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44 Influence of visible light on cutaneous hyperchromias: Clinical efficacy of broad-spectrum sunscreens.

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ABSTRACT

INTRODUCTION:Cutaneous hyperchromias are disorders of skin pigmentation involving increased melanin production and its irregular accumulation in skin cells. The use of sunscreens is fundamental for the control of hyperchromias by reducing the stimulation of pigmentation, as melanin synthesis is mainly stimulated by solar radiation. Many studies have demonstrated that visible light can induce significant skin damage. Considering the effects of visible light, effective photoprotection should not be limited only to UV protection but should also involve visible and infrared protection. OBJECTIVE:The aim of this study was to evaluate the efficacy of UV-VIS sunscreens in protecting skin against damages caused by solar radiation and the influence of visible light on the appearance of cutaneous hyperchromias. METHODS:Forty volunteers aged 18 to 39 years with skin hyperpigmentation participated in the study. To evaluate the efficacy of the formulations developed, the percentage of hyperpigmented area was evaluated using high-resolution images-Visioface® Quick (Courage-Khazaka, Germany) and the analysis of epidermal pigmentation was performed by RCM-Vivascope® 1500 (Lucid, USA). Also, the melanin index was determined using the Mexameter® M X16 colorimeter (Courage-Khazaka, Germany). RESULTS:The developed formulations were effective in the reduction in melanin index, epidermal pigmentation, and percentage of hyperpigmented area. CONCLUSION:Finally, this study discusses how the combination of UV filters and pigments can protect the skin from solar radiation and reduces skin hyperpigmentations.
KEYWORDS:UV-VIS; hyperpigmentation; reflectance confocal microscopy; skin; visible light
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