EADV CONGRESS
AMSTERDAM 25-28 SEPTEMBER 2024
EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY

Abstract N°: 174

"Melasma and quality of life of patients in the South Coast of Jalisco, Mexico."

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Introduction & Objectives:

Introduction: Melasma is a chronic acquired hypermelanosis of the skin that has been shown to be extremely common in women.

Its presence has also been also related to risk factors such as skin phototype, place of residence, use of sun protection, exposure to ultraviolet radiation, among others. use of sunscreen, exposure to ultraviolet radiation, among others.

Objective: To determine the frequency, characteristics and impact on quality of life in patients diagnosed with melasma in the South Coast of Jalisco, Mexico.

Who attend the consultation service in private practice.

Materials & Methods:

The study is analytical, cross-sectional and prospective, during the period January-December 2023. The sample was random, corresponding to 209 women. Sociodemographic data were collected, skin phototypes were identified with the Fitzpatrick skin phototypes were identified with the Fitzpatrick test, and the MelasQol test was applied to identify the impact of melasma on the the impact of melasma on quality of life, all in a validated instrument.

Results:

The prevalence of melasma was 37.2%; 50.1% of the patients in the sample had Fitzpatrick type III phototypes; 61.67% had melasma in the malar region; and 50.1% of the patients in the sample present Fitzpatrick type III phototypes; 61.67% present it in the malar region; and 83.6% have had their quality of life affected, 83.6% have had their quality of life affected.

Conclusion:

Melasma continues to represent a dermatologic pathology with a high prevalence in pregnant women. high prevalence in pregnant women.

Key words: Melasma. Quality of life. MelasQoL. Fitzpatrick scale.

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Abstract N°: 200

Combination of Autologous Follicular cell suspension and mini punch grafting versus each technique alone in The Treatment of Stable Vitiligo: A prospective comparative study.

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Introduction & Objectives:

Follicular cell suspension (FCS) transplantation is a novel surgical treatment for resistant stable vitiligo. Mini punch grafting is an effective treatment for stable vitiligo. Combination of both FCS and mini punch grafting is a better treatment for resistant stable vitiligo.

Objectives: To evaluate efficacy of follicular cell suspension ,mini punch grafting and combination of both techniques in treatment of stable vitiligo.

Materials & Methods:

A prospective comparative study was conducted on 48 patients with stable vitiligo. They were divided into three equal groups: group A (treated with follicular cell suspension), group B (treated with mini punch grafting) and group c (treated with combination of both techniques). All patients were followed-up for 6 months for assessment of their therapeutic response regarding clinical outcomes.

Results:

By comparing between the three studied groups, the degree of re-pigmentation was insignificantly different after 1 and 3 months of treatment. On the other hand, the progress of re-pigmentation was significantly different after 6 months of treatment between the three studied groups (P value= 0.027) being significantly better in group C as compared to groups A and B (p= 0.037, 0.017 respectively) while was comparable between groups A and B.

Conclusion:

Combination of both follicular cell suspension and mini punch grafting is a better and effective technique for treatment of stable vitiligo.

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Abstract N°: 351

The frequency of different causes of facial melanosis in a series of 2020 cases

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Introduction & Objectives: Facial melanosis is an umbrella term that refers to a wide range of disorders resulting in hyperpigmentation, that affect primarily the face and neck. Facial melanosis has a great psychological and cosmetic impact on the life of every patient. There are many etiological factors involved in its etiopathogenesis commonly melasma. Objective: To gather all patients with facial melanosis and try to categorize them into different diseases or groups of diseases.

Materials & Methods: This is a cross-sectional descriptive study where all patients with facial melanosis were gathered together during the period from 2014-2023 years. All patients with Fitzpatrick skin type 111 and 1V. Full demographic information was taken. A clinical assessment was performed and skin biopsies were done for histopathological evaluation

Results:

A total of 2020 cases with facial melanosis was analyzed and the following frequencies were recorded: melasma and melasma-like butterfly lichen diffuse planus actinicus in 1220 (61%) cases, frictional melanosis in 270 (13.5%), post-inflammatory melanosis in 210 (10.5%), butterfly lichen planus actinicus in 180 (9%), black hair dye facial melanosis in 100 (5%), nevus of Ota in 20 (1%), Phytophotodermatitis in 10 (0.5%) gazelle eye like facial melanosis in 10 (0.5%) patients

Conclusion:

Facial melanosis is a major health problem with great psychological impact where melasma, frictional melanosis, and post-inflammatory melanosis constitute the commonest diseases. All share increased melanin stores in the epidermis and dermis. According to the best of our knowledge, this is the first work showing these different facial pigmentary disorders in the same study.

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Abstract N°: 415

Methotrexate Gel Either Alone or Combined with Narrow Band Ultraviolet B or Excimer Light for the Treatment of Vitiligo

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Introduction & Objectives: Methotrexate has been used successfully in the treatment of vitiligo. It leads to decrease in the number of TNF-α secreting T cells in association with increase in the number of interleukin (IL)-10 producing T cells. Topical forms of methotrexate do not have significant hematologic or hepatotoxic side effects unlike the systemic forms of the drug. OBJECTIVE: We sought to evaluate the efficacy and safety of methotrexate gel for the treatment of vitiligo, either alone or combined with narrowband (NB) ultraviolet B (UVB) or with excimer light.

Materials & Methods: Forty-eight patients with vitiligo were randomized into three treatment groups. Group I was treated with methotrexate gel twice daily. Group II was treated with methotrexate gel twice daily plus NB-UVB twice weekly. Group III was treated with methotrexate gel twice daily combined with excimer light twice weekly. Treatment was continued for three months followed by a one-month follow-up period.

Results ; there was a statistically significant difference between groups regarding the therapeutic response. The highest response was recorded in the group treated with methotrexate gel and NB- UVB. More patients in Group II showed good or excellent response than in the other groups.

Conclusion: Methotrexate gel could increase the therapeutic effect of NB- UVB and excimer laser and shorten the treatment period of vitiligo. However, it was not effective enough to induce repigmentation when used alone.

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Abstract N°: 725

A clinicopathological and immunohistochemical study of aquired truncal hypopigmented lesions in adults.

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Introduction & Objectives:

Truncal hypopigmentation is a common skin disorder that may be considered as a cosmetic or medical problem. Evaluation of such lesions is usually difficult and needs careful examination. Further assessment using Wood's light, scrapping test or advanced skin biopsy is mostly required. In this study, we fully evaluated these hypopigmented lesions to identify the proper diagnosis and clarify the underlying disease.

Materials & Methods:

This study included all patients attended the outpatient clinics during the period from 1st march 2023 to 28th February 2024. The study included all patients above 18 years old. All patients were submitted to clinical examination, Wood's light examination, Skin scrapping with KOH examination, and lastly a skin biopsy from hypopigmented lesions and normal skin as a control. All sections were firstly evaluated with routine H&E sections. Further evaluation with special staining (Periodic acid-Schiff (PAS) and Grocott methenamine silver (GMS) stains was performed for cases suspicious of fungal infection. Immunostaining with CD3, CD4, CD8 and CD20 was performed for cases suspicious of Hypopigmented mycosis fungoides. Immunostaining with Melan-A was performed for non-inflammatory cases suspicious for vitiligo or other hypopigmented disorder.

Results:

The study included 135 patients with an average age ranged from 18 to 45 years (28 ± 4.15 years). Out of 135, 81 patients (60%) were males while 54 patients (40%) were females. Eight diseases were involved in this study; the most common (28.9%) was progressive macular hypomelanosis (39 patients) and the least one (1.5%) was pityriasis alba (2 patients). Other spectrum included tinea versicolor (24.4%), hypopigmented mycosis fungoides (15.5%), post inflammatory hypopigmentation (12.6%), vitiligo (10.4%), Leprosy (3.7%) and idiopathic guttate hypomelanosis (3%). Diseases that were more common in females included vitiligo, post inflammatory hypopigmentation and idiopathic guttate hypomelanosis. The majority of diseases were diagnosed from 20 to 30 years.

Conclusion:

To the best of our knowladge, this is the first study describe the criteria of truncal hypopigmented lesions in adults. Our results proposed that the most common dermatoses that may represent up to 70% of cases include progresive macular hypomelanosis, tinea versicolor and hypopigmented mycosis fungoides. We hope this report rises the practical knowldge of dermatologists for such skin disorder.

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Abstract N°: 729

Tattoo complications in Finland: A series of 70 patients (2016-2024)

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Introduction & Objectives:

The prevalence of tattooing is about 18% worldwide. We report here a case series of 70 patients with cutaneous complications on tattoos from 2016 to 2024 from Finland.

Materials & Methods:

We collected prospectively the data from all the outpatients referred for tattoo reactions between 2016 and March 2024. Patients were either i) referred at the Department of Dermatology at Helsinki University Hospital (n=), ii) attended the author's private practice (n=12), iii) email consultations from other Finnish dermatologists (n=7) or directly from tattooists (n= 4) or patients (n=3). We analyzed the demographics, clinical diagnosis and microscopic findings.

Results:

70 patients (50 women, 71%, median age 34 years) were included. Permanent make-up tattoos were involved in 6% (4/70) of the cases and nipple areola tattoo in 2% (1/70). Data are summarized in *table 1*. Briefly, non-infectious granulomatous reactions within tattoos were the most common diagnosis (31%), including sarcoidosis in 6 cases (27% of the cases of granulomas, 9% of all cases). Granulomas occurred within black tattoos in 95% of the cases (21/22). Only 24% of the patients presented with an allergic tattoo reaction, mainly against red shades (82%). Ultrapotent corticosteroid ointments, topical tacrolimus were applied on tattoo allergies and granulomas. In three cases of red or violet tattoo allergies, local infiltrations of corticosteroids provided relief. In two cases of environmental mycobacterial infection, eruption subsided before completion of the oral doxycycline (200 mg/day 3 months). Oral hydroxychloroquine and cyclines were the treatment of choice for non-infectious cutaneous granulomas, in case of local treatments failure. Contact eczema and "overworked tattoos" represented each 7% (5/70) of the complications. We had no case of melanoma or NMSC, but one B cell lymphoma.

Conclusion:

The present series complete our previous researches with now a total of 101 patients in Finland. We observe an increase in cases of granulomas within black tattoos, while cases of allergy to red shades remains stable. This could be a fortuitous finding resulting from a bias of recruitment. Finns may display a preference towards exclusive black tattoos, but there is no epidemiologic study to date supporting this hypothesis. Systemic and cutaneous sarcoidosis remain globally stable, representing one fourth of the cases of granulomatous tattoo reactions. In most of the cases of granulomatous reaction, laboratory findings and chest X-rays are unremarkable. The difficulties to classify a patient with isolated sarcoidal granulomas in tattoos without any other symptoms are well-known. Cutaneous malignancies remain exceptional and still a fortuitous event. Contact eczema to aftercare product are easy to diagnose as the rash is not *restricted* to the tattoo and should not be hastly diagnosed as ink allergy. Lichen planus should be ruled out in cases of lichenoid reaction. Lastly, "overworked tattoo" due to repetitive needle trauma is a rare complication. Our results are in line with the Danish series (9% of the cases). Distinguishing this adverse event from a primary infection is difficult. Concomitant signs of infection prompt to

initiate inevitably oral or local antibiotics. This prompted to considered almost all the cases of overworked as also infected.

These updated data from our series confirm a progressive shift towards granulomatous reactions on black tattoos.

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Abstract N°: 777

SPRY1 deficiency in keratinocytes induces follicular melanocyte stem cells migration to epidermis through p53/SCF/C-KIT signalingSPRY1 deficiency in keratinocytes induces follicular melanocyte stem cells migration to epidermis through p53/SCF/C-KIT signaling

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Introduction & Objectives:

The function and survival of melanocytes is regulated by an elaborate network of paracrine factors synthesized mainly by epidermal keratinocytes. Keratinocytes and melanocytes respond to UV exposure by eliciting a tanning response. However, how keratinocytes and melanocytes interact in the absence of UV exposure is unknown. The purpose of this study was to investigate the effects of SPRY1 in epidermal keratinocytes on melanocytes using a combination of loss- and gain-of-function genetic mouse models.

Materials & Methods:

To characterize the role of SPRY1 in skin physiology, we developed Spry1Δskin (Spry1-KO, "Spry1ΔEpi") mice by crossing mice in which Spry1 was floxed with mice expressing K14–Cre–ERT2. K14-SPRY1 transgenic ("STG") mice induced to express Spry1 in their skin from human cytokeratin (K) 14 promoters.

Results:

Here, we demonstrate that after SPRY1 knockout in epidermal keratinocytes, melanocyte stem cells (McSCs) in the hair follicle exit the niche without depleting the pool of these cells. We also found that McSCs migrate to the epidermis in a p53/SCF/C-KIT-dependent manner induced by a tanning-like response resulting from SPRY1 loss in epidermal keratinocytes. Once there, these cells differentiate into functional melanocytes.

Conclusion:

SPRY1 deficiency in keratinocytes induces follicular melanocyte stem cells migration to epidermis through p53/SCF/C-KIT signaling

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Abstract N°: 810

More than meets the eye: Effective reduction of "hidden spots" with Isobutylamido-Thiazolyl-Resorcinol, a potent tyrosinase inhibitor, for early prevention of hyperpigmentation

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Introduction & Objectives:

Facial hyperpigmentation is a major concern for those affected. While the main treatment goal is the reduction of visible discolorations, there is more to hyperpigmentation than meets the eye: accumulations of melanin can also be hidden in lower layers of the epidermis and might not always be visible; so called "hidden spots". Although initially imperceptible, they pose a risk of becoming visible, especially under the influence of UV exposure. Isobutylamido-Thiazolyl-Resorcinol (ITR), the first tyrosinase inhibitor developed on human tyrosinase, has proven strong efficacy for the reduction of visible hyperpigmentation both *in vitro* and *in vivo*. The aim of this study was to assess if an ITR-containing skin care regimen can also effectively reduce "hidden spots" in the skin, meaning accumulations of melanin below the skin which are not clearly visible with the bare eye.

Materials & Methods:

A monocentric, observational pilot study was conducted from October to December 2023. Hidden spots were visualized using a UV-flash and UVA photography with a specialized Canon EOS-5D Mark III camera modified to detect exclusively in the UVA spectrum. UV radiation penetrates the epidermis and is absorbed by melanin, allowing for the visualization of dark spots within the skin layers which might be imperceptible through standard visual assessment. Images were also obtained using the Canfield VISIA CR Facial Imaging System. Participants were pre-screened for hidden spots by comparing UVA images with clinical RGB images from the VISIA CR System.

Participants applied an ITR-containing skincare regimen twice daily for 8 weeks, including a serum and SPF 30 daytime product in the morning, and serum and night care in the evening. Clinical images were captured at baseline, week 4, and week 8 using UVA photography and the Canfield VISIA CR System. After manual selection of hidden spots in the images, VISIA CR RGB images were quantified regarding the image contrast of those spots. The color difference between the spot area and the adjacent skin area was extracted per spot using individual typology angle (ITA). Additionally, a dermatologist will conduct clinical grading using the Modified Melasma Area and Severity Score of visible and invisible hyperpigmentation. This abstract reports first results, with more results available at the time of the congress.

Results:

24 participants with hidden spots completed the study. Per person, a minimum of 3 hidden spots were analysed in the images regarding their change in ΔITA over time. A decrease of median ΔITA was measured in 22 of the 24 participants ($p<0.001$; Figure 1). Further results will be presented at the time of the congress.

Conclusion:

The results of this pilot study suggest that an ITR-containing skincare regimen can effectively reduce the severity of "hidden spots"—melanin accumulations in the skin not yet visible on the surface. Targeting melanin production at its source with ITR shows promise in addressing not only visible hyperpigmentation but also subclinical

accumulations with the potential to emerge over time. Continued analysis, including clinical grading of pigmentation severity, will provide a more comprehensive understanding of this regimen's effectiveness. While controlled studies are needed for validation, these findings highlight ITR's potential for holistic management of hyperpigmentation concerns, including those not immediately apparent.

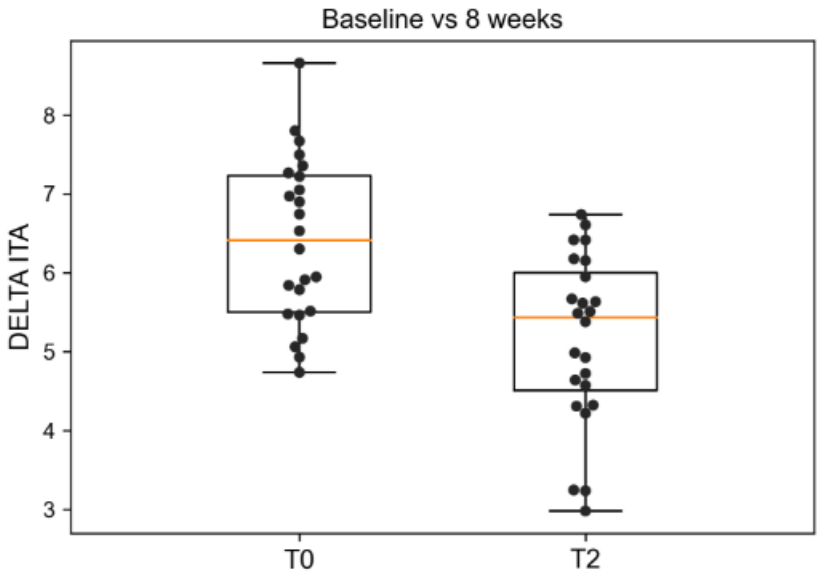

Figure 1: Delta ITA of hidden spots at baseline and at 8 weeks.

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Abstract N°: 844

Vitiligo associated with COVID-19 infection and COVID-19 vaccination: A self-reported survey.

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Introduction & Objectives:

Vitiligo affects 0.5-2% of the global population and, is characterised by immune-mediated deactivation of melanocyte cells resulting in depigmentation. Since the onset of the COVID-19 pandemic, there have been multiple case reports of a potential association between COVID-19 vaccination and infection. Such reports have pointed to common mechanisms such the role of CD8+ T-cell-mediated responses.

The aim of this study was to identify the rate and temporal relationship of vitiligo exacerbation in patients following COVID-19 vaccination and infection.

Materials & Methods:

We performed an online survey of patients attending two specialist vitiligo clinics in Sydney, Australia between December, 2023 and March, 2024. We collected data relating to patient demographics, diagnosis of vitiligo, incidence of COVID-19 infection and vaccination (including type) and changes in vitiligo clinical manifestations including temporal relationships to infection and vaccination. We performed descriptive statistics.

Results:

172 respondents accessed the survey with 146 complete responses (85%) and 114 included in the final analysis. At least 300 vaccine administration were performed including 54/300 (18%) AstraZeneca, 17/300 (6%) Moderna, 205/300 (68%) Pfizer, 5/300 (2%) other, and 19/300 (6%) uncertain vaccinations. Of the 113 patients who had received prior COVID-19 vaccination, 19 (17%) reported new onset vitiligo, 4 (4%) reported vitiligo improvement, 32 (28%) reported vitiligo worsening and 51 (66%) reported no change, uncertain outcomes or did not state the outcome. Changes in vitiligo status were reported within 1 week in 3/113 (3%), 1 month in 7/113 (6%), 3 months in 10/113 (9%), 6 months in 7/113 (6%), 1-2 years in 11/113 (10%) and uncertain time in 20/113 (18%).

95/114 (83%) respondents reported having prior infection with COVID-19. Of the 95 patients who had received prior COVID-19 vaccination, 6 (6%) reported new onset vitiligo, 1 (1%) reported vitiligo improvement, 18 (19%) reported vitiligo worsening and 70 (74%) reported no change or uncertain outcomes. Changes in vitiligo status were reported within 1 week in 0/95 (0%), 1 month in 4/95 (4%), 3 months in 4/95 (4%), 6 months in 4/95 (4%), 1-2 years in 8/95 (8%) and uncertain time in 5/95 (5%).

Conclusion:

We found a range of self-reported outcomes in vitiligo status following COVID-19 vaccination and infection as well as a range of timeframes in which these changes occurred. Future studies can help determine if these relationships are coincidental or driven by an underlying pathological mechanism.

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Abstract N°: 845

Azelaic acid for acne-induced post-inflammatory erythema and hyperpigmentation: a 12-week randomized, double-blind, placebo-controlled clinical trial

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Introduction & Objectives:

Acne is a common inflammatory cutaneous condition characterized by persistent inflammation that stimulates the overproduction and irregular deposition of melanin, leading to post-acne pigmentary changes such as post-inflammatory erythema (PIE) and post-inflammatory hyperpigmentation (PIH). Azelaic acid (AZA), a natural saturated dicarboxylic acid, exhibits a range of pharmacological properties, including antibacterial, anti-keratinizing, pigment-inhibiting, and anti-inflammatory antioxidant effects. Based on its pharmacological profile, we suspected that AZA may offer therapeutic benefits for PIE and PIH. However, there is a lack of clinical trials in this field.

This study aimed to investigate the efficacy and safety of AZA in treating acne-induced PIE and PIH, along with its impact on skin barrier function, acne severity, and quality of life.

Materials & Methods:

This randomized, double-blind, placebo-controlled study enrolled patients with mild-to-moderate acne, who visited West China Hospital from October to December, 2022. Patients were assigned to either the AzA group, receiving 15% AzA gel, or the placebo group, receiving a gel base without AzA, both applied to the face twice daily for 12 weeks. Non-invasive skin tests were conducted at week 0, 4, 8, and 12. The primary outcome was the Post-Acne Hyperpigmentation Index (PAHPI). Secondary outcomes included melanin and hemoglobin levels, Individual Typology Angle (ITA°) values, and measurements of stratum corneum hydration, Transepidermal Water Loss (TEWL), and sebum. The Investigator Global Assessment (IGA) and the Dermatology Life Quality Index (DLQI) were also assessed.

Results:

This study enrolled 72 patients, with 60 completing the trial. Table 1 summarizes the baseline characteristics of patients. Primary findings included:

1. For PIE lesions, a statistically significant improvement in PAHPI scores was observed in the AzA group compared to the placebo group at weeks 8 and 12 ($P<0.05$) (Fig. 1A). Additionally, at week 12, statistically significant differences in hemoglobin, melanin, and ITA° values were found in PIE lesions between the two groups ($P<0.05$).
2. For PIH lesions, a statistically significant improvement in PAHPI scores was observed in the AzA group compared to the placebo group at weeks 8 and 12 ($P<0.05$) (Fig. 1B). Additionally, at week 12, statistically significant differences in melanin, and ITA° values were found in PIH lesions between the two groups ($P<0.05$).
3. For skin barrier function, no significant changes in stratum corneum hydration, TEWL, and sebum were found between the AzA and placebo groups.
4. For acne severity and quality of life, notable differences in IGA and DLQI scores were found between the AzA

and placebo groups at week 12 (P<0.001) (Fig. 1C).

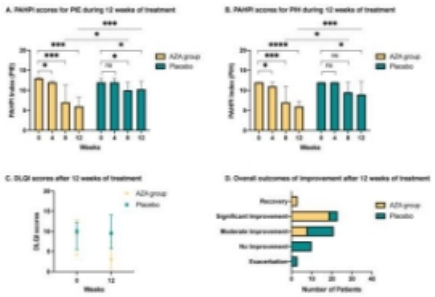
The overall effective rate was 73.33% in the AzA group and 13.33% in the placebo group (P<0.05) (Fig. 1D). No adverse reactions were observed in the placebo group; 66.67% of patients in the AzA group experienced mild adverse reactions such as erythema, stinging, dryness, itching, and flaking within the first four weeks. Symptoms disappeared within 7 days after temporarily stopping the medication for 3-5 days, and no further symptoms were observed after gradually building tolerance.

Table 1. Baseline characteristics of patients

	AzA Group (N=30)	Placebo Group (N=30)
Female (n, %)	12 (40%)	13 (43%)
Type III Skin (n, %)	29 (97%)	29 (97%)
Age (years)*	23.13±3.87	22.23±3.31
Duration of Acne (years)	6.80±3.87	6.07±3.82
Duration of PIE/PIH (days)	11.77±2.84	10.80±3.04
PAHPI Index (PIE) (M [Q1, Q3])	13 (12-13.25)	12 (10-13)
PAHPI Index (PIH) (M [Q1, Q3])	12 (9.75-12)	12 (9.75-12)
Hemoglobin (PIE)	464.57±71.52	434.95±68.79
Melanin (PIE)	87.65±33.08	82.72±32.11
ITA° Value (PIE)	28.29±8.42	30.95±11.13
Hemoglobin (PIH)	403.20±67.73	371.14±94.90
Melanin (PIH)	144.89±33.37	136.39±34.57
ITA° Value (PIH)	24.67±10.07	30.05±12.27
Stratum Corneum Hydration	54.10±13.02	59.82±9.59
TEWL	18.20±4.61	18.18±5.21
Sebum	156.29±60.73	132.64±53.69
IGA Score (Mild) (n, %)	25 (83%)	26 (87%)
DLQI Score	9.50±6.30	9.70±5.90

*Most data in this table were displayed as X±SD. No significant differences were found in medical histories or initial assessment scores between the two groups.

Figure 1. (A) The PAHPI for PIE lesions in the AZA and placebo groups at week 0, 4, 8, 12. (B) The PAHPI for PIH lesions in the AZA and placebo groups at week 0, 4, 8, 12. (C) The DLQI of patients in the AZA and placebo groups at week 0, 12. (A) The overall outcomes of improvement in the AZA and placebo groups at week 12.



