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Preliminary evaluation of vitiligo using in vivo reflectance confocal microscopy.

Ardigo M, Malizewsky I, Dell'anna ML, Berardesca E, Picardo M; J Eur Acad Dermatol Venereol. 2007 Nov;21(10):1344-50.

ABSTRACT

BACKGROUND: Vitiligo is the most common pigmented disorder with a global incidence from 0.1% to 2% in different geographical areas.

Histopathology and histochemistry have shown the reduction of melanocytes in achromic patches, but microscopic changes of lesional and non-lesional skin are still not completely understood.

Reflectance confocal microscopy (RCM), based on the different light reflectance index of cutaneous structures, allowed in vivo, en face microscopic evaluation of superficial skin layers with a resolution similar to skin histology.

AIM: The purpose of this study was to evaluate RCM features of lesional and non-lesional skin of vitiligo patients. Moreover, re-pigmented areas were taken into consideration in order to evaluate melanocyte response to ultraviolet B (UVB) radiation.

SUBJECTS AND METHODS: Sixteen patients of different phototypes affected by active non-segmental vitiligo and 10 controls were enrolled in the study. In vivo skin imaging was done using a commercially available RCM (Lucid, VivaScope 1500). Re-pigmented areas from 6 to 16 patients (after UVB narrow-band therapy) were also examined.

RESULTS: Vitiligo lesions showed the disappearance of the bright rings normally seen at the dermo-epidermal junction.

Moreover, non-lesional skin of vitiligo patients showed unexpected changes as the presence of half-rings or scalloped border-like features of the bright papillary rings.

In re-pigmented areas after UVB narrow band therapy, the presence of activated, dendritic melanocytes was seen.

CONCLUSIONS: Considering our results, and following further studies, RCM clinical applications could be used in the therapeutic monitoring and evaluation of the evolution of vitiligo.