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Clinical Assessment of Anti-Aging Benefits of a Facial Skincare Formulation: a biomarker-centered approach to antioxidative defense

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Skin homeostasis requires a balance between free radical production and natural antioxidant defense. Since this oxidative process is dynamic, rapid restoration mechanisms are necessary to maintain the structural integrity of the skin. This study aimed to clinically evaluate the effects of a skincare formulation (F4565.33367.200.1) on the production of NRF2 (nuclear factor erythroid 2-related factor 2), SOD (superoxide dismutase), CAT (catalase), GPx (glutathione peroxidase) and pCOL1 (type I procollagen) in skin biopsies by immunofluorescence analysis. F4565.33367.200.1 was composed by ferulic acid, tocoferol, ascorbic acid and extracts of Inga edulis, Theobroma cacau and Casearia sylvestris. During 28 days, the formulation was applied to the right forearm of research participants (n=9, 46±5y, ethics committee approval nº5.039.071). Left forearm was considered a control site. Skin biopsies (2mm punch), collected on days T0, T7, T14 and T28 of home use, were immunostained with specific antibodies against the biomarkers. Images were obtained and fluorescence intensity was quantified using ImageJ software. The results demonstrated that, in comparison with control site, F4565.33367.200.1 promotes significant increase of pCOL1 (125.6%-T7; 146.5%-T14; 129.2% T28), SOD (34.1%-T28), CAT (169.3%-T7; 99.9%-T14; 127.1%-T28) and GPX (66.1%-T7). The formulation also promoted an increase of 40.7% in NRF2 in T7, however not significant. Skin biopsies are invaluable tool in dermatology, offering numerous advantages including accurate research in pharmacology. Using this technique, we prove the antioxidant mechanisms of F4565.33367.200.1 increasing the availability of NRF2, SOD, CAT and GPx, and consequently pCOL1. These results make a valuable contribution to proving the benefits of this antiaging formulation, mitigating the daily oxidative damage to which the skin is exposed.

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53691

Clinical Benefit and Safety of Methylene blue Nanoformulation: A Case Study in Acne Patients

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Photodynamic (PDT) treatment is effective for acne treatment by reducing sebum production and inducing antimicrobial activity. However, the conventional photosensitizer, 5-aminolevulinic acid (ALA), is associated with prolonged treatment times due to metabolic activation period and post-treatment light shielding. Moreover, ALA treatment leads to side effects such as pain and pigmentation. While recent efforts have aimed to minimize post-procedural side effects by using lower ALA concentrations, the results have been marginally effective, highlighting the need for new photosensitizers. DERMAdeLIGHT is a biocompatible nano-formulation of photosensitizing methylene blue and using only 1/50 of the conventional methylene blue dosage results in a 99% eradication of acne causing bacteria. Moreover, this photosensitizer shortens the absorption time (10 min), and does not require post-treatment light shielding, with minimal discomfort. This study aimed to evaluate the efficacy and safety of DERMAdeLIGHT in treating acne patients. For 20 acne patients, DERMAdeLIGHT application and exposure to red LED were performed 4 times at 1week intervals after laser treatment. We conducted clinical photography before each treatment and assessed efficacy by measuring porphyrin using a facial analyzer. As a result, 18 out of 20 acne patients showed improvement of at least one stage in their scores after 5 weeks of treatment. Furthermore, facial analysis indicated a 42% reduction in porphyrin, implying effective eradication of acne causing bacteria. Moreover, the treatment process was safe without any side effects. These results suggest that DERMAdeLIGHT, can be used repeatedly without side effects, and provides satisfactory results in a convenient and short timeframe.

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Clinical associations of myositis-specific and myositis-associated autoantibodies in a multi-ethnic Asian cohort with dermatomyositis: A retrospective single-center study

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Introduction: The relevance of autoantibodies to clinical phenotypes and underlying disease in dermatomyositis has been studied.

Methods: We aim to evaluate the clinical associations and characteristics of autoantibodies in an Asian cohort through a retrospective single-center study, including all patients with dermatomyositis seen at the National Skin Centre, Singapore from 1 January 2016 to 31 March 2021. Patients without myositis autoantibody testing performed were excluded.

Results: Twenty-one patients were included. The mean (SD) age was 58.8 (13.9) years. Nine (42.9%) were male. Fifteen (71.4%) were Chinese, five (23.8%) Malay and the remaining one (4.8%) of other races. Twelve (57.1%) had classic dermatomyositis, four (19.0%) amyopathic, three (14.3%) hypomyopathic, one (4.8%) juvenile, and one (4.8%) overlapping with Sjogren's syndrome. Eighteen (85.7%) had at least one autoantibody detected, most commonly anti-TIF1-γ in 15 (71.4%), anti-Ro52 in four (19.0%), and anti-PL-12 in two (9.5%). Six (28.6%) had two, and one (4.8%) had three autoantibodies detected. Seven (33.3%) had confirmed malignancy, the commonest being nasopharyngeal carcinoma in three (14.3%). All except one were anti-TIF1-γ positive. One patient's breast malignancy preceded the dermatomyositis diagnosis by 24 months, while another was diagnosed with lymphoepithelial carcinoma 38 months after. The remaining six malignancies were diagnosed at presentation. Two (9.5%), one anti-MDA-5 and the other anti-EJ positive, had interstitial lung disease.

Conclusion: Our study seems to suggest an association between anti-TIF1-γ and malignancy in this multi-ethnic Asian cohort. Prolonged surveillance for malignancy is required even if initial evaluation is negative. However, prospective data and larger sample sizes are required to further characterize associations.

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Clinical Characteristics of Invasive Squamous Cell Carcinoma in Skin of Color Patients

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Title: Clinical Characteristics of Invasive Squamous Cell Carcinoma in Skin of Color Patients Priya Verbik-, Megan Wackel MS-s, Erin X Wei MD*, Ashley Wysong MD MS*

Background: Literature pertaining to cutaneous squamous cell carcinoma (SCC) primarily focuses on lighter skin types where the incidence is highest, leading to insufficient clinical knowledge of SCC in skin of color individuals. Delays in detection of SCC increases the progression of high-risk features [1]. The objective of this study is to characterize the clinical manifestations of cutaneous squamous cell carcinoma in skin of color patients.

Methods: We conducted a 14-year retrospective cohort study (2008−2022) at a single academic tertiary care center of invasive cutaneous SCC tumors.

Results: We identified 11 cases of invasive SCC in self-reported non-Caucasian patients over the 14-year span. Our cohort consisted of 55% female (6) and 45% male (5) patients. Twenty-seven percent (3) of patients were immunosuppressed. Fifty-four percent (6) of patients were current or prior smokers. Roughly half of the primary tumors were on the head and neck (45%, 5). The most common specific locations were on the hand (27%, 3), eyelid (18%, 2), and scalp (18%, 2). Also of note, there was one case of genital SCC. Majority of the tumors were well differentiated (81%, 9) with 2 moderately differentiated cases. Eighteen percent (2) of cases required either adjuvant chemotherapy or radiation. No patients had local recurrence, nodal or distant metastasis, or disease-specific death.

Conclusion: There are few studies evaluating the clinical characteristics of invasive SCC in skin of color. The results highlight distinct tumor characteristics of cutaneous SCC in skin of color patients and opportunities for additional studies.

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