Conclusion:

Topical 15% AZA gel effectively improved acne-induced PIE and PIH, with mild and manageable adverse events. AZA also improved the severity of acne and the quality of life in patients with PIE and PIH.

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Abstract N°: 871

MitoQ for vitiligo by mitigating PARP1 translocation aberrations: Network Pharmacology and Experimental Validation

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Introduction & Objectives: This study aims to investigate the potential targets of the mitochondria-targeted antioxidant MitoQ in vitiligo, based on the pathogenesis of oxidative stress, with the expectation of providing a therapeutic target for vitiligo.

Materials & Methods: Molecular docking and network pharmacology were used to screen the target molecules of MitoQ in vitiligo. Immunofluorescence was then conducted to verify the expression of these target molecules in the lesion tissues of vitiligo patients. Additionally, transcriptomic analysis and Western blotting were performed to confirm the expression of related signaling pathway molecules at the cellular level.

Results: The molecular docking assay identified four key targets of MitoQ in vitiligo treatment: PARP1, PTGS2, ESR1, and CXCR3. Immunofluorescence results demonstrated impaired PARP1 nuclear translocation in the lesion tissues of vitiligo patients compared to healthy controls. Transcriptomic analysis revealed that MitoQ reduced the expression of DNA damage genes. Protein-protein interaction network indicated a potential association between PARP1 and DNA damage-related genes such as CDKN1A/p21 or SIRT7. Cell experiments showed that MitoQ reduced CDKN1A/p21 protein and delayed melanocyte senescence through PARP1. Gene enrichment analysis suggested that MitoQ could interfere with abnormal PARP1 activation and activate PI3K-AKT and MAPK signaling pathways.

Conclusion: This study demonstrates that MitoQ can mitigate the nuclear translocation abnormalities of PARP1 and delay cellular senescence. This finding suggests that PARP1 could serve as a therapeutic target for vitiligo.

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Abstract N°: 978

Black seed Oil: another dermatological side effect ?

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[1]University hospital of constantine , dermatology and venereology , constantine , Algeria

Black seed Oil: another dermatological side effect ?

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Service de dermatologie, CHU Constantine, Algérie

Introduction :

Lichen planus pigmentosus (LPP) is considered a rare variant of lichen planus (LP). It is characterized by acquired dark brown to gray macular pigmentation located on sunexposed areas. This occurrence in exposed areas has led to considerate the sunlight as the principal etiological agent. Other photosensitizers like mustard oil and alma oil have been incriminated in the disease pathogenesis. We report a new case of LPP after Black Seed oil application.

Observation:

A 29-year-old patient with no pathological history consults for diffuse hyperpigmentation in the face, upper trunk and arms.

The history of the disease dates back to the age of 17 with the appearance of hyper-pigmented macules in the perioral area. There was no history of medication use except Black Seed oil, that has been used daily for years by the patient for its anti-aging and hydration properties. The evolution was towards the extension of the hyperpigmentation to her entire face and the upper part of her body. Clinical examination showed, in addition to the hyperpigmented macules, purplish, lichenoid and itchy papules on the hands and forearms.

The histopathology demonstrated a hyperkeratotic corneal layer surmounted an acanthosic epidermis with hypergranulosis with vacuolar degeneration of basal cell layer; the superficial dermis is marked by incontinence of pigment; Congo red coloring is negative. Thus, the diagnosis of LPP has been made based on clinical and histological examination.

Laboratory tests including viral serologies (hepatitis C, hepatitis B) were performed and there were no anomalies.

Discussion:

Lichen planus pigmentosus is a rare variant of lichen planus, reported in various ethnic groups. It occurs predominantly in female in the third or fourth decade of life, characterized by insidious onset of dark-brown macules in sun exposed areas and flexural folds. The differential diagnosis may occur with macular amyloidosis, drug induced pigmentation and perstans erythema dyschromicum which is more a nosological problem than a true differential diagnosis.

Some risk factors are postulated to induce LPP such as hair dye with mustard oil, alma oil, henna, and nickel.

In our patient, LPP occurred in the context of Black Seed oil application. This oil, derived from the seeds of Nigella sativa or black cumin, is widely used in Africa and Asia for its antioxidant and anti-aging effects.

Several skin or systemic side effects are attributed to its use including: cases of Stevens Johnson syndrome, polymorphic eruptions or extensive eczematic reactions. Histologically, these side effects have in common the presence of an interface dermatitis with a lichenoid infiltrate. The proapoptotic and allergenic action of Black Seed oil is believed to be related to the presence of thymoquinone and monoterpene in its composition.

Our case is special because of the appearance of an authentic LPP following the application of black seed oil. Due to the absence of similar cases in the literature, the cause-effect relationship remains to be confirmed.

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Abstract N°: 980

Improvement of melasma by a novel weekly topical metformin loaded peel-off-mask: a split face, placebo-controlled study.

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Introduction & Objectives:

Melasma is a widely common condition that intractably affects the patient's quality of life. Metformin is a cheap, well tolerated, and relatively safe medication that is widely prescribed for the treatment of Diabetes. Topical metformin has shown promising results in treating melasma, as well as several other dermatological conditions such as acne and recalcitrant central centrifugal cicatricial alopecia.

This study was designed to evaluate the efficacy and safety of a once weekly topical metformin 30% loaded peel-off mask in the treatment of melasma.

Materials & Methods: Twenty female patients with melasma were recruited for the application of a metformin mask and placebo mask to either side of the face once weekly for 12 weeks. Hemi-MASI and modified hemi-MASI scores were performed at baseline, at each visit, and for 12 weeks after the end of treatment.

Results: At the end of the active treatment period, the metformin side showed a significantly better improvement in both Hemi-MASI and modified hemi-MASI scores in comparison to placebo. Although scores decreased 3 months after stopping the active treatment, they were still significantly better than the baseline. No adverse effects were reported.

Conclusion: The beneficial effects of topical metformin in the treatment of melasma we observed are in accordance with those of ***Banavase et al., 2020*** who reported significant improvement in melasma after 8 weeks of topical metformin 30% lotion application. The improvement in the metformin group showed no significant difference in MASI when compared to a matching group of participants using the gold standard TCC daily for the same period . Similar results were also demonstrated by ***AboAlSoud et al., 2022*** upon comparing daily topical metformin 30% cream to TCC. The mean MASI in the latter study improved by 55.97% ± 16.77 at the 8th week of treatment with the daily metformin whereas in the current study, the hemi-MASI improved by 68% ±0.23 at the 12th week using the weekly peel off mask.

Moreover, ***Mapar et al., 2019*** compared the efficacy of topical metformin 15% daily cream to placebo and reported that the MASI score was significantly lower at the end of the treatment period compared to baseline. However, unlike our results, there was no significant difference in MASI scores between patients receiving placebo Vs those receiving the metformin cream (p= 0.43). This could be attributed to the lower concentration used (15% metformin) compared to our study.

Although used only once weekly, our patients' cohort showed comparable results to previous studies using similar concentrations of metformin in the form of daily lotion and cream. This might be related to the properties of peel-off facial masks which intensify the effect of the active ingredient by its occlusive effects.

Limitations: Limited number of patients. The metformin effect was not studied on molecular and cellular levels.

No head-to-head data Vs daily metformin formulations.

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Abstract N°: 1063

A Comparative study of stable vitiligo treatment in the face and neck region using suction blister transplantation or noncultured autologous suspension of epidermal cells

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Introduction & Objectives:

To evaluate the differences and aesthetic meaning of stable vitiligo treatment in the face and neck region using suction blister transplantation or noncultured autologous suspension of epidermal cells.

Materials & Methods:

64 stable vitiligo patients (25 male patients and 39 female patients with age ranges from 10 to 46 years old, average age was 25 years old) in the face and neck region were randomly divided into two groups (32 patients in each group): one group patients received suction blister transplantation, while, other group patients received noncultured autologous suspension of epidermal cells. Calculate patients' treatment effectiveness, pigmentation and piecing deformity in postoperative 3 and 6 months.

Results:

In the postoperative 3 and 6 months, the effectiveness of suction blister transplantation group was respectively 22 patients (68.75%) and 29 patients (84.37%), while the effectiveness of noncultured autologous suspension of epidermal cells group was 19 patients (59.37%) and 28 patients (87.50%) respectively, in which no significant differences were found between two groups (P□0.05). No obvious pigmentation and piecing deformity were found in noncultured autologous suspension of epidermal cells group, which were much better than the suction blister transplantation group in postoperative 3 and 6 months.

Conclusion:

Both suction blister transplantation and noncultured autologous suspension of epidermal cells could bring good treatment effectiveness for patients of stable vitiligo in the face and neck region. Compared with suction blister transplantation, noncultured autologous suspension of epidermal cells could offer better aesthetic appearance.

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Abstract N°: 1269

Comparative study of the effectiveness of different whitening agents for prevention of UVB-induced hyperpigmentation

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Introduction & Objectives:

Hyperpigmentation can be triggered by ultraviolet radiation (UV). Numerous whitening agents exist for the treatment of skin hyperpigmentation. However, there are limited data for the use of these agents for preventing hyperpigmentation. In this study, we aim to evaluate the effectiveness of different whitening agents for the prevention of UVB-induced hyperpigmentation.

Materials & Methods:

A randomized, single-blinded pilot study was conducted in 30 healthy participants. Both inner arms were splitted into upper and lower half, and randomly assigned to receive 4 products (0.05% tretinoin; kojic acid/retinyl palmitate-containing product, KA/RP; 2% hydroquinone and 20% azelaic acid). One hyperpigmented spot was irradiated by UVB in each site after 3-week application. Outcome evaluations included mean lightness index, hyperpigmentation scores rated by a blinded, non-treating physician and participants, and adverse events.

Results:

Four experimental sites showed no significant difference in skin lightening after 3-week application. The mean lightness index was statistically significantly higher in tretinoin, KA/RP and hydroquinone-treated sites compared to azelaic acid in the 7 and 14 days post-UVB irradiation. However, there was no significant difference at the end of the study. A clinical evaluation by a blinded non-treating physician and participants was more favorable on the KA/RP and hydroquinone compared with azelaic acid but there was no statistically significant difference between KA/RP and hydroquinone. Regarding the adverse events, KA/RP was significantly lower compared to azelaic acid and tretinoin.

Conclusion:

Three-week application of 0.05% tretinoin, KA/RP-containing product, and 2% hydroquinone is more effective than 20% azelaic acid in the prevention of UVB-induced hyperpigmentation.

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Abstract N°: 1464

Acquired macular hypomelanosis of lower lip: A new entity

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Introduction & Objectives: Depigmented lesions over the lip may be seen due to various etiologies such as contact leukoderma, post-herpetic depigmentation, a possible sequela of other inflammatory cheilitis or mucosal vitiligo. Herein, we tried** to assess the clinicodemographic parameters of a novel vitiliginous condition affecting the lower lip in the eastern Indian population.

Materials & Methods: In this single-center prospective study done at a tertiary care institute in India from January 2023 to December 2023, 34 patients having isolated depigmented macule affecting the lip(s) were recruited. Complete clinicodemographic data of patients were recorded and analyzed. Skin punch biopsies were performed followed by histopathological evaluation.

Results: Among 34 patients, the mean (SD) age of patients was 32.4 (12.6) years with female preponderance (male: female ratio of 14:20). All patients were residents of eastern Indian states. The mean (SD) duration of the disease was 3.2 (2.1) years, ranging from 6 months to 8 years. The lesions were non-progressive with a mean (SD) duration of stability of 2.3 (1.9) years. None of the patients had a family history of vitiligo or other autoimmune diseases except hypothyroidism in 3/34 (9%) patients. No patient had a predisposing factor such as the history of herpes labialis, or previous cheilitis. None of the patients had any other body site involvement. The lesions were round to oval, depigmented macules of size ranging from 3mm to 1.2cm (mean± SD; 6.2 ±2.3mm). The lesions were located just medial to the angle of the lower lip (n=32, 94.1%), and the angle of upper lip and angle of both lips in 1 patient each. The lesions were bilateral in 24 (70.5%) cases. Punch excisional biopsy was done in 21 (61.8%) patients, histopathology revealed complete loss of melanocytes in the basal layer (21, 100%) and negative HMB-45 stain, and no dermal sclerosis was noted. Patients were followed up for 6±4 months (mean ± SD) with no recurrence of lesion post punch excision.

Conclusion: We describe the clinico-epidemiological and histological features of a novel vitiliginous condition ‘acquired macular hypomelanosis of lip’. The condition is characterised by acquired depigmented macules measuring <1cm, affects the lower lip just medial to the angle of the lip and is bilateral in 2/3rd of the patients. These lesions occur in isolation and are not associated with any other stigmata of vitiligo. Surgical excision is curative and recurrence is generally not seen. Future studies involving dermoscopy, immunohistochemistry and ultrastructural studies may be needed to conclude this unusual variant of depigmenting dermatosis.

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Abstract N°: 1482

Comparison of the efficacy of topical hydroquinone 2% versus intradermal tranexamic acid microinjections in the treatment of melasma: a split-face controlled trial.

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Introduction & Objectives:

Melasma is a benign, acquired, and chronic facial hypermelanosis due to hyperactivity of epidermal melanocytes, with a great impact on patient's quality of life. Topical hydroquinone (HQ) is a conventional choice for most hyperpigmentary disorders including melasma. Tranexamic acid (TA) is a relatively new whitening agent that interferes with keratinocyte- melanocyte interactions. The aim of the present study was to compare the efficacy and safety of intradermal injections of TA with HQ 2% in the treatment of melasma.

Materials & Methods:

In this split-face controlled trial, thirty-seven patients were randomized to receive three monthly sessions of 20 mg/ml intradermal injections of TA either on the right or left side of the face and topical HQ 2% once at night for three months on the other side of the face. A colorimeter was utilized to measure melanin and erythema quantitatively for each side of the face separately at the baseline, and at the end of each month. Visual analogue scale (VAS) was also used to compare the efficacy of the two treatments.

Results:

A statistically significant decrease in melasma value was seen for TA and HQ separately (*p*-value < .001); but not for erythema (*p*-value = .085, .5, respectively). Monthly TA injection was significantly better than daily HQ in reducing the melanin value at the first four weeks (*p*-value = 0 .013); but 20-week overall change was not significantly different (*p*-value = 0 .17). VAS was significantly better for TA (*p*-value < .001).

Conclusion:

This study showed that monthly intradermal injections of TA can be a more effective choice for the treatment of melasma compared to topical HQ. Further studies are needed to support this conclusion.

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Abstract N°: 1531

Temperature-induced human skin pigmentation is mediated by oxidative stress

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Introduction & Objectives:

Global climate change exerts detrimental effects on human health. Specifically, exposure to the combined effect of ambient temperature and relative humidity, which is usually combined in the form of an index referred to as the heat index (HI), is associated with increased mortality and morbidity from cardiovascular, pulmonary and mental disorders. In a recent epidemiological study, we obtained evidence that skin health is similarly compromised. Specifically, in a cohort of 1,510 Indian women we observed positive and significant associations of HI with irregular pigmentation on the face. These associations were robust against the confounding effect of solar UV radiation and air pollution, indicating that long-term exposure to high HI contributes to facial skin aging. It is in the nature of epidemiological studies that they mainly show associations rather than mechanistic insights. In the present study we therefore developed an ex vivo human skin model to further study the cause-effect relationship between HI and skin aging from a mechanistic point of view.

Materials & Methods:

The impact of HI was assessed in ex vivo human skin explants (N=16), which were cultured at high humidity with rising ambient temperatures for up to 10 days. Cell damage was assessed by detection of lactate dehydrogenase (LDH) released into the culture medium. The change of skin colour was determined by colorimetric measurements of DITA°(Individual Typology Angle). Gene expression was studied by RT-qPCR. Melanin was measured by Fontana-Masson staining. Lipid peroxidation was assessed by staining for 4-hydroxynonenal and oxidative DNA by staining for 8-Hydroxi-2`-deoxyguanosine. A cosmeceutical serum containing three different antioxidants (15% vitamin C, 1% vitamin E, 0.5 Ferulic Acid) was topically applied in a dose of 2mg/cm2.

Results:

Tissues were not damaged under these culture conditions. With gradually increasing temperature a dose- and time-dependent skin darkening was observed. This increased darkening was due to increased melanogenesis because in histological sections an increase in melanin staining was observed. Also, mRNA expression of markers associated with skin pigmentation such as proopiomelanocortin, microphthalmia-associated transcription factor and tyrosinase significantly increased. Of note, ambient temperature-induced skin pigmentation was accompanied by an increase in (i) lipid peroxidation detected by 4-hydroxynonenal staining and in (ii) oxidative DNA damage identified by 8-Hydroxi-2`-deoxyguanosine staining. Importantly, repetitive topical application of the antioxidant serum significantly inhibited temperature-induced skin pigmentation.

Conclusion:

We have developed an ex vivo human skin model in which under conditions of high relative humidity an increase in ambient temperature causes skin pigmentation via the generation of oxidative stress. These mechanistic studies support previous epidemiological studies which suggest that HI contributes to skin aging by affecting skin pigmentation. Also, our model is suitable to test cosmeceutical products for claims related to global warming.

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Abstract N°: 1734

Assessing the efficacy and safety profiles of 0.025% tretinoin in treating axillary hyperpigmentation with acanthosis nigricans: a randomized double-blinded study

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Introduction & Objectives:

Acanthosis nigricans, characterized by hyperpigmentation and skin thickening, is a common dermatological concern affecting body folds, notably the axillary region. Despite extensive research efforts, a universally effective treatment for this condition remains elusive. This study sought to assess the efficacy of 0.025% tretinoin in managing axillary hyperpigmentation associated with acanthosis nigricans.

Materials & Methods:

Using an intra-individual design with a split-side axillary approach, participants were randomly assigned to apply 0.025% tretinoin cream and a control cream on opposing sides of the axilla. The impact of an 8-week tretinoin application was meticulously evaluated using the melanin (M) index measured by narrowband reflectance spectrophotometry at weeks 2, 4, and 8. Overall success rates were determined using investigator-assessed (IGE) and participant-assessed (PGE) global evaluation scales. Adverse effects were also monitored throughout the study.

Results:

Twenty participants were enrolled, and results revealed significant improvement in axillary hyperpigmentation with 0.025% tretinoin treatment compared to the control ($p < 0.001$). The mean reduction in the M index between baseline and week 8 was 28.05 ± 12.20% for tretinoin, whereas the control exhibited only 6.55 ± 12.66% reduction. Positive outcomes were supported by global evaluation scales, and both treatments were well-tolerated without severe adverse reactions.

Conclusion:

In conclusion, our findings demonstrate the efficacy of 0.025% tretinoin in significantly improving axillary hyperpigmentation associated with acanthosis nigricans. Tretinoin emerges as a viable treatment option for this challenging condition, offering potential relief to affected individuals.

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Abstract N°: 2209

Exploring Skin Pigmentation Dynamics in Response to Diesel Exposure: Insights from a Comparative Study

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Introduction & Objectives: Human skin is constantly exposed to external stressors such as solar radiation, ozone, and ambient pollution. Previous epidemiological studies in Caucasians and East Asians showed that exposure to Diesel Exhaust Particles (DEP) is associated with skin hyperpigmentation and increased melanogenesis in facial pigmentation (solar or senile lentigines). Although DEP-induced skin pigmentation seems to be mediated by an oxidative stress response, the exact mechanism remains elusive. Models are required to better understand the pathomechanisms involved and to test effective protective or curative approaches. This hereby study explores, using an *ex vivo* (human skin explants) model whether hyperpigmentation is triggered under conditions simulating environmental pollutant exposure. Contrary to past publications with a topical application of pollutants, a novel system, CIDP Controlled Pollution Exposure System (CCPES) was developed to mimic real-life conditions of pollution exposure by controlling the concentration and flux of vaporized DEP and ozone.

Materials & Methods: Human skin explants obtained from surgical waste were exposed for 4 hours per day (2 hours in the morning and 2 hours in the afternoon) for 5 consecutive days to either DEP (NIST 1650b; 250 µg/m3 air per exposure) or ozone (600 ppb per exposure) under the CCPES. Immediately after the last exposure, the skin was washed to remove any particulate residues and lysed in hot 1M NaOH to solubilise the melanin which was then monitored for each condition.

Results: The results obtained from *ex vivo* samples exposed chronically to DEP showed a significant upward trend in the melanin content correlating with increased skin pigmentation. In contrast, a non-significant increase in melanin content was observed in skin explants exposed to ozone. These findings indicate that exposure of skin to DEP induces hyperpigmentation in human skin explants, whereas ozone, despite its ability to cause oxidative stress in the skin, does not significantly elevate melanogenesis.

Conclusion: This study evaluated the effect of DEP exposure on skin pigmentation in controlled physiological parameters of concentration and flux. Using CCPES, we demonstrated a positive link between DEP exposure and skin hyperpigmentation in contrast to ozone and unexposed control zone. We conclude that the proposed methodologies hold significant promise in assessing the role of DEP and urban pollution in the pathogenesis of pigmentary dermatoses such as melasma.

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Abstract N°: 2228

Chemical peels in skin of colour -2024 update

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Introduction & Objectives:

Chemical peels are a mainstay treatment in aesthetic ,cosmetic dermatological and dermatological practice and are one of the most commonly performed cosmetic office procedures.

Peeling in skin of colour presents unique challenges of its own.

Peel complications can be avoided or minimized when the cosmetic dermatologist has a thorough understanding of the principles of cosmetic dermatological procedures as well as a sound understanding of facial and body anatomy.

Materials & Methods:

A literature search of superficial chemical peels for various indications in skin of colour will be reviewed and data presented .

Results:

The discussion will focus on the newer peels available for skin of colour with common indications , individual case discussions, prevention of complications and proper diagnosis and management of problems when they occur.

Conclusion:

Emphasis is placed on how to safely use and combine these newer peels in order to achieve the best cosmetic results, especially in skin of color.

Complications in chemical peel techniques with skin of color are still commonly encountered and a brief overview of the common complications will be highlighted.

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Abstract N°: 2397

Clinicopathological Study of 307 Patients with Lichen Planus Actinicus and Pigmentosus

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Introduction & Objectives:

Lichen planus (LP) is a chronic, inflammatory, mucocutaneous, and autoimmune disease that involves the skin and mucous membrane of the mouth and genitalia, scalp, and nails. LP prevalence is unknown, but it is estimated that less than 1% of the population are affected by LP.

The two less-known subtypes of lichen planus (LP) are lichen planus actinicus (LPA) and lichen planus pigmentosus (LPP), with the highest prevalence in the Middle East. We aimed to evaluate the clinicopathological profile of these patients.

Materials & Methods:

This study is a cross-sectional descriptive retro-respective study including patients who referred to the outpatient clinic of Razi Hospital, and their pathology samples had been recorded in the pathology department of Razi Hospital in Tehran, Iran, from April 2016 to March 2021.

Among all patients, the cases whom LPA and LPP were reported as the differential diagnosis were evaluated and cases with final diagnosis of these two entities were selected for final evaluation. Cases that their diagnoses were postponed to clinical follow-up and needed further evaluation were excluded from the study.

Age, sex, clinical features, duration of symptoms, presence of pruritus, location of lesions, and pathology registered data were extracted and recorded from the records of patients. Pathology registered data were also extracted.

Finally, 184 patients with LPA and 123 patients with LP were included in the study.

Results:

Among 307 patients, 117 (63.9%) in the LPA group and 88 (71.5%) in the LPP group were women. Duration of disease ranged from 1 month to 20 years and 1 month to 12 years in the LPA and LPP groups, respectively. Face (159 patients), limbs (68), and neck (23) were the most frequent sites of involvement in LPA patients, whereas face (60 patients), limbs (47), and trunk (42) were more commonly involved in the LPP patients. Pruritus and oral mucosal lesions were found with similar frequency in both groups. Pathological evaluation showed vacuolar degeneration of basal layer (100%), lymphocytes infiltration (97.3%), and melanin incontinence (58.2%) as the most frequent findings in LPA and vacuolar degeneration of basal layer (100%),lymphocytes infiltration (100%),and melanin incontinence (52/8%) as the most frequent findings in LPP cases.

Conclusion:

LPA and LPP were both more prevalent among women. Face was the most common site of involvement in both LPA and LPP. Vacuolar degeneration, lymphocyte infiltration, melanin incontinence, and hyperkeratosis were more common histological findings in this study.

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Abstract N°: 2398

Efficacy of a 2-MNG-containing depigmenting serum in the treatment of post inflammatory hyperpigmentation.

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Introduction & Objectives: Post-acne post-inflammatory hyperpigmentation (PIHP) is a frequent condition especially in patients with darker phototypes and has a significant impact on their quality of life. Depigmenting topical treatments are used to reverse the condition and are most often based on tyrosinase inhibition. Here, a serum containing 2-MNG, an ingredient that quenches melanin precursors has been tested in post-acne PIHP.

Materials & Methods: A single arm, full face, 3 months study, has been conducted in one center in Mauritius from April to August 2023 to evaluate the effectiveness of a new depigmenting serum, applied twice a day over 3 months, as a standalone procedure i.e. without any recommended sunscreen. Subjects had to have mild acne on the face (GEA =2 and less than 9 inflammatory lesions) and moderate to severe PIHP with a PAPHI score >10. Clinical evaluations were conducted at D0, D14, D28, D56 and D84 using PAHPI score, mean darkness of PIHP lesions (from 0 to 8), Global Acne severity (GEA) and acne lesion counts. Colorimeter (L* a*b*; ITA°, Delta E) measurements were conducted on PIHP lesions and normal skin (both adjacent and unexposed areas). Subject Global Assessment, local and global tolerance, stigmatization questionnaire, cosmetic and satisfaction questionnaires were also used.

