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Characterization and evaluation of pigment distribution and response to therapy in melasma using in vivo reflectance confocal microscopy: a preliminary study.

Ardigo M, Cameli N, Berardesca E, Gonzalez S.; J Eur Acad Dermatol Venereol. 2010 Nov;24(11):1296-303. doi: 10.1111/j.1468-3083.2010.03633.x.

ABSTRACT

BACKGROUND: Melasma is a frequent skin disorder characterized by the appearance of abnormal pigment (melanin) deposits in different layers of the skin.

Melasma has been classified into epidermal, dermal and mixed types using Wood's lamp, and the type and extent of the pigment deposits determine the type and invasiveness of the treatment.

AIMS: The aims of this study were to carry out a preliminary evaluation of the effective usefulness of reflectance confocal microscopy (RCM) in pigment distribution definition and subsequent re-classification of melasma types. Moreover, RCM therapeutical follow-up efficiency to combination therapy with pyruvic acid and hydroquinone was also tested.

MATERIALS AND METHODS: A small group (n=15) of patients previously diagnosed with facial melasma were selected and their pigment distribution was evaluated by RCM. In seven of these patients therapeutical follow-up was performed.

RESULTS: The results of the study suggest that RCM is more accurate than techniques previously used in the diagnosis of melasma, thus providing precise information on the location and extent of pigment deposits.

DISCUSSION AND CONCLUSION: The non-invasive nature of this technique suggests that RCM may be a suitable tool for treatment monitoring, providing additional information not only on the evolution of the disorder but also on the possible occurrence of therapeutical side or adverse effects.