**ABSTRACT**

Visual inspection may fail to accurately evaluate field cancerisation (subclinical actinic keratoses [AKs]). We aimed to describe field cancerisation by confocal reflectance microscopy and changes induced by the application of 3% diclofenac sodium gel in 2.5% hyaluronic acid. Fourteen male patients, >50 years old, with AKs on the bald scalp were included. Clinical examination, confocal microscopy and histological study of clinically visible lesions and "normal appearing" adjacent skin before and after treatment was completed. Reflectance confocal microscopy showed a decrease in scaling (p<0.001) and atypia of the honeycomb pattern (p<0.001) at 2 weeks of treatment. Changes in parakeratosis, inflammation and dermal collagen remodelling were also observed. Histology correlated with confocal features in AK and subclinical AK. Reflectance confocal microscopy was useful in the evaluation of field cancerisation and monitoring of treatment response. A rapid improvement in epidermal atypia was observed.