Results: The study included 32 subjects with 97% females (mean age 31 years, range 18-46 years) of diverse phototypes (50% IV, 44% V and 6% VI). PAHPI score significantly decreased from D56 with a 15.8% decrease at D84 (P-value<0.001). The PAHPI lesion intensity sub-score displayed a decrease of 19.7% at D84 (P-value<0.001). The mean darkness clinical evaluation (0-8) significantly decreased from D28 with a decrease of 25.1% at D84 (P-value<0.001). From an objective colorimetric standpoint, utilizing the Delta E measurements, we observed a significant 60% reduction of the contrast between the lesional and adjacent areas at D84 (P-value<0.001). This improvement was observed since D14. This lesional area lightening effect was confirmed by the ITA. The stigmatization questionnaire showed a 30.6% decrease of the total score at D84. The serum showed very good cosmetic acceptability and was very well tolerated.

Conclusion: This study demonstrated the efficacy and tolerability of the serum in the treatment of post acne PIHP as a standalone skincare. Good clinical results are confirmed by the objective measurement of the ITA and Delta E. Cosmeticity was excellent and will help observance in real life. The reduction of the stigmatization score illustrates the impact of PIHP and its improvement over time. These results can be considered highly encouraging with the new serum, as in real life, its use in combination with a UVA/visible light filtration sunscreen would probably increase patients benefit.

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Abstract N°: 2412

Objective assessment of the depigmentation activity in melasma of a multi component serum compared to hydroquinone using reflectance confocal microscopy and chromametry analysis

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Introduction & Objectives:

Melasma is a common hypermelanosis disorder of the face. Reflectance Confocal Microscopy (RCM) and chromametry help for an objective assessment of the benefit of melasma treatments.

This study assessed the depigmenting activity of a dermocosmetic serum (SerumB3) compared to HQ4% using RCM and chromametry.

Materials & Methods:

23 women, aged 20 to 50 years with melasma received either HQ4% for 84 days (13 subjects), switching to SerumB3 for another 56 days or received SerumB3 (10 subjects) for 140 days. RCM and chromametry were performed at the same sites at baseline, Day 84 and Day 140.

Results:

A significant decrease ($p<0.05$) of the melanin density was observed in both groups in the epidermis (HQ4%: -44%; Serum B3: -36%) and dermis (HQ4%: -71%; SerumB3: -66%) after 84 days. In both groups, the melanin density in the epidermis (-46% and -33% respectively) and dermis (-76% and -78%, respectively) had further decreased after 140 days.

The mean L* value was significantly ($p\leq0.0001$) higher for HQ4% (4.2) than for SerumB3 (2.2) after 84 days. The difference was not significant anymore (HQ4%: 4.0, Serum B3: 3.8) after 140 days. No significant difference for the mean a* value was observed (Day 84: HQ4%: 0.5, SerumB3: 0.0; Day 140: HQ4%: 2.2, SerumB3: 1.9). So did the b* value (Day 84: HQ4%: -1.0, SerumB3: -0.1; Day 140: HQ4%: 0.3, SerumB3:1).

The between-group difference for mean ITA values was significantly ($p\leq0.001$) in favour of HQ4% (14.4) compared to SerumB3 (6.9) after 84 days. After 140 days, the difference was not significant anymore (HQ4%: 11.7; SerumB3: 10.1).

Conclusion:

Serum B3 and HQ 4% provided comparable result using RCM and chromametry exploratory evaluations. Serum B3 may be considered an alternative to HQ 4% as initial or as post-HQ 4% maintenance product.

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Abstract N°: 2506

Impact of Genetic Polymorphisms of Antioxidant GSTP1, UCP2, CAT, SOD2 and EPHX1 Enzymes on Vitiligo Susceptibility

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Introduction & Objectives:

Vitiligo is a common skin disorder characterized by patchy depigmentation due to selected loss of epidermal melanocytes. Its pathogenesis is multifactorial involving complex genetic, immunological and oxidative stress interactions. Free radical accumulation (oxidative stress) and impaired antioxidant mechanisms have been implicated in melanocyte cytotoxicity. Elucidating the genetic determinants underlying oxidative stress pathways could thus provide insights into vitiligo aetiopathogenesis. In this study, we aimed to investigate seven single nucleotide polymorphisms (SNPs) in genes encoding antioxidant enzymes (GSTP1 – rs1138272, rs1695; UCP2 – rs660339; CAT – rs1001179; SOD2 – rs4880; EPHX1– rs2234922, rs1051740) for their association with vitiligo susceptibility in the Greek population.

Materials & Methods:

This single-center cross-sectional study involved vitiligo patients followed at the Vitiligo Outpatient Unit from October 2018 to December 2019 and a control group from the general population. Inclusion criteria were i) age ≥ 16 years; ii) clinical diagnosis of vitiligo; and iii) Greek ancestry. First- to third-degree blood relatives were excluded. Written informed consent was obtained from all participants and peripheral blood samples were collected for DNA isolation and genotyping of the selected SNPs using RT-PCR. Statistical analyses were performed using the IBM SPSS package (v25.0).

Results:

The study included a total of 580 unrelated Greek subjects, comprising 152 vitiligo patients and 428 controls recruited from the general population. EPHX1 gene polymorphisms rs2234922 and rs1051740 showed significant association with vitiligo susceptibility in the study population. No statistically significant differences in genotype and allele frequency distribution were found for GSTP1, UCP2, CAT and SOD2 gene polymorphisms between cases and controls.

Conclusion:

Our findings suggest a potential role of epoxide hydrolase 1 (EPHX1) gene polymorphisms in vitiligo susceptibility among the Greek population. Epoxide hydrolases are involved in the inactivation and detoxification of environmental xenobiotics conferring protection against extrinsic oxidative stress-induced damage. Given the genetic predisposition of vitiligo and the role of oxidative stress, our results indicate that polymorphic variants in the EPHX1 gene could serve as genetic biomarkers of vitiligo development, facilitating personalized therapeutic

interventions. Further research in diverse ethnicities and larger sample sizes is needed to validate these findings and elucidate additional genetic factors contributing to vitiligo pathogenesis.

Gene	SNP	Genotype/Allele	Cases	%	Controls	%	Genetic model	p-value	OR	95% CI	
GSTP1	rs1138272	CC	137	90.1	382	89.3	CC vs. CT+TT	0.761	1.100	0.595	2.033
		TC	14	9.2	43	10.0	TT vs. CC+CT	0.956	0.938	0.097	9.088
		TT	1	0.7	3	0.7	CT vs. CC+TT	0.766	0.908	0.482	1.712
		C	288	94.7	807	94.3	C vs. T	0.764	1.093	0.612	1.952
		T	16	5.3	49	5.7					
GSTP1	rs1695	AA	72	47.4	230	53.7	AA vs. AG+GG	0.177	0.775	0.535	1.123
		GA	69	45.4	160	37.4	GG vs. AG+AA	0.545	0.806	0.401	1.621
		GG	11	7.2	38	8.9	AG vs. AA+GG	0.083	1.392	0.957	2.025
		A	213	70.1	620	72.4	A vs. G	0.431	0.891	0.668	1.188
		G	91	29.9	236	27.6					
UCP2	rs660339	CC	62	40.8	159	37.1	CC vs. CT+TT	0.427	1.165	0.798	1.701
		CT	66	43.4	194	45.3	TT vs. CC+CT	0.625	0.883	0.534	1.458
		TT	24	15.8	75	17.5	CT vs. CC+TT	0.685	0.926	0.638	1.344
		C	190	62.5	512	59.8	C vs. T	0.410	1.120	0.855	1.466
		T	114	37.5	344	40.2					
CAT	rs1001179	AA	12	7.9	19	4.4	AA vs. AG+GG	0.104	1.845	0.874	3.897
		GA	54	35.5	167	39.0	GG vs. AG+AA	0.994	1.002	0.689	1.455
		GG	86	56.6	242	56.5	AG vs. AA+GG	0.446	0.861	0.586	1.265
		A	78	25.7	205	23.9	A vs. G	0.551	1.096	0.811	1.482
		G	226	74.3	651	76.1					
SOD2	rs4880	CC	45	29.6	112	26.2	CC vs. CT+TT	0.427	1.165	0.798	1.701
		CT	72	47.4	225	52.6	TT vs. CC+CT	0.625	0.883	0.534	1.458
		TT	35	23.0	91	21.3	CT vs. CC+TT	0.685	0.926	0.638	1.344
		C	162	53.3	449	52.5	C vs. T	0.410	1.120	0.855	1.466
		T	142	46.7	407	47.5					
EPHX1	rs2234922	AA	91	59.9	235	54.9	AA vs. AG+GG	0.290	1.225	0.841	1.785
		AG	53	34.9	143	33.4	GG vs. AG+AA	0.023	0.420	0.194	0.908
		GG	8	5.3	50	11.7	AG vs. AA+GG	0.744	1.067	0.723	1.575
		A	235	77.3	613	71.6	A vs. G	0.055	1.350	0.993	1.835
		G	69	22.7	243	28.4					
EPHX1	rs1051740	CC	12	7.9	53	12.4	CC vs. CT+TT	0.132	0.606	0.315	1.169
		CT	56	36.8	178	41.6	TT vs. CC+CT	0.050	1.448	0.999	2.101
		TT	84	55.3	197	46.0	CT vs. CC+TT	0.305	0.819	0.559	1.200
		C	80	26.3	284	33.2	C vs. T	0.027	0.719	0.537	0.963
		T	224	73.7	572	66.8					

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Abstract N°: 2517

Efficacy and Safety of Ruxolitinib Cream for the Treatment of Vitiligo Through 2 Years in the TRuE-V Studies

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Introduction & Objectives:

Vitiligo is a chronic autoimmune disease that targets melanocytes, causing skin depigmentation. Ruxolitinib, a Janus kinase (JAK) 1/JAK2 inhibitor, cream demonstrated statistically superior repigmentation vs vehicle at Wk 24 in the TRuE-V1/TRuE-V2 phase 3 studies (NCT04052425/NCT04057573). This post hoc analysis evaluated ruxolitinib cream treatment through 2 y in the TRuE-V long-term extension (LTE; NCT04530344).

Materials & Methods:

TRuE-V1/TRuE-V2 enrolled patients (pts) ≥12 y old with nonsegmental vitiligo and depigmentation covering ≤10% total body surface area. Pts were randomized 2:1 to twice-daily 1.5% ruxolitinib cream or vehicle for 24 weeks, after which they could apply ruxolitinib cream through Wk 52. TRuE-V LTE was a randomized withdrawal and treatment-extension study enrolling pts who completed TRuE-V1/TRuE-V2. We evaluated pts in TRuE-V LTE who applied ruxolitinib cream through Wk 104, based on initial randomization.

Results:

In total, 400 pts applied ruxolitinib cream in the LTE (ruxolitinib cream from Day 1 [RUX-RUX], n=270; vehicle to ruxolitinib cream after Wk 24 [VEH-RUX], n=130); 319 (79.8%) completed treatment (RUX-RUX, n=217; VEH-RUX, n=102). Among pts applying RUX-RUX, the percentage of pts achieving efficacy response milestones, including ≥75% and ≥90% improvement from baseline in facial Vitiligo Area Scoring Index (F-VASI75 and F-VASI90) and ≥50% improvement from baseline in total Vitiligo Area Scoring Index (T-VASI50), increased steadily through 2 y of treatment. F-VASI75 was achieved by 24.7% (66/267) at Wk 24, increasing to 42.5% (113/266), 61.9% (143/231), and 70.7% (147/208) at Wk 52, 80, and 104, respectively. F-VASI90 attainment increased from 10.1% (27/267) at Wk 24 to 18.4% (49/266), 41.1% (95/231), and 42.3% (88/208) at Wk 52, 80, and 104. T-VASI50 was achieved by 19.1% (51/267) at Wk 24, and by 47.0% (125/266), 62.3% (144/231), and 67.3% (140/208) at Wk 52, 80, and 104.

Among pts applying VEH-RUX, overall response rates were lower than for pts who applied RUX-RUX but also showed steady increases through Wk 104. F-VASI75 was achieved by 6.9% (9/130) at Wk 24 (with vehicle) and by 23.1% (30/130), 47.7% (51/107), and 51.0% (51/100) at Wk 52, 80, and 104 (with ruxolitinib cream), respectively. F-VASI90 was achieved by 1.5% (2/130) at Wk 24 and by 8.5% (11/130), 28.0% (30/107), and 33.0% (33/100) at Wk 52, 80, and 104. T-VASI50 was attained by 6.9% (9/130) at Wk 24 and by 23.1% (30/130), 43.0% (46/107), and

58.0% (58/100) at Wk 52, 80, and 104.

Among all 400 pts analyzed, treatment-emergent adverse events (TEAEs) occurred in 71.3% of pts applying ruxolitinib cream at any time through Wk 104. Serious and grade ≥3 TEAEs occurred in 4.8% and 6.0%, respectively, none of which occurred in >1 pt. Treatment-related TEAEs occurred in 16.8% (none were serious); treatment-related application site reactions occurred in 16.8% (most commonly acne [5.0%] and pruritus [4.5%]). In total, 0.3% and 1.0% had an adverse event leading to study drug discontinuation and dose reduction, respectively.

Conclusion:

Ruxolitinib cream produced continued improvement of repigmentation through 2 y, both among pts who applied ruxolitinib cream from Day 1 and those first randomized to vehicle for 6 months. Higher repigmentation rates were observed with longer duration of ruxolitinib cream treatment. Ruxolitinib cream was generally well tolerated through 2 y of treatment.

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Abstract N°: 2680

Characterizing Maintenance of Repigmentation in a Post Hoc Analysis of the TRuE-V Long-Term Extension Study of Ruxolitinib Cream in Vitiligo

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Introduction & Objectives:

Vitiligo is considered a skin memory disorder in which resident memory T cells play a prominent role in disease development, progression, and relapse after stopping treatment. Maintenance therapy after repigmentation may prevent disease progression and depigmentation of repigmented lesions. Ruxolitinib, a Janus kinase (JAK) 1/JAK2 inhibitor, cream demonstrated statistically superior facial repigmentation vs vehicle at Wk 24, with continued improvement through Wk 52 in the phase 3 TRuE-V1/TRuE-V2 studies (NCT04052425/NCT04057573) and through Wk 104 in the TRuE-V long-term extension (LTE) study (NCT04530344). In the TRuE-V LTE, continued use of ruxolitinib cream also maintained response among patients (pts) who achieved near-complete facial repigmentation (≥90% improvement in facial Vitiligo Area Scoring Index [F-VASI90]) at Wk 52 in TRuE-V1/TRuE-V2. This post hoc analysis characterized factors associated with maintenance of repigmentation in the TRuE-V LTE.

Materials & Methods:

TRuE-V1/TRuE-V2 enrolled pts ≥12 y old with nonsegmental vitiligo and depigmentation covering ≤10% total body surface area. Pts were randomized 2:1 to 1.5% ruxolitinib cream twice daily (bid) or vehicle bid for 24 weeks, after which they could apply ruxolitinib cream through Wk 52. TRuE-V LTE was a randomized withdrawal and treatment extension study enrolling pts who completed TRuE-V1/TRuE-V2. In the withdrawal cohort, pts who attained F-VASI90 in TRuE-V1/TRuE-V2 were randomized 1:1 to vehicle bid (withdrawal arm) or 1.5% ruxolitinib cream bid (continuation arm). F-VASI maintenance rates, loss of repigmentation (from F-VASI90 to <F-VASI90), and relapse (from F-VASI90 to <F-VASI75) were assessed.

Results:

A total of 114 pts were included in the analysis (vehicle [withdrawal], n=57; ruxolitinib cream [continuation], n=57). In the withdrawal/continuation arms, F-VASI90 response was maintained by 52.6% (30/57)/73.7% (42/57) of pts up to Wk 64, 31.6% (18/57)/73.7% (42/57) up to Wk 80, and 21.1% (12/57)/56.1% (32/57) up to Wk 104. Loss of any repigmentation occurred in 31.6% (18/57)/15.8% (9/57) up to Wk 64, 43.9% (25/57)/15.8% (9/57) up to Wk 80, and 54.4% (31/57)/22.8% (13/57) up to Wk 104. F-VASI75 response maintenance rates were 71.9% (41/57)/77.2% (44/57) up to Wk 64, 43.9% (25/57)/77.2% (44/57) up to Wk 80, and 35.1% (20/57)/63.2% (36/57) up to Wk 104. Relapse occurred in 8.8% (5/57)/12.3% (7/57) up to Wk 64, 22.8% (13/57)/12.3% (7/57) up to Wk

80, and 24.6% (14/57)/15.8% (9/57) up to Wk 104. At Wk 104 in the withdrawal arm, a larger percentage of pts who maintained repigmentation (F-VASI90/F-VASI75) were female, White, from Europe, and had Fitzpatrick skin types I–III. A larger percentage of pts who lost repigmentation were not diagnosed in childhood; a greater percentage of pts who relapsed were male, from North America, not diagnosed in childhood, had stable disease, and had >10 y disease duration.

Conclusion:

After achieving near-complete facial repigmentation (≥F-VASI90) with ruxolitinib cream, pts in the treatment continuation arm largely maintained F-VASI90 through Wk 104. Loss of repigmentation (<F-VASI90) occurred in half of pts within 1 y of treatment withdrawal, with 44% losing repigmentation within 7 mo (ie, up to Wk 80). A quarter of patients in the treatment withdrawal arm met relapse criteria (<F-VASI75) within 1 y, with 23% relapsing within 7 mo. Repigmentation maintenance was more likely in female pts and those with skin types I–III.

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Abstract N°: 2694

A Novel Tool for Assessing Post-Inflammatory Hyperpigmentation in Clinical Practice

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Introduction & Objectives:

Post-inflammatory hyperpigmentation (PIH) is a common concern for patients with acne-prone skin, affecting both young and mature individuals. Dermatologists require an effective tool to evaluate the intensity of PIH compared to the patient's natural skin tone in their daily practice to assess the impact of treatments on their patients in order to improve quality of life (QoL).

Materials & Methods:

A controlled clinical trial of 68 patients with oily skin type suffering from acne with PIH was conducted. Patients were treated with a study material for 12 weeks, and the reduction of intensity of post-inflammatory hyperpigmentation was evaluated using a new tool, a numerical scale consisting of 18 shades based on the extended Fitzpatrick scale. To validate the accuracy of this new tool, the ability to monitor the reduction of PIH was measured both with the new tool based on the extended Fitzpatrick skin type scale and with a non-invasive device, the Mexameter MX18. The skin color of the same PIH patches was measured using both the tool and the Mexameter, and the change of intensity of the PIH patches over the 12 weeks of product use was measured. The color shade of the PIH was assessed, as well as the color of the skin surrounding the PIH were assessed using both the scale and the Mexameter device, both at baseline and after 12 weeks of full facial product application.

Results:

The correlation between Mexameter MX18® values and the numerical scale was highly significant ($P<0.001$). Non-parametric correlations between skin tone measurements and surrounding skin tone were also highly significant ($P<0.001$). All linear correlations between device measurements and surrounding skin tone were statistically significant ($P<0.01$).

Conclusion:

The numerical scale presented in this study is an effective and practical tool for dermatologists to evaluate PIH and assess treatment efficacy. The tool is easy to use and cost effective, making it a valuable addition to the clinical practice. Additionally, the tool can serve to monitor the development of other pigmentary indications. This study provides a new tool for dermatologists to improve patient outcomes and quality of life.

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Abstract N°: 2839

A very rare cause of acquired hyperpigmentation: Idiopathic eruptive macular pigmentation

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Introduction:

Idiopathic eruptive macular pigmentation (IEMP) is a very rare benign dermatosis belonging to the group of acquired hypermelanosis of unknown etiology. It is characterized by the appearance of asymptomatic hyperpigmented macular lesions. We report a new case.

Case presentation:

An 8-year-old boy, with no notable medical history, presented with progressive hyperpigmented lesions for the past 6 months. No triggering factor was identified. Dermatological examination revealed multiple brownish macules, ranging from 5 to 20 mm, non-pruritic, scattered over the neck, trunk, and all 4 limbs. Darier's sign was negative. Palms and soles were spared. Examination of mucous membranes and nails was without abnormalities. Skin biopsy showed hyperpigmentation of the basal epidermal layer with numerous dermal melanophages. Based on these clinical and histopathological findings, we established a diagnosis of IEMP.

Discussion:

IEMP was first described in 1978 by Degos et al. Less than 50 cases have been reported in the literature. However, this frequency seems to be underestimated, considering the number of unpublished cases and cases mistaken for other diagnoses. The pathogenic mechanisms involved remain poorly understood.

This pigmentation disorder mainly affects children and adolescents, without gender predilection. It must be differentiated from several diagnoses: cutaneous mastocytosis, lichen planus pigmentosus, ashy dermatosis, and postinflammatory hyperpigmentation.

The resolution of IEMP lesions is spontaneous but slow, taking from few months to a few years.

Conclusion:

IEMP is a rare entity, but one that needs to be known, both to avoid unnecessary investigations and considering the limited interest of treatment in the face of spontaneous resolution of the condition.

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Abstract N°: 2936

Histological and immunohistochemical comparisons of vitiligo skin before and after complex treatment using cell technologies

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Introduction & Objectives:

Vitiligo can have a significant impact on a patient's quality of life. To develop a comprehensive treatment method, researchers conducted clinical, immunological, and biochemical studies. The treatment involved traditional therapy, as well as cell technology methods such as melanocyte-keratinocyte suspension (MKS) and automezoconcentrate (AMC). The objective of the study was to analyze the histological and immune-histochemical changes in the affected skin of vitiligo patients before and after treatment and to identify any gender differences.

Materials & Methods:

The study included 107 patients aged 19-65. To evaluate the efficacy of a newly developed treatment method, a comparative histological and immunohistochemical study was conducted on two groups of patients before treatment and 16 weeks after: the main group (56 patients), who received treatment with MKS and AMC according to the new method, and a comparison group (51 patients), who received traditional treatment. Traditional treatment included UVB phototherapy and calcineurin inhibitors topically. The developed method involved several steps: pigmentation' induction of the donor skin using UVB 311 nm, a punch biopsy on the donor skin and transfer it to the biotechnology laboratory to cultivate and manufacture an individualized MKS, injection the MKS into the skin, then UVB 311 nm phototherapy. AMC – is the patient's plasma, in which the platelets concentration several times higher than normal, AMC is injected into the vitiligo area once a week N 4 before MKS.

Results:

The results of the complex histological and immunohistochemical studies indicate that patients with vitiligo display mild epidermal changes such as hyperkeratosis, acanthosis, and focal granulosis, while dermal changes include moderate vascular reactions and an increased number of vessels in the microcirculatory tract, as well as focal lymphocytic infiltrates mainly around blood vessels. The infiltrates were characterized by a significant number of CD3 cells, with a predominance of CD4 cells over CD8 cells. Gender differences were observed, but they were not significant. The absence of melanocytes in the epidermis and the presence of single Langerhans cells in the dermal infiltrate were detected in all cases of vitiligo using specific staining (Melan A, S100). This highlights the characteristic feature of vitiligo. The use of MKS and AMC in the treatment of vitiligo resulted in a decrease in the severity of epidermal dystrophic changes, recovery of melanocytes, and reduction of dermal inflammatory infiltrate, as well as positive clinical results.

Conclusion:

The comprehensive clinical-histological and immunohistochemical studies revealed the absence or insufficient number of melanocytes in the affected skin and dystrophic changes in keratinocytes that are necessary for the regulation of melanocyte growth and differentiation. These identified changes justify the use of cell techniques in the treatment of vitiligo patients aimed at filling the insufficient number of melanocytes in the affected skin and

restoring the normal functioning of keratinocytes. The developed method of treating vitiligo patients using MKS and AMC resulted in positive clinical outcomes and a decrease in the severity of dystrophic changes in the epidermis. Melanocyte recovery and reduction of dermal lymphocytic infiltrate were also observed, with greater improvement in the main group of patients.

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Abstract N°: 3041

Acquired Dermal Macular Hyperpigmentation Mimicking Malignancy in a Middle-Age Woman

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Introduction & Objectives:

Acquired dermal macular hyperpigmentation (ADMH) describes a constellation of dermal hyperpigmented dermatoses that share clinical and histological characteristics, including ashy dermatosis, lichen planus pigmentosus, erythema dyschromicum perstans, Riehl's melanosis, pigmented contact dermatitis, and idiopathic eruptive macular pigmentation.

ADMH is more prevalent in Fitzpatrick skin phototypes III–V. Typically presents as multiple, asymptomatic, hyperpigmented macules in photoexposed and non-photoexposed areas, and histological analysis shows pigment leakage (melanophages). Can be triggered by genetics, infections, toxins, drugs, pigmented contact dermatitis, hormone imbalances, and autoimmune illnesses.

The etymology and classification of these disorders have consistently sparked debate. Experts coined the term ADMH to standardise their nomenclature to ease therapeutic trials and research. An additional concern is the limited efficacy of existing treatments, which have both medical and aesthetic implications, making them an important topic for dermatological consultations.

