Reflectance confocal microscopic evaluation of nonmelanocytic lip lesions.


ABSTRACT

Lips display various benign and malignant lesions. Considering their functional and cosmetic importance, noninvasive diagnostic methods are required. In vivo reflectance confocal microscopy (RCM) has already been reported to be useful in the evaluation of various skin lesions. The aim of this study was to define the RCM features of nonmelanocytic lip lesions, compare them with healthy lip, and demonstrate the applicability of RCM as a noninvasive diagnostic method for nonmelanocytic lip lesions. Sixty-seven patients with premalignant/malignant, inflammatory, and infectious lip lesions and twenty-one healthy volunteers were included in the study. Following clinical and RCM examination, histopathological confirmation was obtained in all lesions except herpes labialis, verrucae, and aphthae. RCM features of individual lesions and corresponding groups were evaluated and compared. Pleomorphism was the common feature of premalignant/malignant lesions. Dermal invasion of dyskeratotic keratinocytes was visualized in all squamous cell carcinoma lesions. Spongiosis and inflammatory cells were the common features of inflammatory lesions. Hypergranulosis and necrotic keratinocytes were highly specific for lichen planus. The most specific features for discoid lupus erythematosus were irregular pattern, follicular plugs, and perifollicular inflammatory cells. Virus-infected keratinocytes were visualized in herpes and verrucae. RCM features showed high sensitivity and specificity to detect nonmelanocytic lip lesions. Although the penetration is limited to the papillary dermis in nonmucosal skin, imaging down to the mid-dermis with satisfactory resolution was possible on the lips. KEYWORDS: Labial lesions; Noninvasive diagnostic techniques; Nonmelanocytic lip lesions; Reflectance confocal microscopy; Skin imaging

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