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Efficacy Testing of a Product in Reducing Facial Hyperpigmentation and Photoaging after a 12-Week Use

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Abstract : Hyperpigmentation is the third most common pigmentary disorder where dermatologic treatment is sought. It affects all ages resulting in skin darkening because of melanin accumulation. An uneven skin tone because of either exposure to the sun (solar lentigos/age spots/sun spots or skin disruption following acne, or rashes (post-inflammatory hyperpigmentation -PIH) or hormonal changes (melasma) can lead to significant psychosocial impairment. Dyschromia is a result of various alterations in biochemical processes regulating melanogenesis. Treatments include the daily use of sunscreen with lightening, brightening, and exfoliating products. Depigmentation is achieved by various depigmenting agents: common examples are hydroquinone, arbutin, azelaic acid, aloesin, mulberry, licorice extracts, kojic acid, niacinamide, ellagic acid, arbutin, green tea, turmeric, soy, ascorbic acid, and tranexamic acid. These agents affect pigmentation by interfering with mechanisms before, during, and after melanin synthesis. While immediate correction is much sought after, patience and diligence are key. Our objective was to assess the effects of a facial product with pigmentation treatment and UV protection in 35 healthy F (35-65y), meeting the study criteria. Subjects with mild to moderate hyperpigmentation and fine lines with no use of skin-lightening products in the last six months or any dermatological procedures in the last twelve months before the study started were included. Efficacy parameters included expert clinical grading for hyperpigmentation, radiance, skin tone & smoothness, fine lines, and wrinkles bioinstrumentation (Corneometer®, Colorimeter®), digital photography and imaging (Visia-CR®), and self-assessment questionnaires. Safety included grading for erythema, edema, dryness & peeling and self-assessments for itching, stinging, tingling, and burning. Our results showed statistically significant improvement in clinical grading scores, bioinstrumentation, and digital photos for hyperpigmentation-brown spots, fine lines/wrinkles, skin tone, radiance, pores, skin smoothness, and overall appearance compared to baseline. The product was also well-tolerated and liked by subjects. Conclusion: Facial hyperpigmentation is of great concern, and treatment strategies are increasingly sought. Clinical trials with both subjective and objective assessments, imaging analyses, and self-perception are essential to distinguish evidence-based products. The multifunctional cosmetic product tested in this clinical study showed efficacy, tolerability, and subject satisfaction in reducing hyperpigmentation and global photoaging.

Keywords : hyperpigmentation; photoaging, clinical testing, expert visual evaluations, bio-instruments
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