Materials & Methods:

In this case study, we discuss the clinical presentation of a middle-aged female patient who was admitted to our hospital with an inexplicable anemia and long-standing acquired hyperpigmentation. Bibliographic research was performed using the PubMed database using the search terms "acquired dermal macular hyperpigmentation," "ashy dermatoses," and "Lichen planus pigmentosus." We obtained a total of 133 articles, and after screening, we included 15 papers in this review.

Results:

A 43-year-old woman with a 17-year medical history of hyperpigmented macules, which began on her face and neck, exhibits new ones on her abdomen and sacrum five years after the first onset. Multiple cycles of corticosteroid medication did not eradicate the dermatoses. The patient was admitted to the hospital to undergo diagnostic tests for anemia. We consulted the dermatology department due to the suspicion of skin lesions linked to malignancy.

A physical examination identified Fitzpatrick type IV. On the face, predominantly in the lateral forehead, and the external surface of both forearms had symmetrical greyish-brown plaques of 5 x 5 cm. And the abdomen and the sacral region displayed large hyperpigmented dark-brown plaques, measuring approximately 30 x 15 cm. Lab analyses showed regenerative anemia, characterised by a hypochromic microcytic pattern. The remaining investigations produced inconclusive findings regarding infections, immunosuppression, or autoimmunity.

The identification of epidermal hyperkeratosis, discrete perivascular lymphocytic infiltrates in the dermis, and

multiple melanophages in a biopsy of the lumbosacral lesion confirmed the presence of ADMH. We recommended administering hydroxychloroquine, sunscreen, and topic hydroquinone and vitamin C.

Conclusion:

We reported an ADMH case in a middle-aged Latina woman who presents with longstanding hyperpigmentation. The histopathological findings suggest an AMDH diagnosis. Dermatoses exhibit variations in colour, size, and onset time, displaying spectrum variations in AMDH: ashy dermatitis in photoexposed areas (like the face, neck, and arms) and pigmentary lichen planus in non-photoexposed areas (like the back and abdomen). This highlights the blurred distinction between the various pathologies encompassed within ADMH.

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Abstract N°: 3056

Partial Unilateral Lentiginosis: A Comprehensive Review of Characteristics, Diagnosis, and Treatment

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Introduction & Objectives: Partial Unilateral Lentiginosis (PUL) is a rare dermatological condition characterized by the appearance of small, rice-grain-sized, brown, or black lentigines that are localized exclusively on one side of the body. These lentigines typically cluster together in closely-knit groups or form streak-like patterns, often aligning with dermatomal lines. These lines are prominently visible on the face, neck, trunk, or extremities. Diagnosis of PUL is predominantly clinical and involves a comprehensive examination that includes cutaneous assessment, ocular evaluation, and dermoscopy. Treatment is generally sought for cosmetic reasons and primarily involves laser therapy, which has been found to be highly effective. To the best of our knowledge, this is the first review of Partial Unilateral Lentiginosis.

Materials & Methods: A literature review was conducted by searching for "Partial Unilateral Lentiginosis" on PubMed, yielding 36 articles. Of these, 27 met the inclusion criteria and were thoroughly reviewed to synthesize the findings of this study. Additionally, four more articles were incorporated specifically for discussion purposes.

Results: Of the 95 reported cases of Partial Unilateral Lentiginosis reviewed in the literature, 70 were female and 25 were male, corresponding to 74% and 26% respectively, with a gender ratio of 2.8:1. Determining the exact ages of diagnosis and onset is challenging due to missing data in many reports; however, most cases were noted to appear at birth or during early childhood. All patients exhibited signs of hyperpigmented light brown macules or rice-sized lentigines ranging from 1 mm to 5 mm. Specifically, lentigines sized between 2-3 mm were reported in 4 patients (4.21%), and those ranging from 1 mm to 5 mm in 22 patients (23.15%). Diagnosis typically relied on a comprehensive history, physical examination, skin biopsy, and selective laboratory studies to differentiate PUL from similar genetic disorders like LEOPARD syndrome, LAMB syndrome, NAME syndrome, Carney Complex, and Neurofibromatosis Type 1. More recent cases also required cutaneous, ocular, and dermoscopic examinations. Among the 32 cases that sought treatment, laser therapy was the predominant method. Specifically, 20 cases used the low-fluence 1,064 nm QS Nd:YAG laser, with 19 (95%) achieving at least a 50% improvement in lesion appearance without recurrence or significant side effects. The first case treated was notably unsuccessful despite multiple laser modalities and topical treatments being attempted. Three other cases reported satisfactory outcomes using Alexandrite Q-switched lasers and a combination of 511 nm and 578 nm Copper Bromide (CuBr) lasers. Plans for using the 1,064 nm QS Nd:YAG laser were in place for another case.

Conclusion: In summary, Partial Unilateral Lentiginosis (PUL) is a relatively rare dermatological condition primarily affecting females, as evidenced in the literature. It is characterized by unilateral, hyperpigmented lentigines. The diagnosis of PUL typically relies on a thorough clinical evaluation and may be supplemented by biopsy to confirm the condition. Laser therapy, especially with the 1,064 nm QS Nd:YAG laser, has shown promising results in treating this condition, achieving significant improvement in the appearance of lentigines with minimal side effects. Nonetheless, further research is essential to enhance patient outcomes.

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Abstract N°: 3076

Randomized controlled investigator blinded comparative study of the efficacy and tolerability of a new 2-MNG containing serum versus Cysteamine 5% in the treatment of melasma: interim study results.

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Introduction & Objectives:

Melasma is a common acquired disorder of hyperpigmentation that is a global concern.

Newer topical products with higher efficacy, less side effects and longer periods of remission are constantly being evaluated. This study aimed to evaluate and compare the efficacy and safety of a new 2-MNG containing dermocosmetic serum versus Cysteamine 5% in the management of melasma.

Materials & Methods:

140 participants with melasma, ranging from mild to severe based on (IGA), were screened and enrolled for a 4-month treatment period into 2 groups- Test product(TP) and Marketed product (MP). Baseline assessments, including digital imaging, dermatological examination, and spectrophotometer readings, were performed to record skin conditions. Follow-up assessments included various evaluations such as modified Melasma Area and Severity Index (mMASI) scoring, IGA scoring, Investigator Global Assessment of Improvement (IGAI), assessments for other skin attributes.

Results:

After 2 months of treatment, dermatological assessments revealed significant reduction in melasma severity in terms of mMASI and IGA for both groups compared to baseline (23% vs 19% respectively) with no significant difference between groups. However, in terms of IGAI, 98% of subjects using TP improved slightly and moderately compared to 85% using MP, with a difference of 30% in favor of TP, for those who improved moderately (46 % vs. 16%), which showed statistically significant at month 2 ($p<0.001$).

Regarding the skin attributes, there are also a significant improvement compared to baseline for both groups, with a significant difference at Month 2, in favour of TP in skin tone, skin smoothness and skin brightness assessments ($p<0.05$).

Conclusion:

After only 2 months of treatment, both products demonstrated significant improvement in melasma. However, 30% of subjects using TP showed a significantly greater improvement in melasma severity compared to those treated with MP at month 2. Additionally, the TP exhibited statistically superior improvements in skin attributes such as smoothness, evenness, and brightness compared to the MP.

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Abstract N°: 3080

Platelet-rich plasma injection combined with Q-switched ruby laser in the treatment of periorbital hyperpigmentation: A Randomised case-control study

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Introduction & Objectives:

Q-switched ruby (QSR) laser is widely used in the treatment of pigmentary disease, but there may be a risk of causing post-inflammatory hyperpigmentation, especially in dark-skinned population. We implemented this study to compare the effect of Platelet-rich plasma (PRP) injection combined with laser therapy versus laser alone for periorbital hyperpigmentation (POH) treatment.

Materials & Methods:

In this single-center, case-controlled study, patients with periorbital hyperpigmentation (pigmentary subtype predominant) were allocated to receive PRP injection after QSR laser or QSR laser only, followed by a 12-week and 24-week follow-up.

Results:

All the 30 patients received complete treatment (PRP combined QSR laser 20, QSR laser only 10). At the end of treatment, the combined group showed better improvement of pigmentation, achieved a higher grade of all evaluation scales. Erythema and mild pain were the most common adverse reactions of both groups. No other serious adverse reactions were observed.

Conclusion:

Combination with PRP injection can improve the therapeutic effect of QSR laser in treating POH and lessen the risk of post-inflammatory hyperpigmentation (PIH), indicating a new option for POH treatment.

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Abstract N°: 3119

How to get rid of dark spots fast? Efficacy and tolerability of a simple skin care regimen combining a serum with Isobutylamido-Thiazolyl-Resorcinol, a potent tyrosinase inhibitor, and a cleanser with alpha hydroxy acids to reduce facial hyperpigmentation

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Introduction & Objectives:

Facial hyperpigmentation is a major cosmetic concern for those affected. While hydroquinone is considered the gold standard treatment, it bears a considerable risk for side effects. Isobutylamido-Thiazolyl-Resorcinol (ITR) is a potent cosmetic tyrosinase inhibitor, reducing melanin production at its source, and has shown promising results in terms of hyperpigmentation reduction without the known side effects of hydroquinone. The aim of this study was to assess if the efficacy of a serum with ITR can be increased when used in combination with a cleanser containing exfoliating Alpha Hydroxy Acids (AHAs) while maintaining excellent tolerability.

Materials & Methods:

A monocentric, double blinded, split face controlled randomized clinical trial was conducted to evaluate the efficacy and tolerability of two simple skin care regimens for the reduction of facial hyperpigmentation. For 4 weeks, participants used a cleansing gel containing 2% AHA (lactic acid & glycolic acid) twice daily on one side of the face. On the other side participants used a standard cleanser without active ingredients only in the evening to remove make-up or sunscreen. Participants furthermore used a serum containing the tyrosinase inhibitor ITR on both sides of the face, followed by a sunscreen with SPF 50+.

Modified Melasma Area and Severity Index (mMASI) and tolerability were assessed by a dermatologist at baseline and after 4 weeks of treatment. Furthermore, self-grading of hyperpigmentation intensity and skin evenness were conducted by the participants on 10-point scales from 1 (= very trong hyperpigmentation/ very uneven skin tone) to 10 (= no hyperpigmentation/very even skin tone) at baseline and after 1, 2 and 4 weeks of treatment.

Changes across time were assessed on both sides using Wilcoxon Signed Rank Test. For mMASI, treatment results on both sides of the face were compared using Wilcoxon Signed Rank Test. The level of significance was set to α=0.5 for all analyses.

Results:

In total, 64 participants completed the study (97% women, 3% men; mean age: 52 years; Phototypes III-V). No significant differences between the two treatment areas were observed at baseline in any of the examined parameter.

After 4 weeks, a significant decrease of mMASI score was observed on both treatment areas ($p<.001$), with the area treated with the AHA cleanser + ITR showing superior improvement as compared to the control side ($p=.022$).

The self-grading of hyperpigmentation and skin evenness showed significant improvements over the course of the study on both treatment areas, with first significant results after one week ($p<.001$).

The skin care regimen was very well tolerated after 4 weeks of product use.

Conclusion:

The results of this study show that a skin care regimen consisting of a cleanser with exfoliating AHA and a serum with the potent tyrosinase inhibitor ITR is safe and effective for the reduction of facial hyperpigmentation, with first results observed by the patients after only one week. Combining the ITR-containing serum with an AHA cleanser led to superior reduction of facial hyperpigmentation measured with mMASI as compared to using the serum alone. Consequently, combining ITR-containing skin care products with an AHA containing cleanser can increase the efficacy of ITR-containing products, making it a good option especially for patients who want to see fast results.

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Abstract N°: 3156

Comparison of two depigmenting serums in the management of post-acne Post Inflammatory HyperPigmentation

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Introduction & Objectives:

superficial epidermal layers which can help alleviate skin aging signs and reduce scars appearance. However, typical skin reactions such as erythema, desquamation, and crusts can frequently occur with a frequency and severity depending on laser settings. Therefore, post CO2 laser skin care with an appropriate dermocosmetic (DC) able to restore skin barrier integrity and improving physical cutaneous signs is recommended.

The aims of this study were to evaluate, following Fx CO2 laser procedure, the skin re-epithelization kinetic and barrier associated clinical signs of a DC formulation containing vitamin B5, madecassoside and a prebiotic complex versus a reference dermocosmetic repair skin care (RDC).

Materials & Methods:

Adults with phototype II or III were included in this double-blind intra-individual study. Following Fx CO2 laser on similar zones of 4 cm^2 each on every subject's back, DC or RDC were applied twice daily in the study center at a standardized dose of 2mg/cm^2 for 18 days (except on Sundays). Clinical assessments included the wound healing kinetic overtime based on the re-epithelization score ranging from 0=no healing to 5=complete healing, individual scores of erythema, desquamation and crusts (all rated from 0=none to 3=severe), their composite score alongside standardized patients' skin photos.

Results:

This study was conducted on 25 subjects (15 women, 10 men), mean age of 37.7±7.3 years old, with phototype II (3;12%) or III (22;88%). The mean wound healing score was significantly ($p<0.05$) higher with DC compared to RDC starting from Day 6 till Day 14. On DC area, the composite score also showed a significantly ($p<0.05$) better improvement from Day 6 and a significantly ($p<0.05$) enhanced efficacy on crusts severity from Day 7 versus the RDC.

Conclusion:

The post-CO2 laser application of the tested DC care provided a significantly faster and better repair efficacy associated with an improvement in physical signs, particularly crusts formation, compared to a reference dermocosmetic.

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Abstract N°: 3162

Comparison of 2-MNG-containing depigmenting serum vs. hydroquinone 4% in the treatment of facial melasma: a monocentric randomized controlled study

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Introduction & Objectives:

Hydroquinone 4% (HQ4%) and Kligman's trio are the gold standard of melasma treatment. Very few cosmetic formulas have claimed equivalent efficacy vs HQ4%. Here, an innovating serum containing 2-MNG, an ingredient that quenches melanin precursors, twice a day (group A), has been compared to HQ4% (group B) in the treatment of facial melasma. **Materials & Methods:**

A 3 months comparative, randomized, investigator blinded, parallel group study, has been conducted in Brazil from August to March 2023. Both groups applied the same tinted high SPF, UVA PF and VL-PF sunscreen at least in the morning and at midday. Subjects had to have facial epidermal or mixed melasma of any severity. Evaluations were conducted at D0, D28, D56, D84 utilizing mMASI, local tolerance severity (0 to 5 score, from "no" to "very severe" signs of local intolerance) and the PUSH-D stigmatization questionnaire.

Results:

The study included 109 female subjects (mean age 43.2 years, range 30-51 years) with diverse phototypes (47% I to III and 53% IV). Both groups showed a significant decrease of mMASI at D84 (- 28% for group A, -34% for group B, $p<0.001$) with mean change from baseline of -2.16 and -2.56. This improvement was significant since D28. No statistical difference was observed between the two groups at any visit and the non-inferiority, with a predefined threshold of 1.3, was demonstrated at D84 (Mean difference of 0.46, 95% CI [-0.25,1.17]). Both groups showed a significant decrease of the PUSH-D total score at all visits with a significant difference between groups at D28 and D56 in favor of the serum. Patients receiving HQ4% significantly experienced more local irritations at D28 (6.0% for group A vs. 21.4% for group B).

Conclusion:

This study shows that a new depigmenting serum is non-inferior in efficacy than HQ4% on facial melasma over 3 months of use. The serum was better tolerated than HQ4%. Given the body of literature showing efficacy of HQ4% in melasma, this study strongly suggests that the new melanin quencher containing serum is an effective solution for melasma in association with a sunscreen efficiently covering UVAs and visible light, with optimized cosmetic properties and no risk of irritation and ochronosis opening the door for longer term use.

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Abstract N°: 3198

Topical treatment with active ingredients that regulate key pathophysiology signaling pathways in melasma

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Introduction & Objectives:

Melasma has a complex pathophysiology in which different cell types and signaling pathways are involved. Paracrine factors secreted by keratinocytes, fibroblasts and endothelial cells act on melanocytes and stimulate melanogenesis by modulating several pathways such as Wnt/beta-catenin (WNT), endothelin-1 (EDN1), alpha-type melanocyte-stimulating hormone (αMSH) and stem cell factor (SCF). αMSH secreted by keratinocytes binds to the MC1R receptor to activate the cAMP pathway and MITF, the main transcription factor of melanogenic enzymes. The WNT pathway, together with estrogens, can promote angiogenesis, which directly activates pigmentation through the END1/EDNRB pathway. The objective is to develop a specific combination of topical active ingredients that regulate the main melanogenic pathways and demonstrate its effectiveness both clinically, *in vitro* and *ex vivo*.

Materials & Methods:

Firstly, to identify a depigmentation complex that acted synergistically in the main pathways of melanogenesis, artificial neural networks were used using the method described by Martínez-Gutiérrez et.al. 12 Once this depigmentation complex was found, in vitro studies were carried out to corroborate the synergistic efficacy and mechanism of action. Analysis using qPCR and real-time microscopy with primary human melanocytes allowed us to confirm the signaling pathways and the targets where the active ingredients acted. The quantification of total melanin was performed by spectrophotometry in a culture of melanocytes stimulated with L-tyrosine + IBMX for 72 h. In order to verify the depigmentation efficacy of the complex in an ex vivo model, a pigmented 3D epidermal model was treated for 6 days for subsequent histological analysis. Finally, to demonstrate the clinical efficacy of the depigmentation complex, a single-center, open and prospective trial was carried out with a topical formula containing the complex. The study was performed in Spain between October 2018 and October 2023 with 100 volunteers with melasma and phototypes II-IV. The treatment protocol included a clinical session with application of a depigmenting mask plus iontophoretic mask and a 120-day home treatment with a topical depigmenting agent twice a day. The evaluation methods used were VISIA, Mexameter, MASI index, photographic record, safety and efficacy questionnaires and Likert-type surveys. Control visits were scheduled on days 0, 7, 15, 30, 60, 90 and 120. The data obtained were analyzed using the Student t test and 95% confidence interval. Cohen's d statistical method was used to calculate the effect size.

Results:

A synergistic combination was found with retinol, diosmin and ferulic acid, which acts on the key cellular processes of melanogenesis: inflammation, vascularization and the hormonal pathway. *In vitro* data demonstrated a reduction of the main markers (COX-2, PGE2, ET-1). The total synthesis of melanin in the melanocytes stimulated and treated with the active ingredients was reduced by 89%. This evidence is consistent with the safety and efficacy clinical study in melasma patients treated with the formula in which an average reduction of 57% in MASI

was achieved along with an improvement in skin quality.

Conclusion:

This study has demonstrated the efficacy and safety of an innovative depigmentation treatment in melasma that regulates different key cellular processes in the pathophysiology.

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Abstract N°: 3319

A holistic comprehension to treat melasma effectively: from pathogenesis to effective topical treatment concepts and photoprotection

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Introduction & Objectives:

Melanogenesis is a highly regulated process triggered by different factors such as UV exposure, cosmeceuticals and oxidative stress. Depending on genetic predisposition, individual internal and environmental trigger factors result in hyperactive melanocytes producing an accumulation of melanin which leads to several dermatological conditions of unwanted hyperpigmentation such as melasma. An advanced understanding of the pathogenesis of melasma with its signalling pathways is crucial to treat melasma effectively and sustainably. Topicals from cosmeceuticals to prescription drugs can play an important role not only as pre- and post-treatment tools. The objective is to understand the individual signalling pathways as well as the principles of topical treatments and UV protection to manage melasma effectively and sustainably.

Materials & Methods:

In melasma, hyperactive melanocytes not only overproduce melanin but they also accumulate melanin resulting in unwanted hyperpigmentation and dermatological diseases such as melasma. Complex scientific data shows today that there are several signalling pathways by which different cell types upregulate melanogenesis in melasma. Also that there are other contributors to this unwanted skin discoloration such as e.g. new vessel formation, inflammation and oxidation etc.

It has been found that blue light induces hyperpigmentation in high phototypes via the specific melanocyte sensor Opsin-3. In addition, iron oxide that provide physical pigment in the photoprotection formulas to protect against HEV2. Currently there are several photoprotection solutions with pigment and different textures to provide a broader range of photoprotection and ensure its adherence. Some innovative solutions contain new photosensitive polymers which change their conformation when exposed to solar radiation and contain key active ingredients. For instance, photolyase is an enzyme capable of immediately repairing damage caused by UVA and UVB radiation for skin repair. Another example is mycosporines (MAAs), molecules found in nature which can absorb the most UV-A radiation (310-362 nm). They act as antioxidants eliminating ROS, accelerate re-epithelisation and prevent collagen degradation and protein glycation. UVA increases the presence of collagenase. Therefore, other potential ingredients for protecting proteins against stress conditions are those that increase heat shock proteins like HSP-47, which protects and enhances type-I collagen synthesis.

Results:

Topicals can play an important role to treat and manage melasma effectively. Especially cosmeceuticals ‘only’ one can be quite effective and be on the safe side, especially in treating light melasma or in managing recurrent melasma on the long term.

Conclusion:

Modern concepts for treating melasma topically effectively have to target all the various and different pathways causing this disease. This said, cosmeceuticals are an indispensable tool especially to be combined in e.g. pre- and

post-procedure protocols but can be very useful also in treating especially light melasma or in managing recurrent melasma on the long term.

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Abstract N°: 3479

Lichen planus pigmentosus and lichen planopilaris coexistence

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Introduction & Objectives:

Lichen planus (LP)is a known inflammatory skin condition with different variant. Many of these variants can coexist together. Lichen planus pigmentosus (LPPigm) is known in the literature to precede the development of frontal fibrosing alopecia (FFA).However, only few cases have been reported in literature for LPPig to precede or to develop after the classic lichen planopilaris (LPP).

Materials & Methods:

Here we report a case of 45 years old lady who presented with LPPig then developed classic LPP with agood response to treatment.

Results:

The association between FFA and LPPigm is well-established in the literature compared to the association between classic LPP and LLPig which is extremely rare. We only found few cases reported in the literature. Al marek et al reported a postmenopausal fiztpatrick V female who presented with dark pigmentation on dark pigmentation over the sides of her neck that was diagnosed as LPPigm. The pigmentation was preceded by scarring hair loss 20 years ago that mainly affected the vertex of scalp, which was diagnosed as LPP. Cobos et al. reported a premenopausal African American woman who presented with dark pigmentation on her arms, neck, and face that was diagnosed as LPPigm. The pigmentation was preceded by LPP affecting frontal scalp ,few portions of her occipital scalp and eyebrow since few years.3 Our patient and the two patient reported were African origin females. The lag time from LPPi to LPP from one year to 20 years range.Our patient presented with LPPig followed LPP unlike the two patients reported who showed the opposite .chen etal reported a case series of six patients with follicular LPPigm on slate grey-coloured macules over the neck, upper limbs and trunk noticed the presence of LPP in the scalp of two patients.The patient reported was male and female . Thus for patients, who present with LPPi or LPP it may be useful to evaluate them for hair loss and pigmentation and follow them more closely.

Conclusion:

Lichen planus is a chronic inflammatory dermatological disorder with multiple clinical and morphological variants. The coexistence of its two clinical variants, LPPigm and FFA, is well-established in the literature. However, the coexistence of classic LPP and LPPigm is rare.. Since both diseases are psychologically distressing, especially when coexisting, dermatologists should be aware of this association. Thus, for these patients who present with either LPPigm or LPP and its variants, it may be useful to evaluate them for either hair loss or pigmentation and follow them closely, as early recognition and treatment carry a better prognosis.

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Abstract N°: 3527

Topical Ruxolitinib for Vitiligo: A Friendly Summary of the Body of Evidence (FRISBEE)

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Introduction & Objectives:

Vitiligo is a chronic depigmenting skin disease caused by autoimmune destruction of melanocytes [1,2]. Its global prevalence is estimated to be around 0.5-2% [2], affecting both sexes equally and people of all races and socioeconomic levels, with peak incidences in the second and third decades of life [1].

Its pathogenesis is thought to be multifactorial, involving genetic, autoimmune and oxidative stress components; and is known to be mediated by interferon-gamma (IFN-γ), which activates the JAK-STAT pathway in order to recruit CD8+ T cells that produce a cytotoxic response directed against melanocytes [2,3].

Clinically, vitiligo usually presents as depigmented macules and patches around the body, and it may be classified into 2 main categories: nonsegmental (the most common type, usually with symmetrical and bilateral lesions) and segmental (unilateral and asymmetric) [1,2]. Furthermore, given its conspicuous clinical features, vitiligo may have profound negative effects on patients' self-esteem, mental health and quality of life [1,3].

Regarding treatment, this condition is usually managed with topical corticosteroids, topical calcineurin inhibitors, phototherapy, oral mini-pulses of corticosteroids, or a combination of therapies [2]. However, vitiligo may be treatment-resistant and show an unpredictable disease course, with flare-ups or clinical progression [1].

Ruxolitinib is a Janus Kinase (JAK) 1 and JAK2 inhibitor, which suppresses the IFN-γ-mediated pathway and thus prevents melanocyte destruction, leading to skin repigmentation [3,4]. Its topical use at a concentration of 1.5% was approved by the Food and Drug Administration (FDA) in 2022 for patients 12 years of age and older with nonsegmental vitiligo, and recent studies have shown promising results with its application [4,5].

Nonetheless, there is still controversy regarding the efficacy and safety of ruxolitinib in patients with vitiligo.

The objective of this study is to assess the efficacy and safety of topical ruxolitinib, compared to placebo, in patients with vitiligo.

