biopsy was obtained.

RESULTS: It was demonstrated that tumor nests with peripheral palisading, branch-like structures, fibrotic septa and increase in vascular diameter were characteristic RCM features for nodular and micronodular BCC. The size and shape of the tumor nests allowed further distinction between these BCCs. Solar elastosis and tumor nests connected with the basal cell layer characterize superficial BCC.

CONCLUSION: This study presents RCM features for BCC, which might allow in vivo diagnosis of the nodular, micronodular and superficial subtype of BCC. This could prevent a skin biopsy, resulting in direct proper treatment. Further, RCM allows to evaluate the total lesion, which makes it possible to detect mixed-type BCCs.