ABSTRACT

Actinic keratoses (AKs) represent the earliest stage in the development of squamous cell carcinoma (SCC) and represent important biomarkers for individuals at risk for development of invasive SCC. Based on clinical morphology, AK can be subdivided into three different grades, which correspond to specific dermatoscopic, reflectance confocal microscopic, and histopathologic substrates. Given the risk for potential progression toward invasive SCC, AK should be treated at the earliest stage. A wide range of minimal destructive or topical therapies is available for the treatment of AK. The choice of treatment depends on the number, size, clinical grading, duration, and location of lesions, patient's compliance, general health conditions, and cosmetic outcome. Treatment can be divided into lesion-directed and field-directed therapies. Lesion-directed treatment focuses on the treatment of single lesions, whereas field-directed treatment aims to eliminate both clinically visible and subclinical lesions within the field of actinic damage (concept of field cancerization). Noninvasive techniques such as dermoscopy and reflectance confocal microscopy can be helpful in identifying AK potentially progressing toward SCC, as well as in the selection of the adequate treatment and monitoring of the treatment outcome.