Materials & Methods:

An electronic search in Epistemonikos, the largest database of systematic reviews in health, which is maintained by screening multiple information sources, including MEDLINE, EMBASE, Cochrane, among others, was performed. Data from the primary studies were extracted from the systematic reviews and reanalyzed. Subsequently, a meta-analysis and a Summary of Findings (SoF) table using the Grading of Recommendations, Assessment, Development and Evaluation (GRADE) approach were performed.

Results:

We identified 9 systematic reviews [1,3,6–12] that together included 5 primary studies [4,5,13,14], of which 3 were randomized trials (831 patients) [4,5]. The analysis of the present work was based on the 3 randomized trials **(Table 1).**

Conclusion:

Topical ruxolitinib, compared to placebo, increases the probability of achieving a*F-VASI75*, *F-VASI90* and *T-VASI50* response at week 24, but also increases the likelihood of presenting any adverse event (mainly application-site acne and pruritus) in patients with vitiligo (high certainty of the evidence).

Table 1. Summary of Findings (SoF) table

Topical ruxolitinib for vitiligo

Patients Patients with vitiligo
Intervention Ruxolitinib*
Comparison Placebo

Outcomes	Absolut effect		Relative risk (RR) (95% CI)	Certainty of evidence (GRADE)
	Placebo	Ruxolitinib		
	Difference: patients per 1000			
F-VASI75 response at week 24**	92 per 1000	300 per 1000	RR 3,27 (2,10 to 5,08)	⨁⨁⨁⨁[1] High
	Difference: 208 more (Margin of error: 101 to 374 more)			
F-VASI90 response at week 24***	14 per 1000	148 per 1000	RR 10,78 (3,43 to 33,91)	⨁⨁⨁⨁[1] High
	Difference: 135 more (Margin of error: 33 to 453 more)			
T-VASI50 response at week 24†	55 per 1000	212 per 1000	RR 3,86 (2,24 to 6,66)	⨁⨁⨁⨁[1] High
	Difference: 157 more (Margin of error: 68 to 310 more)			
Adverse events ††	395 per 1000	501 per 1000	RR 1,27 (1,06 to 1,50)	⨁⨁⨁⨁[1] High
	Difference: 107 more (Margin of error: 24 more to 197 more)			

* 1.5% ruxolitinib cream applied twice daily was prescribed in 2 studies [5], while the third study [4] randomized the intervention group to receive either 0.15% ruxolitinib cream once daily, 0.5% once daily, 1.5% once daily or 1.5% twice daily. For this analysis, only the patients that received 1.5% ruxolitinib cream twice daily were considered.

** The Facial Vitiligo Area Scoring Index (F-VASI) is a tool for calculating the surface area of vitiligo depigmentation on the face on the basis of the size of the patient's palmar surface, with degree of depigmentation estimated to the nearest percentage (0% or no depigmentation present, 10%, 25%, 50%, 75%, 90%, and 100% or no pigment present)[5]. F-VASI75 response represents a decrease (improvement) of at least 75% from baseline in the F-VASI.

***F-VASI90 represents a decrease (improvement) of at least 90% from baseline in the F-VASI [5].

† The Total Vitiligo Area Scoring Index (T-VASI) is a tool for calculating the surface area of vitiligo depigmentation on the entire body, on the basis of the size of the patient's palmar surface. T-VASI50 represents a decrease (improvement) of at least 50% from baseline in the T-VASI [5].

†† The most reported adverse effects (AEs) were application-site acne, nasopharyngitis and application-site pruritus [4,5]. No serious AEs were considered to be related to the intervention.

[1] The risk of bias was assessed as low, and no inconsistency or imprecision were identified.

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Abstract N°: 3562

Melasma as a probable sign of hypothalamic-pituitary-adrenal axis disturbance.

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Introduction & Objectives:

Melasma is a pigmentation disorder characterized by the appearance of hyperpigmented macules most commonly presented in women. Scientific evidence reveals a communication between the skin and the hypothalamic-pituitary-adrenal axis (HPAA). Overstimulation or dysfunction of this axis in melasma constitutes an activation of melanocyte stimulating hormone (γ-MSH) due to an increase of corticotropin. We aim to identify possible signs of the HPAA dysfunction in patients diagnosed with melasma.

Materials & Methods:

A descriptive study was conducted between February 2024 and April 2024 in two dermatologic centers in Bogota, Colombia. We included patients with melasma. Data was obtained via medical records and through a survey created for this research completed by patients during their appointment. Variables included: age, sex, personal medical history, sleeping pattern, sexual desire, presence of palpitations; women were asked about the menstrual alterations. Generalized Anxiety Disorder (GAD) questionnaire was applied. Absolute and relative frequencies were used. An univariate analysis was performed, and relative and absolute frequencies were estimated. Data was collected in Microsoft Excel and was analyzed with JAMOVI Version 2.5.3.0

Results:

Of 57 patients, 94.7% were women and the most frequent age group was 41-50 years old (38.6%). Over a half of the patients needed more than 30 minutes to fall asleep (57.9%) and almost two thirds of the sample had nighttime awakenings (61.4%). Almost half of the sample wakes up tired after a seven hour sleep (47.4%) and 26.3% manifested palpitations while resting. Just under a half of the patients had menstrual abnormalities (49.1%), more than half had premenstrual symptoms (59.6%), 29.8% had hormonal replacement therapy or contraceptives and 17.5% presented polycystic ovaries. Decreased sexual desire was present in 47.4% of the subjects and lack of concentration in 45.6%. GAD2 scale was positive in 14.0% of the patients. Of the 9 symptoms evaluated, each subject presented at least one of them, with a median of 4.24 positive symptoms per patient.

Conclusion:

This is one of the first patient studies to review the possible involvement of the HPAA dysfunction in the development of melasma. An HPAA dysfunction could be reflected among the sleeping and menstrual abnormalities, and decayed libido and concentration, which were encountered in this sample. Despite the fact that all of these patients showed a form of HPAA dysfunction, there was no significant percentage of patients with suspected anxiety disorder.

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Abstract N°: 3604

Topical pentoxifylline can be an effective and safe adjunctive therapy to NBUVB therapy in treating vitiligo: A split-side clinical trial

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Introduction & Objectives:

Vitiligo is a common pigmentary skin disease. Considering the role of TNF (tumor necrosis factor)-α in the pathophysiology of vitiligo, anti-TNF-α agents may have a potential role in the treatment of vitiligo. In this split-side, triple-blinded clinical trial, we aimed to compare the repigmention rate and safety of pentoxifylline and tacrolimus combination therapies amongst vitiligo patients receiving NBUVB (narrowband ultraviolet B) therapy.

Materials & Methods:

Thirty-five pairs of bilateral symmetric vitiligo lesions of various anatomical sites in 18 patients who were on NBUVB phototherapy, were enrolled by simple random sampling. Each patient served as her/his own control, randomized to apply 10% pentoxifylline cream either on the right or the left side and 0.1% tacrolimus ointment on the remaining side twice daily for 3 months. The melanin, erythema and VASI (Vitiligo Area Scoring Index) were measured at the baseline, end of the first month and end of the third month of therapies for each side, separately.

Results:

The melanin value was steady increased by 29.842 units in “NBUVB + Tacrolimus” side and 22.253 units in “NBUVB + Pentoxifylline” side per each follow up, represented no difference between two groups in repigmentation of vitiligo (β [95% CI (confidence interval)], *p*-value = -7.589 [-21.535 – 6.357], 0.286). Two groups were not different for repigmentation rate (change in VASI) ($\chi 2$ = 2.428, degree of freedom (df) = 4, *p*-value = 0.658).

Conclusion:

The efficacy of pentoxifylline combination therapy with NBUVB was comparable to that of tacrolimus, at least in short-term follow up. More well-designed clinical trials with larger sample sizes and longer follow up periods are demanded.

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Abstract N°: 3608

Successful treatment of solar lentigines by topical application of stabilized cysteamine: A vehicle-controlled, double-blind randomized study

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Introduction & Objectives:

Solar lentigines are common hyperpigmented lesions typically appearing after 50 years of age and associated with negative psychological effects in affected individuals. Topical depigmenting products, such as hydroquinone and even the Kligman's formula, are usually ineffective for treating lentigines. Stabilized cysteamine has been recently shown to be as effective as the modified Kligman's formula for treating melasma. In this study, we evaluated the therapeutic effect of a stabilized cysteamine on solar lentigines.

Materials & Methods:

A vehicle-controlled, double-blind, and randomized study was performed on 30 patients with solar lentigines. Stabilized cysteamine or vehicle control creams were applied on solar lentigines on the dorsum of the hands daily for 12 weeks. Clinical measurements with colorimetry and visual analog scale were performed at baseline, 4, 8, and 12 weeks.

Results:

Statistically significant results were obtained in the cysteamine group versus the vehicle control group. Stabilized cysteamine provided a 40% reduction in colorimetric values ($p < 0.002$) versus a 2% reduction in the vehicle group ($p < 0.405$). Cysteamine also provided a 40% reduction in VAS ($p < 0.001$) versus a 2% reduction in the vehicle group ($p < 0.245$).

Conclusion:

Significant improvement of solar lentigines was observed after 12 weeks of application of stabilized cysteamine by all evaluation methods. Stabilized cysteamine represents a highly effective topical treatment for solar lentigines and can be considered as one of the first topical therapies effective on this hyperpigmentary disorder.

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Abstract N°: 3622

Efficacy and local tolerability assessment of a ginger-containing oil-in-water emulsion in comparison with hydroquinone 2% in patients with mild to moderate facial melasma: A parallel, investigator-blind, randomized trial

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Introduction & Objectives:

Melasma is an acquired pigmentary skin disease. Here, we evaluated the efficacy and local tolerability of a ginger-containing cosmetic product compared to the standard treatment (topical 2% hydroquinone cream).

Materials & Methods:

Thirty cases of mild to moderate melasma, age 18-65 years old, were treated randomly for 12 weeks, using a ginger containing oil-in-water emulsion or topical 2% hydroquinone. Efficacy outcomes, including the modified melasma area severity index (mMASI), melanin index, pigmentation severity index (delta E) and lightening index (delta L) were compared between the two groups, 6 and 12 weeks after starting the treatment, and 12 weeks after termination (week 24). Adverse reactions and patients' satisfaction were also recorded in all follow-up visits.

Results:

At week 12, the mMASI, delta E, and delta L decreased significantly in both groups (p-value<0.01). At week six, only hydroquinone 2%, showed a significant improving effect on delta E and delta L and higher satisfaction rate (p-value<0.01).

The product was well-tolerated according to the subjective safety assessment and the measurement of transepidermal water loss and skin erythema index.

Conclusion:

The effectiveness of the ginger containing oil-in-water emulsion for improving the melasma lesions was comparable with that of hydroquinone 2% normally used as the standard treatment.

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Abstract N°: 3677

Different variants of Lichen Planus Pigmentosus in Filipino patients: A case series

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Introduction & Objectives: Lichen Planus Pigmentosus (LPP) is a variant of lichen planus characterized by hyperpigmented macules and patches, typically occurring on sun-exposed areas. Individuals with darkly pigmented skin are more likely to be affected. In Filipinos, LPP is becoming more prevalent, offering a chance to examine various forms and clinical presentations of the condition.

This case series describes six unique cases of LPP to examine its diverse presentation in Filipino patients, detailing different etiologies and presentations that can aid in accurate diagnosis.

Materials & Methods:

Case 1: A 27- year-old female presented with diffuse gray pigmentation with accompanying pruritus (8/10) on the left thigh and then spreading to the trunk and upper extremities one year later. The patches spread across the face and neck the next year.

Case 2: A 22-year-old male with HIV developed blotchy grayish black macules on the trunk and extremities for one year, which then spread to his face after two months. He began taking Delamanid and Linezolid for multidrug-resistant tuberculosis (MDR-TB) clinical trial in the same month, which then led to extensive hair loss.

Case 3: A 43-year-old female presented with diffuse and blotchy grayish pigmentation on the left antecubital area after monthly glutathione injections for one year which spread and evolved to multiple grayish macules and patches on her neck that spread to her face.

Case 4: A 40-year-old diabetic female taking Gliclazide and Metformin presented with red pruritic (5/10) patches on the axillae after daily use of a hypopigmenting cream containing Kojic acid and Lycopene. The lesions spread to her neck after one month.

Case 5: A 42-year-old female presented with reticulated graying black patches on the back for 9 years. Lesions then spread to the trunk and proximal upper extremities then to the face.

Case 6: A 15–year-old male presented with a nonpruritic gray patch on the right side of face for 8 months.

Results: Dermoscopy of the 5 cases showed perifollicular black dots in arcs and circles on the face and black dots on brown areas on the face and neck. Histopathological examination revealed basal vacuolization, superficial and perifollicular lymphocytic lichenoid dermatitis, and numerous pigment-laden macrophages. Patients received treatment with low-dose isotretinoin, topical tacrolimus 0.1%, desonide cream, and photoprotection. Once stabilized, patients underwent low-fluence Q-switched Nd:YAG laser therapy.

Conclusion: The cases show a wide range of etiologies and presentations of lichen planus pigmentosus in Filipino patients. While LPP can occur without a clear cause, potential etiologic agents such as hypopigmenting agents should be considered. Pediatric cases present additional challenges due to rarity and unidentified causes. These different variants, including diffuse, blotchy, inversus, reticulated, and vellus hair patterns, highlight the complexity and diversity of LPP in Filipinos. It is crucial for clinicians to carefully assess each patient's medical history and

potential exposure to irritants, chemicals, or medications, while considering these unusual presentations.

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Abstract N°: 3734

The role of α-MSH/MC1R in the pathogenesis and treatment of vitiligo

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Introduction & Objectives:

Vitiligo is a skin disorder hallmarked by depigmented patches of skin secondary to melanocyte destruction and subsequent loss of melanin production. The aetiology for vitiligo is multifactorial, and response to treatment is often unpredictable. In this review, we have assessed the role of α-melanocyte-stimulating hormone (α-MSH) and its canonical MC1R receptor in the pathogenesis of vitiligo and its therapeutic implications. α-MSH is a neuropeptide secreted in the skin and is involved in stimulating skin pigmentation via the α-MSH/MC1R pathway. The purpose of this review is to better understand the role of α-MSH in the pathogenesis and treatment of vitiligo.

Materials & Methods:

A systematic literature search was conducted across Medline, Cochrane and Embase for papers assessing α-MSH in the context of vitiligo. Both clinical and pre-clinical studies were considered for inclusion.

Results:

Thirty studies were included, a combination of human, animal and in-vitro cell studies. Nineteen studies assessed α-MSH in human vitiligo patients, of which four studies assessed the role of α-MSH analogues for the treatment of vitiligo. α-MSH appears to play a role in oxidative stress protection, and a decreased serum α-MSH level in vitiligo patients compared to healthy controls has been identified. α-MSH analogues have been used as adjunctive treatment for vitiligo with variable efficacy. Additionally, α-MSH levels may correlate to the degree of skin darkening in response to UV exposure and may be a predictor for treatment efficacy.

Conclusion:

α-MSH and MC1R signalling plays a role in the pathogenesis and treatment of vitiligo. While not an independent predictor of disease activity or treatment efficacy, serum α-MSH levels may be used as a predictive marker for the efficacy of phototherapy.

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Abstract N°: 3753

Dopamine and vitiligo - is there a link? A systematic review and meta-analysis

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Introduction & Objectives:

Vitiligo is a pigmentary skin disorder hallmarked by destruction of melanocytes. There are many theories concerning the pathogenesis of vitiligo. Catecholamines, particularly dopamine, has been implicated in vitiligo pathogenesis due to it's release during oxidative stress, resulting in accumulation of oxidation products. The purpose of this systematic review and meta-analysis is to explore the association between vitiligo and the dopamine pathway in the pathogenesis of vitiligo.

Materials & Methods:

Searches were conducted on Medline, Cochrane and Embase for studies investigating the association between dopamine and vitiligo. In vitro and animal studies were excluded.

Results:

After screening, 12 studies were included and of these, three papers including 85 vitiligo patients and 50 control patients could be used for meta-analysis. Dopamine levels in vitiligo patients are significantly higher (SMD 1.68), particularly in urine and skin and during active disease. Vitiligo patients also have a higher expression of genes involved in the dopamine metabolism pathway.

Conclusion:

Dopamine levels in the urine and skin are higher in vitiligo patients. Catecholemines and dopamine may play a toxic effect on melanocytes in vitiligo patients both causing and perpetuating the disease.

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Abstract N°: 3925

Mechanistic study of the keratinocyte HMGB3/Wnt/β-Catenin signaling affecting the treatment of UVB in vitiligo

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Mechanistic study of the keratinocyte HMGB3/Wnt/β-Catenin signaling affecting the treatment of UVB in vitiligo

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Introduction & Objectives:

Vitiligo, a chronic skin disorder, profoundly impacts the physical and mental well-being of those afflicted. UVB phototherapy, a vital treatment modality, has been shown to promote the regeneration of melanocytes and enhance their adhesion to keratinocytes, although the precise underlying mechanism remains enigmatic.
Materials & Methods: ** To validate this hypothesis and elucidate the precise mechanism by which UVB regulates the cytoskeleton and adhesion functions via the HMGB3/Wnt/β-Catenin axis, we will utilize a three-dimensional skin model.

Wnt / β -Catenin cell pathway changes were assessed by keratinocytes and in vitro skin models, and changes in cell adhesion capacity and cytoskeletal proteins by RCTA and immunofluorescence.

Results:

Our single-cell transcriptome atlas analysis revealed a notable elevation in subpopulations of keratinocytes expressing high levels of HMGB family proteins in vitiligo lesions. Our research has demonstrated that HMGB3 regulates stem cell functions via the Wnt/β-Catenin signaling pathway, suggesting that activating this pathway could facilitate melanocyte regeneration. Notably, we discovered that UVB stimulates HMGB3 expression in KC, leading to the activation and liberation of the E-cadherin/β-Catenin complex and subsequent cytoskeleton reorganization. Based on these findings, we hypothesize that UVB promotes melanocyte regeneration and its interaction with KC by activating the HMGB3/Wnt/β-Catenin signaling axis, ultimately restoring the epidermal complexion.

Conclusion:

The ultimate aim of this research is to enhance the efficacy of UVB treatment for vitiligo by elucidating its underlying mechanisms, thereby paving the way for novel research avenues and therapeutic strategies.

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Abstract N°: 3927

Atrophic Nevus of Ota-like Macules Overlying Acne Scars on the Temporal Area: Case Series

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Introduction & Objectives:

We describe four representative cases of atrophic Nevus of Ota-like macules on the temporal area overlying boxcar and rolling scars which are a hitherto unreported condition in the English language literature despite its not so uncommon occurrence. Four cases with similar clinical features are hereby reported.

Materials & Methods:

Case Report:

Four Filipino patients (2 males and 2 females) with Fitzpatrick skin phototype IV, consulted at the dermatology clinic because of acne and acne scars. Atrophic bluish atrophic macules were observed on the temporal areas. All four patients noted the appearance of bluish macules after resolution of nodulo-cystic acne and denied previous intake of minocycline or any related antibiotics.

Case 1 is a 15-year-old female who noticed bluish macules on the temporal area 5 years prior to consult (PTC) after a flare of nodular and cystic lesions of acne conglobata. She is also suffering from mild hidradenitis suppurativa involving both axilla. Dermatological examination showed numerous bilateral blue macules underlying atrophic boxscar and rolling scars.

Case 2 is a 31-year-old male who presented with atrophic blue macules on the right temporal area which appeared after nodular and cystic lesions of acne conglobata 11 years PTC. Closer examination revealed 2 bluish macules overlying an atrophic rolling and boxcar scars.

Case 3 is a 21-year-old male who observed the atrophic blue macules on bilateral temples 4 years PTC after pustular and nodular lesions of acne conglobata. Dermatological examination showed 3-4 atrophic macules on the bilateral temporal areas overlying boxcar scars.

Case 4 is a 33-year old female , who presented with atrophic blue macules on the temporal area after nodular and cystic lesions of acne conglobata 15 years PTC. She also noticed bluish macules on both zygomatic areas 7 years PTC. On the temporal areas, the bluish macules were overlying boxscar and rolling scars. On the zygomatic area, the bluish macules appeared on the normal skin and diagnosed as Hori’s Nevus.

Results:

All 4 patients underwent baseline medical imaging, dermoscopy, and histopathology. Immunostains Melan-A, S-100 and HMB-45 were further requested. Follow up photographs were taken on follow up. In all 4 cases, dermoscopy showed blue clods and areas similar to acquired bilateral nevus of Ota-like macules (ABNOM) or Hori’s nevus . Histopathological examination revealed atrophy of the epidermis and spindle-shaped melanocytes in the dermis interspersed between eosinophilic and dense collagen bundles. The spindle-shaped melanocytes were highlighted by the immunohistochemical stains Melan-A, S-100 and HMB-45. All four cases underwent monthly Q-switched Nd:YAG laser treatment (4-6 J/cm2, 4 mm spot size) with significant lightening of the blue macules.

Conclusion:

Atrophic Nevus of Ota-like Macules overlying boxcar and rolling acne scars on the temporal area has not yet been described in the English language literature. The type and location of acne scars suggest a concomitant diagnosis of acne conglobata. Since case 4 showed ABNOM on the zygomatic areas, we postulate that the atrophic scars may serve as a “window” on areas where dermal melanocytosis such as Hori’s Nevus commonly occurs.

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Abstract N°: 4013

Chemical peels for Melasma in Skin of colour -2024

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Introduction & Objectives:

Melasma is a common chronic refractory acquired hyperpigmentation of the skin having a serious impact on the quality of life and is challenging to treat. Treatment is often a multimodality approach.

Procedures in skin of colour are often a challenge due to the risks of post inflammatory hyperpigmentation.

While effective, the approach to chemical peels in skin of colour requires special considerations due to differences in skin physiology, potential for post-inflammatory hyperpigmentation, and increased risk of adverse effects.

Materials & Methods:

Chemical peels are a well-known modality of treatment and forms the second-line of management in melasma and may be helpful in improvement of its epidermal component. The dermal component is handled by the ability of peel to induce phagocytosis of stagnant melanin. However deep chemical peeling for a dermal component of melasma is not recommended in skin types IV to VI since it can lead to scarring and severe dyschromias. Sequencing peels with a triple combination topically have shown a better efficacy in moderate to severe melasma when measured by spectrometry.

Specialised peels for melasma will be detailed and highlighted .

Results:

Proper patient selection, good counseling, priming of skin, and post procedural use of topical therapies are essential to achieve the desired effects of peeling.

Conclusion:

It is important to understand the challenges and nuances of performing chemical peels in individuals with skin of colour, highlighting tailored treatment strategies and post-peel care to optimize outcomes and minimize complications.

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Abstract N°: 4034

Skin whitening and management of hyperpigmentation

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Introduction & Objectives:

Skin lightening procedures are used worldwide, but their use is particularly widespread in many African, Asian and Caribbean nations, and about 40% of African women bleach their skin. They are also used among dark-skinned populations in Europe and North America by both women and men. The premium on pale skin stretches back thousands of years, but the European colonising projects of the 16th century firmly established the association between whiteness and power. “Lighter skin corresponds to all kinds of advantages in the job and marriage market and even within the criminal justice system”.

Skin-lightening creams could contain corticosteroids mercury or inhibitors of melanin production hydroquinone, which are banned in the European, and could simply be bought over the counter.

Skin whitening creams and procedures like peeling and devices are used also in several diseases as melasma, post-inflamatory hyperpigmentation, lichen and ochronosis.

The effectiveness of these procedures are variable and side effects could be seen.

Materials & Methods:

We report our experience in the management of hyperpigmentation situations using creams, peeling, nanoneedling and lasers especially picosecond lasers with a literature revue.

Results:

melasma, acne post-inflammatory hyperpigmentation, lichen and ochronosis were the most seen pathologies.

Combined treatments seem to be interesting but recurrences are frequent.

Exogenous ochronosis secondary to chronic use of lightening creams isn’t rare.

Conclusion:

Hyperpigmentations could alter quality of life

Treatments have variable results

Chronic use of skin lightening cream is not safe.

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Abstract N°: 4122

A bidirectional autoimmune cluster between vitiligo and rheumatoid arthritis: A large-scale population-based study

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Introduction & Objectives:

Both vitiligo and rheumatoid arthritis (RA) involve dysregulated immune response with alteration of cytokine activity. A knowledge gap exists regarding the association between vitiligo and RA due to the absence of large-scale cohort studies designed to investigate this association. We investigated the bidirectional epidemiological association between vitiligo and RA.

Materials & Methods:

A large-scale population-based study was conducted using both a cohort study and a case-control study design. Adjusted hazard ratio (HR) and odds ratio (OR) were calculated, and multivariate analyses were used, using Cox and logistic regressions, respectively. The risk of new-onset RA among individuals with vitiligo and the odds of vitiligo occurring in patients who have RA were calculated. We characterized the determinants of RA among patients with vitiligo.

Results:

20,851 vitiligo patients and 102,475 controls were included. Patients with vitiligo had a significantly increased risk of developing new-onset RA (adjusted HR, 1.44; 95% confidence interval [CI], 1.02-2.02, P=0.036). The incidence rates of new-onset RA were 4.1 (95% CI 3.0-5.4) and 2.9 (95% CI 2.4-3.3) cases per 10,000 person-years among patients with vitiligo and controls, respectively. The likelihood of having vitiligo was significantly elevated after a preexisting diagnosis of RA (adjusted OR, 1.67; 95% CI, 1.38-2.03; P<0.001). Patients with vitiligo and comorbid RA had an elevated risk of all-cause mortality, compared to patients with without RA (adjusted HR, 1.61; 95% CI, 1.03-2.51; P=0.037).

