Effectiveness and limitations of reflectance confocal microscopy in detecting persistence of basal cell carcinomas: a preliminary study.


ABSTRACT

BACKGROUND/OBJECTIVES: Reflectance confocal microscopy (RCM) can accurately and non-invasively diagnose basal cell carcinoma (BCC). The use of RCM in assessing responses to saucerization or curettage and cautery of BCC has not been established. The aim of the present study was to expound the usefulness of RCM in assessing treatment responses of BCC to saucerization or curettage and cautery 8-12 weeks after treatment.

METHODS: Eight sequential patients, with 11 superficial BCCs, were recruited. Lesions were evaluated clinically and dermoscopically. Three operators performed RCM imaging for each BCC at baseline and 8-12 weeks after treatment. Diagnostic criteria for RCM diagnosis included streaming of basal cells and the presence of cord-like structures and horizontal vessels. Results were compared against histopathology. Difficulties in establishing tumour clearance were identified and the effectiveness of RCM in assessing the response to treatment was explored.

RESULTS: At baseline, all lesions were consistent with superficial BCC. At 8-12 weeks after treatment, RCM correctly diagnosed 10 of 11 lesions as tumour free. Furthermore, RCM was reliable across operators of variable experience and the findings were confirmed histopathologically. Limitations were identified, but appeared to be related to operator experience.

CONCLUSION: The diagnosis of BCC was straightforward and reliable in the present study. Thus, RCM appears useful in assessing the early treatment response of superficial BCC treated with saucerization or curettage and cautery despite operator-dependent limitations.