Conclusion:

Our study confirms a significant bidirectional association between vitiligo and RA, being one of the largest cohort studies about vitiligo patients reported so far. This research bridges an existing gap in the field, as the absence of an extensive cohort study designed to practically investigate the association of vitiligo and RA. Patients with vitiligo and comorbid RA experience a high burden of cardiometabolic comorbidities and are at a significantly elevated risk of death. Physicians treating patients with vitiligo should be aware of the association in clinical practice. Our findings highlight the shared immunological mechanisms and potential therapeutic avenues involving JAK inhibitor.

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Abstract N°: 4151

A unique approach of 'Controlled chemical Dermabrasion' in the treatment of Hyperpigmentation and Melasma in patients of skin of colour.

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**Introduction & Objectives: We have many therapeutic weapons in the field of Cosmetic Dermatology. The controlled chemical dermabrasion technique represents a major step forward, particularly for severe hyperpigmentation conditions, either melanic or melano-hematic seen in the dermatology clinic. Here, we describe a new technique to treat hyperpigmentation and Melasma in skin of colour.

Materials & Methods : The controlled chemical dermabrasion treatment is a combination of 2 combination peels - Peel 1 and Peel 2 and utilizes a series of active ingredients at high concentrations, applied in the form of an occlusive emulsion for a period ranging from 45 minutes to 2 hours. Different active ingredients are added to its basic composition according to the predominant lesion to be treated. 71 cases were treated, 45 with hyperpigmentation of various types and 26 with melano-hematic pigmentation. Results were evaluated via visual inspection and using photographs taken before and after the procedure. In 3 cases, skin biopsies were taken before and after the treatment. The study was carried out on patients of phototype I-IV.

Results : In the hyperpigmentation group, excellent results were seen in 95% of cases, and in 65% of cases with melano-hematic pigmentation. Immediate effects included erythema and fine desquamation. There were no complications to the treatment.

Conclusion : The controlled Chemical dermabrasion using combination chemical peel treatment represents a major innovation in the field of dermo-cosmetics by virtue of its results and polyvalence, able to treat pigmentation in skin of colour.**

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Abstract N°: 4206

A Case of Graft-Versus-Host Disease Induced Vitiligo Following Allogeneic Stem Cell Transplantation: A Case Report

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Introduction & Objectives:

Graft-versus-host disease (GVHD) is a common complication following allogeneic hematopoietic stem cell transplantation(HSCT), characterized by the immune response of donor T cells against recipient tissues. While GVHD primarily affects the skin, gastrointestinal tract, and liver, its association with vitiligo has garnered significant attention in recent years. This case highlights the importance of considering GVHD as a potential etiology in patients presenting with vitiligo-like depigmentation following allogeneic HSCT.

Materials & Methods:

We present a case of a 17-year-old female patient who underwent allogeneic HSCT for the treatment of acute myeloid leukemia. Despite successful engraftment and resolution of other GVHD manifestations, the patient developed leucodermia lesions on her skin consistent with vitiligo.

Detailed clinical evaluation, including histopathological examination and immunohistochemical analysis, confirmed the diagnosis of vitiligo secondary to GVHD. Treatment with systemic immunomodulatory agents and topical corticosteroids led to partial repigmentation but was limited by recurrent episodes of GVHD flare-ups.

Results:

Vitiligo, an autoimmune skin disorder characterized by depigmented patches, shares similarities with cutaneous manifestations of GVHD, raising intriguing questions about their interplay.

This review aims to elucidate the complex relationship between GVHD and vitiligo, exploring their shared immunopathogenic mechanisms and clinical implications. We discuss the immunological processes underlying both conditions, including dysregulated T cell responses and the role of cytokines such as interferon-gamma and tumor necrosis factor-alpha. Furthermore, we examine clinical evidence linking GVHD and vitiligo, highlighting case reports and observational studies that support their association.

Additionally, we explore the diagnostic challenges posed by distinguishing between GVHD-associated depigmentation and primary vitiligo, emphasizing the importance of a multidisciplinary approach involving dermatologists, hematologists, and transplant specialists. Insights from this review underscore the need for further research to unravel the intricacies of GVHD-associated vitiligo, with potential implications for risk stratification, monitoring, and therapeutic interventions in transplant recipients.

Conclusion:

On the light of what was mentionned above, GVHD should be considered as a potential etiology in patients presenting with vitiligo following allogeneic HSCT. Furthermore, it underscores the challenges in managing GVHD-associated vitiligo, particularly in the setting of concurrent graft dysfunction. Continued vigilance and multidisciplinary collaboration are essential for optimizing outcomes and tailoring therapeutic interventions in such cases.

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Abstract N°: 4411

Clinical evaluation of the depigmentant effect of a new facial suncare formulation with DP-Complex and very high UV protection in subjects with hyperpigmentation.

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[1]ISDIN

Clinical evaluation of the depigmentant effect of a new facial suncare formulation with DP-Complex and very high UV protection in subjects with hyperpigmentation.

AUTHORS

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Introduction & Objectives:

Disorders of hyperpigmentation are common and, depending on the extent and location of involvement, can affect the quality of life and pose a significant psychological burden for patients; particularly those living in areas with intense ultraviolet radiation as the skin pigmentation could be impacted by UV exposure.

We have investigated the depigmenting efficacy and tolerability of a new facial suncare formulation containing DP-Unify complex, acting on correcting hyperpigmentations, and very high UV protection filters.

Materials & Methods:

The topical fluid formulation was used at least twice daily in 30 women with mild or moderate hyperpigmented spots on the face, Fitzpatrick skin type II-IV, aged 36 to 64 years, during 12 weeks. The overall depigmentation effect was rated by investigator through modified MASI , Hyperpigmentation and Photodamage's Investigator Global Assessments (IGA) and Global Aesthetic Improvement Scale (GAIS); instrumentally, the melanin index of spot area was measured using Mexameter® and the number and areas of spots were evaluated through VISIA®. In addition, GAIS evaluation and a self-assessment questionnaire were evaluated by all subjects. These parameters were evaluated at baseline (D0), and after 28 and 84 days of treatment.

Results:

The study result showed a statistically significant reduction in mMASI score (-12.15%) and IGA photodamage (-8.3%) at 28 days and IGA hyperpigmentation (-7.2%) at D84 compared to D0. The dermatologist reported that 86.6% of subjects presented an improvement of GAIS score at D84, which was increased to 93.7% when this parameter was evaluated by subjects. In addition, there was a statistical reduction of melanin index in areas with spots at 28 days (-10.8%) and 84 days (-22.1%) and UV count (-10.3%) and brown spots (-10.5%) evaluated by VISIA at 84 days. At D84, 100.0% of subjects reported that dark spots diminished, 96.7% dark spots number and size has been reduced and are less visible, improving the general aspect. The product was very well tolerated.

Conclusion:

This new sun care product showed a significant depigmenting effect, with a visible improvement of appearance of facial skin from day 28 of treatment and keep being effective until 84 days of use, with well tolerance.

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Abstract N°: 4521

Efficacy of 5% cysteamine cream compared with 4% hydroquinone cream in Melasma : A randomized Control Trial

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Introduction & Objectives:

Melasma, is a common acquired hyperpigmentary disorder seen in the Asian and south east Asian countries. Being, a recurrent and resistant disorder Melasma is difficult to treat in skin of colour. Hydroquinone (HQ) and Kligman's formula are the few FDA-approved drugs for the treatment. However, long-term treatment with HQ and Kligman's formula have shown multiple side effects such risk of malignancy, telangiectasia, atrophy and hyperpigmentation of skin respectively. Cysteamine 5% is a new topical cream which promises to give similar results if not better with lesser side effects than the conventional hydroquinone. This study aims to evaluate the efficacy and side effect profile of cysteamine 5% and hydroquinone 4% in the treatment of melasma in Indian population.

Materials & Methods:

A total of 44 patients diagnosed clinically with melasma of Fitzpatrick type III-IV-V skin. The patients were randomised into two groups: one receiving 4% HQ cream and the other 5% cysteamine cream. The patients in group A were asked to apply a thin layer of 4% hydroquinonoe and group B to apply 5% cysteamine cream on their facial Melasma on daily basis at night time for eight consecutive weeks. All of the 44 included subjects in both groups were advised to use a physical sunscreen in the morning time. After 8 weeks, the primary outcome was measured as the improvement in the modified Melasma area and severity index (mMASI) from baseline along with global physician assessment score. Additionally, dermoscopic pictures were captured and analysed. Adverse effects were documented.

Results:

This study, included 44 participants (22 in each group), revealed significant enhancements in the improvement in mMASI for both groups compared to baseline. The results were statistically significant with both the groups. The of 5% Cysteamine cream was ($p=<0.001$) and 4% hydroquinone ($p = 0.001$). The most common type presented in both the groups were malar type. The median age of presentation in group 1 was 37 years and group 2 was 48 years. No adverse effect was reported in the cysteamine group, however 2 patients reported burning at the site of application in HQ group.

Conclusion:

The patients that received topical 5% cysteamine cream and 4% HQ cream showed a decrease in mMASI severity score with different grades of improvement from the baseline. The results were statistically significant in both the groups and similar side effects were encountered in comparison with hydroquinone. However, a large controlled sample trials are required to establish an optimal and effective mechanism to establish the efficacy of cysteamine in melasma.

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Abstract N°: 4531

Accelerating Vitiligo Repigmentation: Heterologous Type I Collagen as an Adjunct to NB-UVB Therapy

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Introduction & Objectives:

The quest for more effective treatments for vitiligo, offering faster onset and enduring repigmentation, continues to be unmet.

This study aimed to assess the potential efficacy of heterologous Type I collagen (HTIC) as an adjunctive therapy to narrowband ultraviolet B (NB-UVB) in the management of vitiligo.

Materials & Methods:

We enrolled five patients with non-segmental vitiligo, aged 18 years and older, featuring bilateral and approximately symmetrical vitiligo lesions that had remained stable in size for at least six months. All vitiligo lesions were subjected to NB-UVB therapy following the Vitiligo Working Group recommendations. Furthermore, two selected non-facial lesions in each patient underwent intradermal HTIC injections every two weeks. Repigmentation progress in lesions treated with NB-UVB plus HTIC was compared to their symmetrical counterparts treated solely with NB-UVB at baseline and Week 12.

Results:

Repigmentation of HTIC-injected lesions commenced after the first treatment session in three cases and after the second session in two cases. By Week 12, following six sessions, the mean repigmentation rate reached 70.5 percent (95% confidence interval: 0.569–0.841) in the NB-UVB plus HTIC treatment group, contrasting significantly with 16.5 percent (95% confidence interval: 0.137–0.192) in the NB-UVB treatment group (p=0.0006, paired t-test).

Conclusion:

Although our study had a limited sample size, our findings suggest that the incorporation of HTIC alongside NB-UVB therapy may accelerate the onset of repigmentation in vitiligo patients.

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Abstract N°: 4636

Effect of Povorcitinib on Achievement of VASI50 by Body Region in Patients With Extensive Nonsegmental Vitiligo: Post Hoc Analysis of a 52-Week Phase 2 Study

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Introduction & Objectives:

Vitiligo is a chronic autoimmune disease characterized by depigmentation of skin due to the progressive loss of melanocytes. Repigmentation is an important treatment goal; however, some body regions (e.g., hands and feet) are less responsive to treatment. The Vitiligo Area Scoring Index (VASI) is a clinician-reported outcome tool that assesses the affected body surface area (BSA) and depigmentation pattern of vitiligo lesions, as well as repigmentation over time. Povorcitinib, an oral, small-molecule, selective Janus kinase (JAK)1 inhibitor, was associated with substantial repigmentation in patients with extensive nonsegmental vitiligo through 52 weeks of treatment in a phase 2 dose-ranging study (NCT04818346). Here, the effect of povorcitinib on achievement of ≥50% improvement from baseline in VASI (VASI50) by body region is reported, using data from the phase 2 study.

Materials & Methods:

Adults with nonsegmental vitiligo affecting ≥0.5% facial and ≥8% total BSA were eligible to enroll. Patients (N=171) were randomized 1:1:1:1 to receive 1 of 3 doses of povorcitinib (15, 45, or 75 mg) or placebo once daily for 24 weeks of double-blinded treatment. Thereafter, patients received once-daily povorcitinib 45 mg (initially randomized to povorcitinib 45 mg) or 75 mg (initially randomized to placebo or povorcitinib 15 or 75 mg) for an additional 28 weeks (treatment extension). This post hoc analysis pooled data for the 103 patients originally randomized to povorcitinib and included in the extension evaluable population. The percentage of patients achieving VASI50 through Week 52 was calculated for each body region (face, head and neck [including scalp], trunk [including genitalia], upper extremities [including axillae], hands, lower extremities [including buttocks], and feet) and total body (including and excluding the face). Data are reported as observed cases. Only patients with baseline VASI >0 for each body region were included in the respective body region analyses.

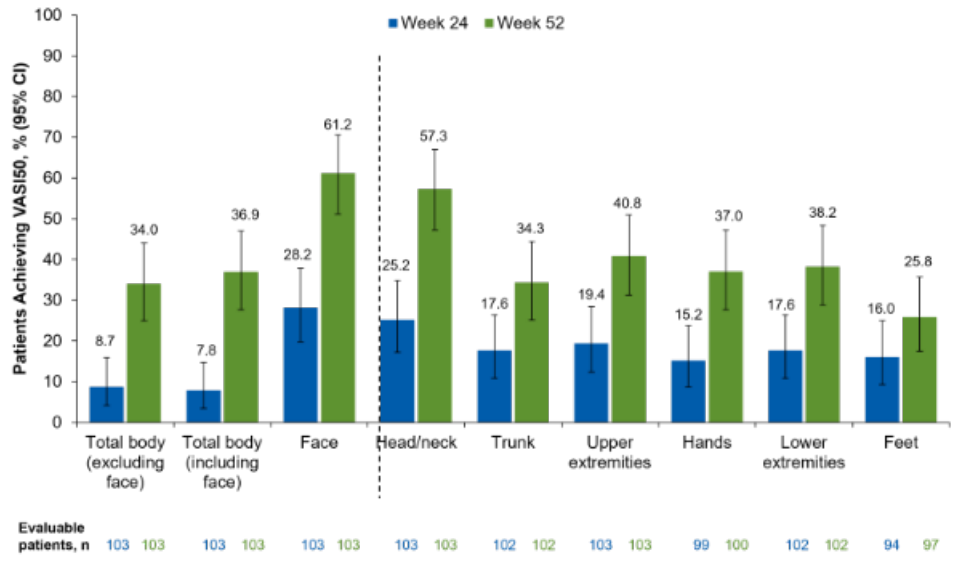
Results:

Among the 103 patients included in this analysis, total body VASI50 (including face) was achieved by 7.8% of patients at Week 24 and increased to 36.9% at Week 52; total body VASI50 (excluding face) was achieved by 8.7% and 34.0% of patients, respectively (**Figure**). The percentage of patients who achieved VASI50 increased from Weeks 24 to 52 in each body region, including face (28.2% to 61.2%), head and neck (25.2% to 57.3%), upper extremities (19.4% to 40.8%), lower extremities (17.6% to 38.2%), and trunk (17.6% to 34.3%). Improvements were also observed from Weeks 24 to 52 in the difficult-to-repigment hands (15.2% to 37.0%) and feet (16.0% to 25.8%).

Conclusion:

In adults with extensive nonsegmental vitiligo, oral povorcitinib produced clinically meaningful improvements in repigmentation through Week 52 across all body regions per VASI50, including the difficult-to-repigment hands and feet. The VASI is the gold standard for assessment of repigmentation in clinical trials, and this analysis of response rates by body region may be helpful in managing treatment expectations among patients and caregivers.

Figure. VASI50 Response by Body Region at Weeks 24 and 52



VASI50, ≥50% improvement from baseline in Vitiligo Area Scoring Index.

Face: includes nose and eyelids, excludes vermillion (red) lips, scalp, ears, and neck; Head/neck: includes face and scalp; trunk: includes genitalia, excludes buttocks; upper extremities: includes axillae, excludes hands; lower extremities: includes buttocks, excludes feet.

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Abstract N°: 4686

Effect of Povorcitinib on Achievement of VESplus50 by Body Region in Patients With Extensive Nonsegmental Vitiligo: Post Hoc Analysis of a 52-Week Phase 2 Study

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Introduction & Objectives:

Vitiligo is a chronic autoimmune disease characterized by progressive loss of melanocytes, resulting in skin depigmentation. The treatment goal for most patients is to regain lost pigmentation; however, some body regions are especially difficult to repigment, such as the hands and feet. The Vitiligo Extent Score-plus (VESplus) is a quantitative clinical tool used to estimate the body surface area (BSA) of vitiligo lesions and assess repigmentation pattern over time. Povorcitinib, an oral, small-molecule, selective Janus kinase (JAK)1 inhibitor, was associated with substantial repigmentation in patients with extensive nonsegmental vitiligo through 52 weeks of treatment in a phase 2 dose-ranging study (NCT04818346). Here, the effect of povorcitinib on achievement of ≥50% improvement from baseline in VESplus (VESplus50) by body region is reported, using data from the phase 2 study.

Materials & Methods:

Adults with nonsegmental vitiligo affecting ≥0.5% facial and ≥8% total BSA were eligible to enroll. 171 patients were randomized 1:1:1:1 to receive 1 of 3 doses of povorcitinib (15, 45, or 75 mg) or placebo once daily for 24 weeks of double-blinded treatment. Thereafter, patients received once-daily povorcitinib 45 mg (initially randomized to povorcitinib 45 mg) or 75 mg (initially randomized to placebo or povorcitinib 15 or 75 mg) for an additional 28 weeks (treatment extension). This post hoc analysis pooled data for the 103 patients randomized to povorcitinib on Day 1 and included in the extension evaluable population. The percentage of patients achieving VESplus50 through Week 52 was calculated for 19 body regions (face [upper, lower], trunk [upper, lower], waist [including genitalia], legs [front, back], feet, arm [right: front, back; left: front, back], hand [right, left], axilla [right, left], back [upper, lower], and gluteal) and total body (including and excluding the face). Data are reported as observed cases. Only the body regions in patients with baseline VESplus >0 (involved regions) were included in analyses.

Results:

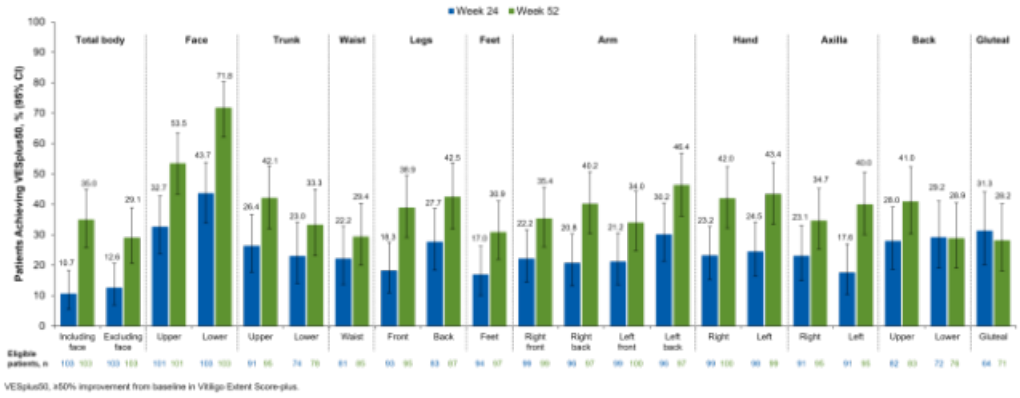
Among the 103 patients included in the analysis, total body VESplus50 (including face) was achieved by 10.7% at Week 24 and increased to 35.0% at Week 52; total body VESplus50 (excluding face) was achieved by 12.6% and 29.1%, respectively (**Figure**). The percentage of patients who achieved VESplus50 increased from Weeks 24 to 52, particularly in the face (upper: 32.7% to 53.5%; lower: 43.7% to 71.8%), back of arms (left: 30.2% to 46.4%; right: 20.8% to 40.2%), back of legs (27.7% to 42.5%), upper trunk (26.4% to 42.1%), and upper back (28.0% to 41.0%). Improvements were also observed from Weeks 24 to 52 in the difficult-to-repigment hands (right: 23.2% to 42.0%; left: 24.5% to 43.4%) and feet (17.0% to 30.9%). Interestingly, there was a plateau in response rates for the lower

back (29.2% to 28.9%) and gluteal (31.3% to 28.2%) regions and only a small increase in response rates for the waist (22.2% to 29.4%) from Week 24 to 52.

Conclusion:

In adults with extensive nonsegmental vitiligo, oral povorcitinib produced clinically meaningful improvements in repigmentation through Week 52 across all body regions per VESplus50, including the hands and feet, which are challenging to repigment. These findings indicate that the validated VESplus can be applied in clinical practice, with the potential to identify differences in repigmentation across 19 small and discrete body regions.

Figure. VESplus50 Response by Body Region at Weeks 24 and 52



VESplus50, ≥50% improvement from baseline in Vitiligo Extent Score-plus.

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Abstract N°: 4781

Comparison of oral tranexamic acid in 'fixed dose of 500mg/day versus dose based on body weight' in melasma : A randomized clinical trial

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Introduction:

Melasma is an acquired hyperpigmentation and vascularization disorder, commonly affecting the face, and has a tendency for relapse. The condition considerably affects the self-esteem and negatively impacts the quality of life (QoL). Tranexamic acid is widely used off-label in its treatment. Majority studies used a dose of 500mg/day (250mg bid) but not all patients respond well at this dose.

Objective:

To compare oral tranexamic acid in two dosing regimens (fixed dose of 500mg/day versus dose based on body weight) in melasma.

Materials and methods:

This is a randomized open label clinical trial in which 20 patients (>18 years of age) of melasma (regardless of the gender and severity) were randomized in two groups (group A and B). Group A received oral tranexamic acid in a fixed dose of 500mg/day whereas group B at a minimum dose of 10mg/kg/day. All patients were prescreened for any contraindications (absolute/relative) of tranexamic acid and baseline modified Melasma Area and Severity index (mMASI) and melasma QoL scores were calculated. Treatment duration was for 12 weeks. Follow up was done 4 weekly for the entire treatment duration and for another 12 weeks post completion. Strict photoprotection was advised. Primary outcome was 75% reduction in mMASI (mMASI-75) at week 12 from baseline, melasma QoL scores at week 12 and 24 and relapse rates at week 24.

Results:

Both groups showed a significant reduction in mean mMASI scores at week 12 ($p<0.05$) but the proportion of patients reaching mMASI-75 was significantly greater in group B (80% cases) at 12 weeks than group A ($p<0.05$). Reduction in melasma QoL score was significant or both groups at week 12 and 24 ($p=0.04$). Gastric disturbance and nausea was noted in one patient from each group but was temporary and did not require discontinuation Relapse rates at week 24 were low for both the groups but was lower for group B.

Conclusion:

Both dosing regimens showed efficacy in terms of mMASI reduction at week 12 but in reaching mMASI-75, dose based on bodyweight outperformed the fixed dose. Relapse rates were also lower for the dose based on bodyweight at week 24. So, optimal dosing of tranexamic acid based on bodyweight in melasma seem to be the scientific way forward.

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Abstract N°: 4975

Effectiveness of Imiquimod (IMQ) in Comparison to Other Treatments in the Reduction of Actinic Keratosis Lesions

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Introduction & Objectives:

Actinic keratoses (AK) are commonly encountered and recognised as sun-induced precursors to squamous cell carcinoma (SCC). There is a wide spectrum of treatment available to lower the risk of SCC transformation and address field pre-cancerisation. These include lesion-directed therapy such as curettage, cryotherapy and laser ablation as well as field-directed therapy such as photodynamic therapy and topical medication. However, currently there are no clear recommendations or guidelines as to which modality of treatment is unanimously superior. The purpose of this systematic review is to evaluate the effectiveness of imiquimod (IMQ) in comparison to other treatments in the reduction of actinic keratosis lesions.

Materials & Methods:

A systematic search was conducted using MEDLINE, EMBASE and Cochrane for randomised controlled trials using imiquimod for the treatment of actinic keratoses. The primary outcome was treatment effectiveness, reported as reduction in the number of actinic keratosis lesions. Secondary outcomes assessed include tolerability, treatment adherence, adverse events and cost.

Results:

After screening, 25 studies were included with a total of 4739 patients with actinic keratosis. Imiquimod of different strengths as well as comparison with other treatments such as 5-fluorouracil, photodynamic therapy, diclofenac, ingenol mebutate gel and cryotherapy were assessed. Imiquimod is an effective therapy for AKs with 100% clearance rates achieved in up to 85% of patients when used once daily, three times a week for 4 weeks. Overall, imiquimod remains a relatively tolerable therapy with expected adverse effects including erythema, pruritus, pain and scaling. Treatment may be limited by duration and adherence to treatment courses.

Conclusion:

Imiquimod is a safe, accessible and effective therapy for actinic keratoses. Further studies should explore means to enhance treatment efficacy with combination therapies to reduce treatment duration and increase compliance.

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Abstract N°: 5060

An effective topical treatment of vitiligo with a combination of Ginger and Carrot: A case report

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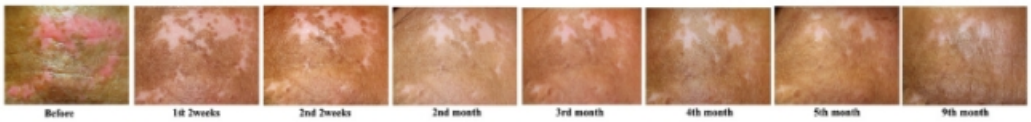
Introduction & Objectives: Vitiligo mentioned as a hypopigmented disease which could be a cosmetic problem. There is no known cure for vitiligo until now. There are some initial studies about the efficacy of natural health product in the treatment of vitiligo. We aimed to determined the repigmentation response of the vitiligo lesions following administration of an herbal cream which is made based on Persian Medicine.

Materials & Methods: This cream which is named Dolbigo was made of the water extract of*Daucus carota* L. var. sativus and rhizome powder of *Zingiber officinale* Rosc. These two components mixed together in a weight ratio of 1:4 in the USP cold cream.

A primary study group of the present research consisted of 5 patients which 3 of them has acrofacial vitiligo and 2 of them has focal vitiligo. In this group all patients except one person had got topical and physical treatment already, but they did not have an acceptable or a long-time response to these therapies. It was decided to report the response of the patient who was not given any kind of therapy for vitiligo, as a naive patient who was a 50-years-old man with focal vitiligo. The lesions had appeared on his forehead and right eyelid 5 years ago. He had not any underlying diseases and took no medicine or supplement.

Dolbigo was administered to him as a topical drug and ordered to apply on lesions regularly three times a day and massage it for one minute. The cream used to be stayed on them for 30 minutes and then could wash with water. He was oriented not to take any medicines for vitiligo except Dolbigo, during the study. However, he could apply sunscreen after washing his face. For measuring the response of lesions to treatment, after taking some photos of lesions in same conditions, the photos were analyzed by Image J Program. The percentage of depigmented area is determined in this program.



Results: Dolbigo therapy with 6-months administration followed by 3-month rest was applied. In the first month, his response was examined in 2 weeks intervals and then, the examination was done every 4 weeks for the 5 other months. Finally, in the 9th month he was examined to check if the skin depigmentation occurs again or not (Figure 1, Figure 2).

Figure 1. The changes of lesions during treatment with carrot and ginger cream.

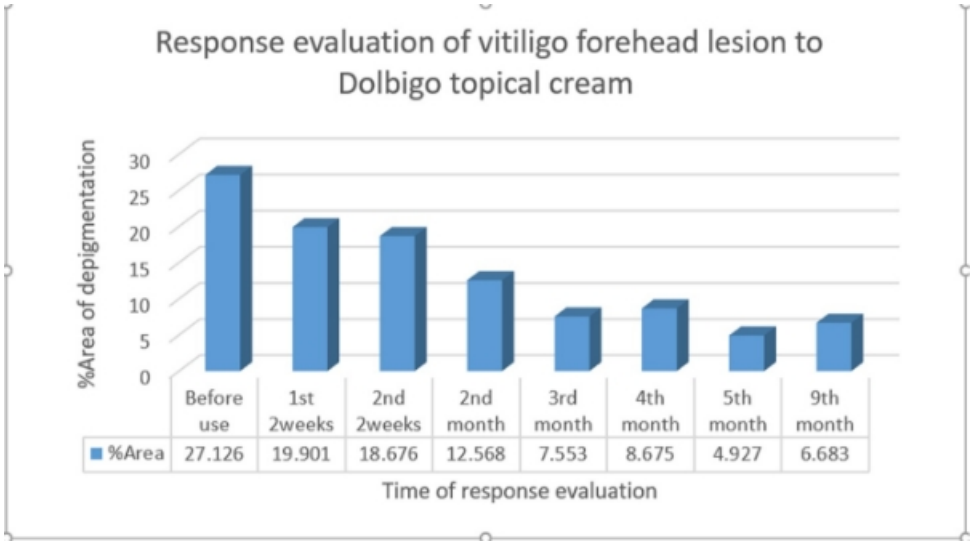


Figure 2. Response evaluation of vitiligo forehead lesion to carrot and ginger cream.

Conclusion: So, *Daucus carota* L. var. sativus and *Zingiber officinale* Rosc. may be mentioned as the parts of therapy in the future attempts to find proper treatment manner of vitiligo.

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Abstract N°: 5062

Improvement in a case of vitiligo with the help of Persian Medicine treatments, a case report

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Introduction & Objectives: A 28-year-old man developed vitiligo lesions on his face from three weeks before. He was using oral corticosteroids and topical tacrolymus for three weeks, but skeletal pain and no improvement in skin lesions, lead he to refer to Traditional Persian Medicine (TPM) clinic.

Materials & Methods: The patient was diagnosed as Baras and prescribed dietary recommendations, henna poultice, chamomile oil, chamomile tea and Nigella Sativa potion with honey.

Results: By following the orders, the lesions had a healing process and faded over time. In the fourth week of Persian medicine treatment, the patient accidentally suffers from severe sunburn and blisters in the hypo pigmented areas. As the blisters healed, the newly grown skin was completely healthy

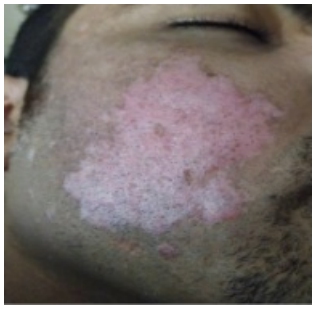

Figure 1: Before treatment

Figure 1: Before treatment

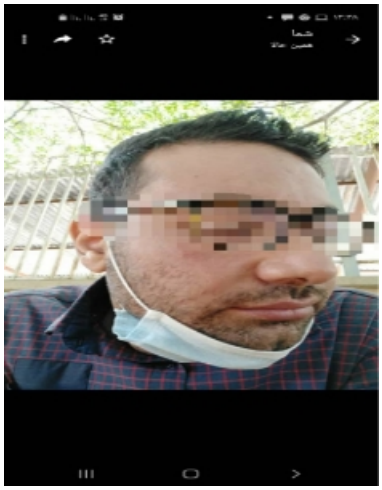

Figure 2: After treatment

Conclusion: The use of classic medicine beside TPM can be effective in treating vitiligo.

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Abstract N°: 5113

Pigmentary disorders, prevalence, impact on quality of life, social stigmatization: results of the first large international survey in South Asian Pacific (I'SPOT study)

Chee-Leok Goh[1], Hee Young Kang[2], Henry W. Lim[3], Akimichi Morita[4], Liu Wei[5], Andrew F. Alexis[6], Sérgio Schalka[7], Brigitte Dréno[8], Jean Krutmann[9], Suzana Puig[10], Fatimata Ly[11], Jorge Ocampo-Candiani[12], Caroline Lefloch[13], Anne Laure Demessant*[14], Delphine Kerob[15], Thierry Passeron[16]

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Introduction & Objectives:

Pigmentary disorders (PD) such as Melasma, Post-inflammatory Hyperpigmentation (PIH), Solar Lentigo, Vitiligo, Peri-Orbital Hyperpigmentation (POH) and Axillary Hyperpigmentation (AH) are frequent dermatological conditions, but little is known on their real-world prevalence and impact. This first worldwide survey evaluates the prevalence of PD, its impact on quality of life (QOL) and stigmatization in 34 countries. This current abstract presents the SAP results compared to worldwide.

Materials & Methods:

Survey (N= 48,000) conducted in 34 countries structured this way: North America, Latin America ,Europe , SSA, North Asia, SAP, MENA, India and Australia from 12/22 -02/23. An automated selection from the Ipsos Panel ensured representative samples (gender, age, employment status and country region) based on quota method.

The online auto-administered questionnaire covered demographics, phototype, self-reported pigmentation condition based on a descriptive text and image of each of the conditions; its impact on QOL, stigmatization, and sun protection behavior.

Results:

Among 6 000 people living in the SAP zone, 63% of the population report having at least one PD (vs 50% worldwide) such as solar lentigo 31% (vs 27%), AH 26% (vs 18%), PIH 22% (vs 15%), POH 27% (vs 15%), melasma 16% (vs 11%) and vitiligo 11% (vs 8%). In detail, people living in SAP reported more PD compared to worldwide

especially in Thailand (77% at least one PD), Indonesia (73%) vs Malaysia (55%) and Singapore (46%). Those who reported suffering from a PD were mostly women 56% with an average age of 42.9yo. Diagnosis by the dermatologist was reported only by 30% (vs 36% worldwide), whereas 20% (vs 19% worldwide) made their own diagnosis thanks to the questionnaire.

Pigmentation disorders have a major impact on the QOL and lead to stigmatization. DLQI was >10/30 for 35% of them vs 28% worldwide. In detail DLQI >10/30 depends on the PD and varies from 21% for solar lentigo to 58% for vitiligo.

Impacts on stigmatizations were higher in SAP: 48% of patients with a PD have concealed/hidden the visible parts of their affected skin (vs 45% worldwide), 36% have avoided some people (vs 32% worldwide), 32% have refused direct contact with the public (vs 30% worldwide), and 21% felt they brought shame to their family, relatives (vs 19% worldwide).

Although sun exposure is well recognized by the medical community to worsen the pigmentation, only 28% of SAP sufferers consider that sun exposure is deleterious to their condition (vs 38% worldwide), this is mainly the case in Malaysia and in Indonesia in which few consider it deleterious (respectively 16% and 24%). They however reported a higher level of protection against the sun: 41% protect their skin all year, and especially in Thailand (52%) (vs 38% worldwide). Finally, 75% of SAP sufferers regret not having better protected their skin from the sun in the past vs 70% among non-sufferers – a lower regret compared to worldwide sufferers (80%).

Conclusion:

This first large international survey on PD shows the higher prevalence of PD in SAP vs worldwide, especially in Thailand and Indonesia. QOL and stigmatization were more serious in SAP vs worldwide. Although photoprotection habits reported are higher vs worldwide, knowledge about PD and sun exposure is lower, this highlights the need for a more efficient photoprotection education.

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Abstract N°: 5119

Pigmentary disorders, prevalence, impact on quality of life, social stigmatization: results of the first large international survey in Latin America

Sérgio Schalka*[1], Jorge Ocampo-Candiani[2], Andrew F. Alexis[3], Suzana Puig[4], Fatimata Ly[5], Brigitte Dréno[6], Jean Krutmann[7], Chee-Leok Goh[8], Hee Young Kang[9], Henry W. Lim[10], Akimichi Morita[11], Liu Wei[12], Anne-Laure Demessant-Flavigny[13], Caroline Lefloch[14], Delphine Kerob[15], Thierry Passeron[16]

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Introduction & Objectives:

Pigmentary disorders (PD) such as Melasma, Post-inflammatory Hyperpigmentation (PIH), Solar Lentigo, Vitiligo, Peri-Orbital Hyperpigmentation (POH) and Axillary Hyperpigmentation (AH) are frequent dermatological conditions, but little is known on their real-world prevalence and impact. This first worldwide survey evaluates the prevalence of PD, its impact on quality of life (QOL) and stigmatization in 34 countries. This current abstract presents the Latin American results compared to worldwide.

Materials & Methods:

Survey (N= 48,000) conducted in 34 countries structured this way: North America, Latin America ,Europe , SSA, North Asia, SAP, MENA, India and Australia from 12/22 -02/23. An automated selection from the Ipsos Panel ensured representative samples (gender, age, employment status and country region) based on quota method.

The online auto-administered questionnaire covered demographics, phototype, self-reported pigmentation condition based on a descriptive text and image of each of the conditions; its impact on QOL, stigmatization, and sun protection behavior.

Results:

Among 7 000 Latin Americans, 57% of the population report having at least one PD (vs 50% worldwide) such as solar lentigo 33% (vs 27%), AH 24% (vs 18%), POH 12% (vs 15%), melasma 12% (vs 11%), PIH 11% (vs 15%) and vitiligo 4% (vs 8%). Latin Americans reported more PD compared to worldwide except for POH, PIH and vitiligo. In

detail, Argentinians reported less PD (47%) versus Brazil (62%), Mexicans (63%) and Peru (58%). Latin Americans who reported suffering from a PD were mostly women 61% with an average age of 43.1yo. Diagnosis by the dermatologist was reported by 40% (vs 36% worldwide) and 24% (vs 19% worldwide) made their own diagnosis thanks to the questionnaire.

Pigmentation disorders have a major impact on the QOL and lead to stigmatization. DLQI was >10/30 for 19% of them vs 28% worldwide. In detail DLQI >10/30 depends on the PD and varies from 11% for solar lentigo to 29% for vitiligo.

Although impacts on stigmatizations were lower in Latin America, they remain important: 42% of patients with a PD have concealed/hidden the visible parts of their affected skin (vs 45% worldwide), 26% have avoided some people (vs 32% worldwide) and 24% have refused direct contact with the public (vs 30% worldwide).

Although sun exposure is well recognized by the medical community to worsen the pigmentation, Latin Americans sufferers reported a higher-level protection against the sun: 42% protect their skin all year (vs 38% worldwide vs 33% among Latin America non-sufferers). Among sufferers, Argentinians less protect their skin all year (33%) versus Mexicans (48%). And 56% of Latin Americans sufferers consider that sun exposure is deleterious to their condition (vs 38% worldwide). And yet, 92% of Latin Americans PD sufferers regret not having better protected their skin from the sun in the past (vs 80% worldwide), less likely the case among Argentinian sufferers (88%).

Conclusion:

This first large international survey on PD shows the higher prevalence of Melasma, Solar Lentigo and AH in Latin America vs worldwide especially in Brazil, Mexico and Peru, and their important impact on QOL and stigmatization. However, compared to worldwide, Latin America have better photoprotection behaviors except in Argentina in which there is a need for a better photoprotection education.

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Abstract N°: 5122

Pigmentary disorders, prevalence, impact on quality of life, social stigmatization: results of the first large international survey in Middle East and North Africa (I'SPOT study)

Brigitte Dréno[1], Jean Krutmann[2], Andrew F. Alexis[3], Suzana Puig[4], Liu Wei[5], Akimichi Morita[6], Hee Young Kang[7], Fatimata Ly[8], Sérgio Schalka[9], Jorge Ocampo-Candiani[10], Anne-Laure Demessant-Flavigny[11], Caroline Lefloch[12], Delphine Kerob[13], Henry W. Lim[14], Thierry Passeron[15]

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Introduction & Objectives:

Pigmentary disorders (PD) such as Melasma, Post-inflammatory Hyperpigmentation (PIH), Solar Lentigo, Vitiligo, Peri-Orbital Hyperpigmentation (POH) and Axillary Hyperpigmentation (AH) are frequent dermatological conditions, but little is known on their real-world prevalence and impact. This first worldwide [WW] survey evaluates the prevalence of PD, its impact on quality of life (QOL) and stigmatization in 34 countries. This current abstract presents the MENA results compared to WW.

Materials & Methods:

Survey (N= 48,000) conducted in 34 countries structured this way: North America (USA, Canada), Latin America (Brazil, Argentina, Mexico, Peru), Europe (France, Spain, Germany, UK, Italy, Greece, Sweden, Russia), SSA (South Africa, Ivory Coast, Nigeria, Kenya), North Asia (China, Japan, South Korea), SAP (Singapore, Malaysia, Thailand, Indonesia), MENA (Morocco, Egypt, Saudi Arabia, Qatar, United Arab Emirates, Kuwait, Oman), India and Australia) from December 2022-February 2023. An automated selection from the Ipsos Panel ensured representative samples (gender, age, employment status and country region) based on quota method.

The online auto-administered questionnaire covered demographics, phototype, self-reported pigmentation condition based on a descriptive text and image of each of the conditions; its impact on QOL, stigmatization, and sun protection behavior.

Results:

Among 4 000 people living in the MENA zone, 52% of the population report having at least one PD (vs 50% WW) such as solar lentigo 26% (vs 27%), AH 26% (vs 18%), PIH 22% (vs 15%), POH 19% (vs 15%), melasma 15% (vs 11%) and vitiligo 11% (vs 8%). In detail, people living in MENA reported more PD compared to WW especially in Egypt in which 30% report AH and 28% PIH. Those who reported suffering from a PD were mostly women 55% with an average age of 38.6yo. Diagnosis by the dermatologist was reported by 42% (vs 36% WW) and 16% (vs 19% WW) made their own diagnosis thanks to the questionnaire.

Pigmentation disorders have a major impact on the QOL and lead to stigmatization. DLQI was >10/30 for 42% of them vs 28% WW. In detail DLQI >10/30 depends on the PD and varies from 30% for POH to 58% for vitiligo.

Impacts on stigmatizations were higher in MENA : 52% of patients with a PD have concealed/hidden the visible parts of their affected skin (vs 45% WW), 44% have avoided some people (vs 32% WW), 40% have refused direct contact with the public (vs 30% WW), 31% have been left out by colleagues (vs 21% WW), 31% were pushed away by their partner (vs 20% WW), and 29% felt they brought shame to their family, relatives (vs 19% WW).

Although sun exposure is well recognized by the medical community to worsen the pigmentation, only 23% of MENA sufferers consider that sun exposure is deleterious to their condition (vs 38% WW). In detail, some disparities appear: 28% of Moroccans sufferers consider it deleterious and 19% among GCC sufferers. Only 37% protect their skin all year (vs 38% WW), a protection lower among GCC sufferers (32%) but better among Moroccans sufferers (44%). And yet, 81% of MENA sufferers regret not having better protected their skin from the sun in the past (vs 80% WW).

Conclusion:

This first large international survey on PD shows the higher prevalence of PD in MENA especially in Egypt in which AH and PIH were more present. Although some disparities appear among countries, MENA sufferers report lower knowledge about sun exposure and PD, highlighting the need for a more efficient photoprotection education.

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Abstract N°: 5136

Pigmentary disorders, prevalence, impact on quality of life, social stigmatization: results of the first large international survey in North Asia (I'SPOT study)

Akimichi Morita[1], Liu Wei[2], Henry W. Lim[3], Andrew F. Alexis[4], Sérgio Schalka[5], Brigitte Dréno[6], Jean Krutmann[7], Suzana Puig[8], Chee-Leok Goh[9], Hee Young Kang[10], Fatimata Ly[11], Jorge Ocampo-Candiani[12], Anne-Laure Demessant-Flavigny[13], Caroline Lefloch[14], Delphine Kerob[15], Thierry Passeron[16]

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Introduction & Objectives:

Pigmentary disorders (PD) such as Melasma, Post-inflammatory Hyperpigmentation (PIH), Solar Lentigo, Vitiligo, Peri-Orbital Hyperpigmentation (POH) and Axillary Hyperpigmentation (AH) are frequent dermatological conditions, but little is known on their real-world prevalence and impact. This first worldwide [WW] survey evaluates the prevalence of PD, its impact on quality of life (QOL) and stigmatization in 34 countries. This current abstract presents the North Asian results compared to worldwide

Materials & Methods:

Survey (N= 48,000) conducted in 34 countries structured this way: North America (USA, Canada), Latin America (Brazil, Argentina, Mexico, Peru), Europe (France, Spain, Germany, UK, Italy, Greece, Sweden, Russia), SSA (South Africa, Ivory Coast, Nigeria, Kenya), North Asia (China, Japan, South Korea), SAP (Singapore, Malaysia, Thailand, Indonesia), MENA (Morocco, Egypt, Saudi Arabia, Qatar, United Arab Emirates, Kuwait, Oman), India and Australia) from December 2022-February 2023. An automated selection from the Ipsos Panel ensured representative samples (gender, age, employment status and country region) based on quota method.

The online auto-administered questionnaire covered demographics, phototype, self-reported pigmentation condition based on a descriptive text and image of each of the conditions; its impact on QOL, stigmatization, and sun protection behavior.

Results:

Among 6 000 Northern Asians, 44% of the population report having at least one PD (vs 50% WW) such as solar lentigo 22% (vs 27%), POH 17% (vs 15%), PIH 14% (vs 15%), AH 13% (vs 18%), melasma 15% (vs 11%) and vitiligo 8% (vs 8%). In detail, Northern Asians reported less PD compared to WW except for POH and melasma. But, North Asia reveals major disparities according to the countries: whereas 66% of Chinese report at least one PD, this is the case for 21% of Japanese people. Northern Asians who reported suffering from a PD were mostly women 55% with an average age of 47.7yo. Diagnosis by the dermatologist was reported only by 44% (vs 36% WW), whereas 20% (vs 19% WW) made their own diagnosis thanks to the questionnaire.

Pigmentation disorders have a major impact on the QOL and lead to stigmatization. DLQI was >10/30 for 23% of them vs 28% WW. In detail DLQI >10/30 depends on the PD and varies from 15% for melasma to 33% for PIH.

Although impacts on stigmatizations were lower in North Asia, they remain important: 40% of patients with a PD have concealed/hidden the visible parts of their affected skin (vs 45% WW), 29% have avoided some people (vs 32% WW), and 28% have refused direct contact with the public (vs 30% WW).

Although sun exposure is well recognized by the medical community to worsen the pigmentation, North Asians sufferers reported a low-level protection against the sun: 33% protect their skin all year (vs 38% WW). And yet, 52% consider that sun exposure is deleterious to their condition (vs 38% WW). Finally, only 64% of North Asians sufferers regret not having better protected their skin from the sun in the past vs 58% of non-sufferers – a lower regret compared to WW sufferers (80%).

Conclusion:

This first large international survey on PD shows different prevalence of PD in North Asia, in which Chinese reports more PD compared to Japan, and eventually compared to WW. Although North Asia are more likely to know that sun exposure is deleterious to PD, their low level of protection highlights the need for a more efficient photoprotection education.

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EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY

Abstract N°: 5144

Pigmentary disorders, prevalence, impact on quality of life, social stigmatization: results of the first large international survey in Sub Saharan Africa (I'SPOT study)

Fatimata Ly[1], Brigitte Dréno[2], Jean Krutmann[3], Chee-Leok Goh[4], Hee Young Kang[5], Henry W. Lim[6], Akimichi Morita[7], Liu Wei[8], Sérgio Schalka[9], Suzana Puig[10], Jorge Ocampo-Candiani[11], Anne-Laure Demessant-Flavigny[12], Caroline Lefloch[13], Delphine Kerob[14], Thierry Passeron[15]

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Introduction & Objectives:

Pigmentary disorders (PD) such as Melasma, Post-inflammatory Hyperpigmentation (PIH), Solar Lentigo (SL) , Vitiligo, Peri-Orbital Hyperpigmentation (POH) and Axillary Hyperpigmentation (AH) are frequent dermatological conditions, but little is known on their real-world prevalence and impact. This first worldwide [WW] survey evaluates the prevalence of PD, its impact on quality of life (QOL) and stigmatization in 34 countries. This current abstract presents the SSA results compared to WW.

Materials & Methods:

Survey (N= 48,000) conducted in 34 countries structured this way: North America (USA, Canada), Latin America (Brazil, Argentina, Mexico, Peru), Europe (France, Spain, Germany, UK, Italy, Greece, Sweden, Russia), SSA (South Africa, Ivory Coast, Nigeria, Kenya), North Asia (China, Japan, South Korea), SAP (Singapore, Malaysia, Thailand, Indonesia), MENA (Morocco, Egypt, Saudi Arabia, Qatar, United Arab Emirates, Kuwait, Oman), India and Australia) from 12/22-02/23. An automated selection from the Ipsos Panel ensured representative samples based on quota method.

The online auto-administered questionnaire [Q] covered demographics, phototype, self-reported pigmentation condition based on a descriptive text and image of each of the conditions; its impact on QOL, stigmatization, and sun protection behavior

Results:

Among 5 000 people living in the SSA zone, 51% of the population report having at least one PD (vs 50% WW) such as PIH 24% (vs 15%), AH 23% (vs 18%), SL 16% (vs 27%), POH 15% (vs 15%), melasma 10% (vs 11%) & vitiligo 7% (vs 8%). Some differences appear according to the country: 59% of Nigerians et 54% of South Africans report PD compared to Ivorians (46%) and Kenyans (47%). SSA who reported suffering from a PD were mostly women 62% with an average age of 36.3yo. Diagnosis by the dermatologist was reported only by 27% (vs 36% WW), whereas 16% (vs 19% WW) made their own diagnosis thanks to the Q.

PD have a major impact on the QOL and lead to stigmatization. DLQI was >10/30 for 31% of them vs 28% WW. In detail DLQI >10/30 depends on the PD and varies from 21% for POH to 45% for melasma.

Impacts on stigmatizations were higher in SSA: 58% of patients with a PD have concealed/hidden the visible parts of their affected skin (vs 45% WW), 41% have avoided some people (vs 32% WW), 37% have refused direct contact with the public (vs 30% WW) and 24% have been left out by colleagues (vs 21% WW).

Although sun exposure is well recognized by the medical community to worsen the pigmentation, SSA sufferers reported a low-level protection against the sun: only 30% protect their skin all year (vs 38% WW). South Africans sufferers report a better protection (37%) vs 17% in Ivory Coast. Only 31% consider that sun exposure is deleterious to their condition (vs 38% WW). Disparities in countries appear among PD sufferers: 26% of South Africans and 15% of Kenyans consider the sun deleterious vs 43% of Ivorians & 38% of Nigerians. And yet, only 75% of SSA sufferers regret not having better protected their skin from the sun in the past vs 60% among non-sufferers, a lower regret compared to sufferers WW (80%).

Conclusion:

This first large international survey on PD shows the higher prevalence of PIH and AH in SSA vs WW, especially in South Africa and in Nigeria, their important impact on QOL and stigmatization. Although heterogenous results in SSA, population report insufficient photoprotection knowledge and behaviors, highlighting the need for a more efficient photoprotection education.

EA DV CONGRESS
AMSTERDAM 25-28 SEPTEMBER 2024
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Abstract N°: 5149

Pigmentary disorders, prevalence, impact on quality of life, social stigmatization: results of the first large international survey in North America (I'SPOT study)

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Introduction & Objectives:

Pigmentary disorders (PD) such as Melasma, Post-inflammatory Hyperpigmentation (PIH), Solar Lentigo(SL), Vitiligo, Peri-Orbital Hyperpigmentation (POH) and Axillary Hyperpigmentation (AH) are frequent dermatological conditions, but little is known on their real-world prevalence and impact. This first worldwide [WW] survey evaluates the prevalence of PD, its impact on quality of life (QOL) and stigmatization in 34 countries. This current abstract presents the North American results compared to WW.

Materials & Methods:

Survey (N= 48,000) conducted in 34 countries structured this way: North America (USA, Canada), Latin America (Brazil, Argentina, Mexico, Peru), Europe (France, Spain, Germany, UK, Italy, Greece, Sweden, Russia), SSA (South Africa, Ivory Coast, Nigeria, Kenya), North Asia (China, Japan, South Korea), SAP (Singapore, Malaysia, Thailand, Indonesia), MENA (Morocco, Egypt, Saudi Arabia, Qatar, United Arab Emirates, Kuwait, Oman), India and Australia) from 12/22-02/23. An automated selection from the Ipsos Panel ensured representative samples (gender, age, employment status and country region) based on quota method.

The online auto-administered questionnaire covered demographics, phototype, self-reported pigmentation condition based on a descriptive text and image of each of the conditions; its impact on QOL, stigmatization, and sun protection behavior.

Results:

Among 4 000 North Americans, 43% of the population report having at least one PD (vs 50% WW) such as SL 28%

(vs 27%), PIH 12% (vs 15%), AH 11% (vs 18%), POH 10% (vs 15%), melasma 7% (vs 11%) and vitiligo 5% (vs 8%). In detail, North Americans reported less PD compared to WW except for SL. North Americans who reported suffering from a PD were mostly women 57% with an average age of 47.8yo. Diagnosis by the dermatologist was reported only by 31% (vs 36% WW), whereas 26% (vs 19% WW) made their own diagnosis thanks to the questionnaire.

PD have a major impact on the QOL and lead to stigmatization. DLQI was >10/30 for 17% of them vs 28% WW. In detail DLQI >10/30 depends on the PD and varies from 6% for solar lentigo to 38% for vitiligo.

Although impacts on stigmatizations were lower in NA, they remain important: 37% of patients with a PD have concealed/hidden the visible parts of their affected skin (vs 45% WW), 23% have avoided some people (vs 32% WW), 22% have refused direct contact with the public (vs 30% WW), and 16% felt they brought shame to their family, relatives (vs 19% WW).

Although sun exposure is well recognized by the medical community to worsen the pigmentation, North Americans sufferers reported a low-level protection against the sun but similar compared to WW sufferers: only 39% protect their skin all year (vs 38% WW). Canadians' sufferers report a lower protection (36%) versus USA sufferers (43%). Only 36% consider that sun exposure is deleterious to their condition (vs 38% WW). Disparities appear between Canada and USA: Canadian seem more aware of the deleterious aspect of the sun for their PD (43%) vs 29% of USA. Finally, 83% of North Americans sufferers regret not having better protected their skin from the sun in the past, a very similar feeling in Canada and in the USA (vs 80% WW).

Conclusion:

This first large international survey on PD shows high prevalence of PD but less frequent compared to WW prevalence. North Americans photoprotection behaviors and knowledge, although similar to WW remain insufficient, it highlights the need for a more efficient photoprotection education.

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Abstract N°: 5220

Pigmentation and its stressfull burden.

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Introduction & Objectives: Vitiligo is an acquired dermatological pigmentation disorders of the skin. It causes loss of pigment on effected areas of the skin or mucosae and is characterised by milk white, nonscaley lesions with distinct margins.

Materials & Methods:

Aim of this research study about Vitiligo is to investigate the impact of vitiligo on the life quality of affected patients.

Results: 1758 individuals who come in Dermatolgy Service in period October 2014 - March 2015 was examined having or not Vitiligo. 39 Cases with Vitiligo were diagnose through the physical standard examination. In these 39 patients diagnosis with Vitiligo were applied DLQI questionnaire:

From 39 patient, 22 were females and 17 were males, it was noticed that gender was influential in the degree of concern that brings Vitiligo (p=0.01,), and in the degree of embarrassed and anxiety due to this skin disease (p=0.01), where females were proven to be the most sensitive category. Resulted that age group was determinant in the skin disease (vitiligo) impact on social activities (p=0.007), in the skin disease impact for the selection of clothes (p=0.007), in problems with relatives as the result of skin disease states (p=0.007) and in problems level caused from the skin disease treatment (p=0.000). Categories which are more sensitive from skin disease are the age groups 15-24 and 25-34, represent the highest percentage of the persons who have concerns as the result of the skin disaese states. residence feature is determinant for the concerns level as the result of skin disease states (p=0.01), skin disease impact level on social activities (p=0.026), sexual difficulties level as the result of skin disease states (p=0.0047) .

Conclusion: Finally, the aetiology and pathogenesis of vitiligo remains unclear. It is still not understood what causes the destruction of melanocytes. Also, uncertainties remain about the natural history and epidemiology of this disease. Current treatments help to alleviate symptoms for temporary repigmentation of vitiliginous patches, but these do not cure the underlying disease.

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Abstract N°: 5469

Comparison of the capacity of two SPF50+ sunscreens with UVA-PF=20 and UVA-PF>40 to efficiently inhibit solar simulator-induced persistent skin hyperpigmentation

Ludivine Canchy[1], Anne-Laure Demessant-Flavigny[1], Caroline Lefloch[1], Hervé Burnet[2], Aurelie Bonnot[2], Solene Trevisan[3], Pascale Renoux[4]

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Introduction & Objectives:

UVA radiation is present all over the year and can cause multiple harmful consequences on the skin including skin cancer, skin aging, immunomodulation and hyperpigmentation. Among currently available SPF50+ sunscreens, the UVA protection factor (UVA-PF) highly varies, an information is frequently not clearly given on the packaging and therefore, awareness about its importance is still low.

This study assessed the potential to inhibit persistent UVA-induced skin pigmentation of two sunscreens with equivalent SPF50+ UVB but different UVA-filter properties.

Materials & Methods:

A single day intra-individual randomized double blind study was conducted in 10 healthy Caucasian volunteers aged 18-70 years with phototypes III to IV from December 2022 to January 2023. Based on the ISO 24442:2011 methodology, exposure started 15 to 30 minutes after the standardized fingercot application of 2mg/cm^2 of the two tested products (product 1: UVA-PF=20, product 2: UVA-PF>40) and a reference sunscreen (UVA PF=12). Visual assessment to determine the Minimal Persistent Pigment Darkening Dose (MPPDD) was made 2h15 after the end of UV exposure; high quality images using specific devices were made to visualize the UVA-induced pigmentation.

Results:

The UVA-PF>40 sunscreen provided a higher protection against UVA-induced hyperpigmentation than that containing a UVA-PF=20. In the volunteer showing the best protecting effect, no pigmentation was detected with the UVA-PF>40 sunscreen even at the highest dose of 549 J/cm^2. Conversely, a perceptible hyperpigmentation effect was already detected with the UVA-PF=20 sunscreen at an intermediate dose of 281 J/cm^2.

Conclusion:

This study shows the superior efficacy of a UVA-PF>40 sunscreen in inhibiting UVA-induced persistent hyperpigmentation using a well calibrated model. Results underline the importance of applying sunscreen products that do not only efficiently protect from UVB, but also protect efficiently from UVA. Moreover, the study confirms the need for dermatologists to raise patients' awareness about the deleterious effects of UVA on skin teratogenicity, skin aging and skin pigmentation and the importance of using sunscreens that efficiently protect against UVB and UVA radiation.

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Abstract N°: 5488

Melasma Management with cosmeceuticals and the combination of 1927nm laser and depigmentation mask: Case series

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Introduction & Objectives:

Melasma is a complex dermatosis characterized by facial hyperpigmentation, primarily affecting women over 35 years of age. Standard treatment typically involves rigorous photoprotection, topical depigmentation therapy, and in-office procedures such as chemical peels and lasers, yielding varying outcomes. This study aims to assess the efficacy of a topical regimen comprising depigmenting cosmeceuticals and targeted photoprotection in conjunction with two sessions of Thulium 1927nm laser therapy and a depigmenting mask.

Materials & Methods:

We present findings from a cohort of six patients treated with a depigmenting cosmeceutical formulation containing tranexamic acid, niacinamide, mandelic acid, and gluconolactone applied twice daily for 16 weeks. Additionally, patients used a specific sunscreen containing niacinamide, sclareolide, and *Pisum Sativum* (Pea) extract. Participants underwent two sessions of 1927nm laser therapy, followed immediately by the application of a depigmenting mask composed of hydroquinone 7%, retinoic acid 6%, kojic acid 3%, triamcinolone acetonide 0.1%, ascorbic acid 1.5%, and alpha tocopherol 1.5% in Lanette cream. They were instructed to wear the mask for 6 hours before washing it off at home. Melasma severity was evaluated using the Melasma Severity Scale (MSS) before treatment initiation, and at 4 weeks post the final laser + depigmenting mask session (12 weeks treatment in total). Pre-treatment and post-treatment photographs were taken, and patient satisfaction was gauged on a 5-point scale.

Results:

All patients exhibited good tolerance to the procedures, with four demonstrating excellent improvement (>75%) and two showing substantial improvement (50-75%). Overall, all six patients expressed high satisfaction. At the 12-week follow-up post the final laser session, sustained improvement was observed in all cases.

Conclusion:

This protocol combining 1927nm laser therapy with a depigmenting cosmeceutical regimen, together with specific photoprotection, presents as an exceptional treatment modality for melasma.

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Abstract N°: 5495

Diving deep into dermal pigmentation - Case series of Dermoscopic and Clinical Improvement in 3 cases of Resistant Acquired Dermal Macular Hyperpigmentation using 785nm Picosecond laser

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Introduction & Objectives:

Difficult to treat hyperpigmentation is a concern in Fitzpatrick skin types IV to VI. These skin types are characterised by increased epidermal melanin, larger melanosomes, labile melanocytes and reactive fibroblast responses, posing special challenges for the use of laser therapies such as post inflammatory hypo and hyperpigmentation. Our 3 patients had deep dermal pigmentation clinically diagnosed under Acquired dermal macular hyperpigmentation (ADMH). ADMH was coined to include Riehl's melanosis, lichen planus pigmentosus, ashy dermatoses, and idiopathic macular eruptive pigmentation, clinically characterised by greyish brown small and large pigmented macules/patches and histopathologically show evidence of current or resolved interface dermatitis with pigment incontinence, without any clinically evident prior inflammatory lesions. Dermoscopy offers a non-invasive modality for diagnosis of ADMH with the most common findings being pseudo network patterns with brown/grey dots/globules grouped in arcuate, semi-arcuate or hexagonal manner which correlate histopathologically with dermal pigment incontinence and melanophages.

The 1064 nm Q-switched(Qs) Nd:YAG, 532 nm KTP, 532 nm Qs Nd:YAG, t755 nm Qs alexandrite and intense pulse light are commonly used to treat pigmentation. Conventional Qs have both photothermal and photomechanical properties and sometimes this photothermal property can lead to excess heat and damage at the basal layer and superficial blood vessels leading to dyspigmentation in darker skin types. Picosecond lasers(ps) in the range of 500 to 750 picoseconds like the Titanium sapphire picosecond laser, offer advanced benefits due to their shorter pulse duration.

Our objectives were to study the safety, efficacy of 785nm ps in the above scenario.

Materials & Methods:

Our 3 cases were of fitzpatrick skin type 5, with 5-10 year history of stable facial ADMH & had failed conventional treatment with triple combination, chemical peels, Q-switch Nd:Yag laser sessions. They refused consent for biopsy and were evaluated on clinical examination, global photography and dermoscopy.

We used a combination of collimator Qs 1064nm, Collimator 785nm ps, 0.2 to 0.4 J/cm2 & fractional handpiece 785nm ps from 0.4 to 0.8J/cm2, with gradually increasing energies. 6 treatment sessions were done at 15-30 day intervals. Post procedure icing, use of a mild steroid cream for 4 days and regular sunscreen was advised.

Results:

There was immediate erythema & mild edema, which took 1-2 hours to subside. All 3 patients tolerated the treatment well without any adverse effects. Over 3-6 months there was reduction in pigmentation on clinical examination, global photography as well as dermoscopy.

Conclusion:

785nm ps can be an important treatment choice in darker skin types with dermal pigmentation. There are limited

studies in the safety profile of 785nm pico wavelength in darker skin types and further studies are needed in this area.

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Abstract N°: 5719

Vitiligo: Aggravating factors experienced by patients in a global study. Results of the ALL Project.

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Introduction & Objectives:

Vitiligo, a chronic inflammatory skin disease characterized by the loss of pigmentation, impacts millions of individuals globally. This study aims to investigate regional differences in vitiligo prevalence, examining disparities between continents and the effects of environmental factors and living conditions on the course of the disease.

Materials & Methods:

The ALL PROJECT is a large-scale study of individuals representative of the adult population in 20 countries on five continents: Europe [France, Italy, Germany, Poland, Portugal, Spain, Denmark; n=17500], Latin America[LA] [Brazil, Mexico; n=6501], Asia [China, India, South Korea; n=10500], North America [NA] [Canada, USA; n= 7500); Middle East [ME] [Israel, United Arab Emirates; n=2750], Australia [Australia; n=2000] and Africa [Kenya, South Africa, Senegal; n=1800] In each of the 20 countries surveyed, representative and extrapolable samples of the general population aged 16 and over were interviewed. This methodology ensures that the results of the study can be generalised to the entire population of each country included in the project, thus providing a global and diversified perspective of the subjects studied. The results were compared using chi-squared or Fisher's exact test. The alpha risk was set at 5% and two- tailed tests were used. Statistical analysis was performed using EasyMedStat (version 3.34; www.easymedstat.com)

Results:

The prevalence in Europe is 1.3% [0.76% to 1.21%]. In Asia, the Middle East and Africa, the prevalence is 2.5% [2.24% to 2.84%], 3.2% [2.38% to 4.02%] and 1.7% [1.08 to 2.26], respectively. Prevalence rates for men and women differ by region.Prevalence rates for men are higher than for women in Europe (1.6% vs 1.0%), North America (1.4% vs 0.6%) and Africa (1.8% vs 1.5%). In Asia, the gender difference is reversed, with a prevalence rate of 2.9% for women compared with 2.2% for men. The situation is similar in Latin America [1.0% for women vs 0.8% for men].

Regardless of the continent, stress was identified as the main factor contributing to the exacerbation of the disease, with 49.2% of respondents citing it as a significant factor. Pollution was identified as the second most important factor, with 21.2% of respondents indicating this. The proportions of patients identifying these factors as significant were as follows: 37.8% in Asia and 19.3% in Europe. It is also noteworthy that one in three women (25.3%) identified hormonal changes as a factor in exacerbation. In addition, the use of certain products on the skin was cited as an aggravating factor by 15.1% of respondents, with significant differences between regions: 21.6% in Asia and 16.9% in Europe. Only 8.4% reported that alcohol consumption aggravated their vitiligo.

Conclusion:

The findings reveal fluctuating prevalence rates of vitiligo across regions, with heightened occurrences noted in Asia and the Middle East as opposed to Europe and the Americas. These differences could stem from variations in genetic predispositions, environmental conditions, or disparities in healthcare access and utilization. The recognition of stress and pollution as primary exacerbating factors underscores the necessity for a comprehensive approach to address these conditions, incorporating stress management strategies and environmental quality enhancement initiatives to mitigate their impact on patients.

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Abstract N°: 5761

A systematic review of efficacy and safety of lasers versus topical medications for acanthosis nigricans and pseudo-acanthosis nigricans treatment

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Introduction & Objectives:

Acanthosis nigricans (AN) is a cutaneous disorder identified by well-defined pigmented plaques mostly detected on skin folds. Timely diagnosis and treatment of AN is essential as it could be an early manifestation of an underlying condition. The treatment of choice for AN has not been determined yet. Our study aimed to compare the efficacy and safety of various lasers with topical medications, including cream and peel.

Materials & Methods:

PubMed, Scopus, and Web of Science databases, as well as the Google Scholar search engine, were thoroughly searched until May 1st, 2023. Study selection was restricted to clinical trials published in English language comparing lasers with topical treatments. This study followed the PRISMA guidelines for systematic reviews and meta-analyses.

Results:

Out of 1748 studies, Six clinical trials met our inclusion criteria, with 133 patients. We examined laser therapies, including fractional CO2 laser, 1550-nm erbium fiber laser, and long-pulsed alexandrite laser, while the topical treatments comprised glycolic acid (GA) peel, retinoic acid peel, trichloroacetic acid (TCA) peel, and tretinoin cream. In two studies, GA peel demonstrated favorable results compared to fractional CO2 laser. Besides, fractional CO2 laser exhibited efficacy, surpassing TCA peel in AN management. Additionally, a fractional 1550-nm erbium fiber laser displayed superiority over tretinoin cream in reducing average roughness. Similarly, a long-pulsed alexandrite laser demonstrated its effectiveness in axillary AN treatment compared to the combination of tretinoin and ammonium lactate.

Conclusion:

the findings revealed that laser therapy was associated with superior results. Moreover, topical treatments are safe and efficacious in AN management.

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Abstract N°: 5763

Bilirubin as a new antioxidant in melasma

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Introduction & Objectives:

Oxidative stress and its role in the pathogenesis of cutaneous diseases have been widely investigated. However, there are few studies that have solely assessed the contribution of intracellular antioxidants in the etiopathology of melasma. Furthermore, there are convincing reports about antioxidant properties of bilirubin (Bil) and uric acid (UA) in some skin disorders but not melasma. This study aimed to determine serum levels of two major extracellular antioxidants (Bil and UA) levels in patients with melasma and their correlation with the severity and extent of the disease.

Materials & Methods:

In this case-control study, the serum levels of bilirubin and uric acid of 50 melasma patients were compared with 50 healthy controls. Moreover, the correlation of serum concentrations of these antioxidants with the extent and severity of the disease were assessed.

Results:

The serum concentration of Bil was significantly higher in the case group ($p < 0.05$). Furthermore, serum Bil level had a positive correlation with the extent of the melasma (correlation coefficient, +0.3; $p < 0.05$). No significant difference was found between the serum concentrations of UA between the study and control group. Neither Bil nor UA had a significant correlation with the severity of the disease.

Conclusion:

Oxidative stress may play a major role in the etiopathology of melasma and bilirubin, as an antioxidant, could be involved in the process of oxidative stress.

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Abstract N°: 6192

The interplay of pigmentation disorders and phototype in shaping perceived stigmatization: findings from the I'SPOT survey

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Introduction & Objectives:

Skin diseases present a significant challenge to patients' well-being, impacting not only their physical health but also their psychological and social experiences. The visible nature of many skin conditions can make individuals susceptible to stigmatization, leading to feelings of shame, social isolation, and discrimination. The I'SPOT study investigated the prevalence and impact on QOL and stigmatization of 6 main pigmentary disorders (PD). We then looked at the interplay between PD, phototype, and perceived stigmatization, aiming to shed light on the unique challenges faced by individuals with darker skin tones.

Materials & Methods:

An international survey was conducted in 34 countries from all continents with 48,000 respondents. We gathered, among others, self-declared data on presence of PD (e.g.: melasma, vitiligo, PIH, solar lentigo) and individuals' perceived stigmatization. The survey incorporated the validated PUSH-D questionnaire, which assesses two key dimensions of stigmatization: avoidance behaviors and negative feelings/experiences. For relative risks estimation, phototype was classified to lighter (I to III) and darker (IV to VI).

Results:

23767 respondents declared suffering from at least one PD (49.5%). PD prevalence is similar between phototypes I-III (49.6%) and IV-VI (49.1%). Among this population, the analysis revealed a consistent pattern: individuals with

darker skin tones reported significantly higher levels of perceived stigmatization across all dimensions of the PUSH-D questionnaire compared to those with lighter skin tones. This finding was evident in both avoidance behaviors and negative feelings/experiences. Individuals with darker skin tones were more likely to engage in avoidance behaviors. For instance, they were 1.16 times more likely to report “avoiding appearing in family photos” ($p<0.001$) and 1.24 times more likely to “avoid some people” ($p<0.001$) compared to individuals with lighter skin tones. Furthermore, the data indicated a greater prevalence of negative feelings and experiences of discrimination among individuals with darker skin tones. They were 1.21 times more likely to report feeling “less loved by family and friends” ($p <0.001$) and 1.27 times more likely to feel “pushed away by their partner” ($p <0.001$) compared to individuals with lighter skin tones. This underscores the increased emotional and social impact of perceived stigmatization on individuals with darker skin tones.

Conclusion:

While individuals with PD across all skin tones may encounter stigma, those with darker skin tones appear to face a higher burden. This disparity may stem from societal beauty standards, cultural biases, and to disease-specific factors leading to pronounced, lasting marks, amplifying self-consciousness and drawing unwanted attention. Self-reported PD without severity assessment is a limitation of the study. This study highlights the urgent need for culturally sensitive and inclusive approaches to dermatological care.

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Abstract N°: 6201

Pigmentary disorders, prevalence, impact on quality of life, social stigmatization: results of the first large international survey in Europe (I'SPOT study)

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Introduction & Objectives:

Pigmentary disorders (PD) such as Melasma, Post-inflammatory Hyperpigmentation (PIH), Solar Lentigo, Vitiligo, Peri-Orbital Hyperpigmentation (POH) and Axillary Hyperpigmentation (AH) are frequent dermatological conditions, but little is known on their real-world prevalence and impact. This first worldwide survey evaluates the prevalence of PD, its impact on quality of life (QOL) and stigmatization in 34 countries. This current abstract presents the European results compared to worldwide.

Materials & Methods:

Survey (N= 48,000) conducted in 34 countries structured this way: North America (USA, Canada), Latin America (Brazil, Argentina, Mexico, Peru), Europe (France, Spain, Germany, UK, Italy, Greece, Sweden, Russia), SSA (South Africa, Ivory Coast, Nigeria, Kenya), North Asia (China, Japan, South Korea), SAP (Singapore, Malaysia, Thailand, Indonesia), MENA (Morocco, Egypt, Saudi Arabia, Qatar, United Arab Emirates, Kuwait, Oman), India and Australia) from December 2022-February 2023. An automated selection from the Ipsos Panel ensured representative samples based on quota method.

The online auto-administered questionnaire covered demographics, phototype, self-reported pigmentation condition based on a descriptive text and image of each of the conditions; its impact on QOL, stigmatization, and sun protection behavior.

Results:

Among 13 000 Europeans, 41% of the population report having at least one PD (vs 50% worldwide) such as solar lentigo 29% (vs 27%), PIH 9% (vs 15%), POH 8% (vs 15%), AH 9% (vs 18%), melasma 6% (vs 11%) and vitiligo 6% (vs 8%). In detail, Europeans reported less PD compared to worldwide except for solar lentigo. But, there are disparities among countries: Italians and Spanish (41% and 39% respectively) report much more Solar lentigo versus French people (26%), Brittons (24%), Germans (24%) and Russians (23%). Europeans who reported suffering from a PD were mostly women 60% with an average age of 49.6yo. Diagnosis by the dermatologist was reported only by 37% (vs 36% worldwide), whereas 20% (vs 19% worldwide) made their own diagnosis thanks to the questionnaire.

Pigmentation disorders have a major impact on the QOL and lead to stigmatization. DLQI was >10/30 for 16% of them vs 28% worldwide. In detail DLQI >10/30 depends on the PD and varies from 7% for solar lentigo to 29% for vitiligo.

Although impacts on stigmatizations were lower in Europe vs worldwide, Brittons reveal higher stigmatization: 32% of patients with a PD have concealed/hidden the visible parts of their affected skin (vs 39% in Great Britain), 19% have avoided some people (vs 24% in Great Britain), and 18% have refused direct contact with the public (vs 22% in Great Britain).

Although sun exposure is well recognized by the medical community to worsen the pigmentation, European sufferers reported a very low-level protection against the sun: only 29% protect their skin all year (vs 38% worldwide). And yet more Europeans consider that sun exposure is deleterious to their condition vs worldwide (48% vs 38% worldwide).

Conclusion:

This first large international survey on PD shows a high prevalence of solar lentigo in Europe vs worldwide especially in Spain and in Italy. Impact on QOL and stigmatization, although lower in Europe compared to worldwide, presents high figures in Great Britain. Finally, photoprotection behaviors are much lower in Europe compared to worldwide, highlighting the need for a more efficient photoprotection education.

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Abstract N°: 6344

Clinical pattern of lip vitiligo

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Introduction & Objectives: Vitiligo is a common autoimmune pigmentary disorder characterized by destruction of functional melanocytes resulting in the appearance of depigmented patches on the skin and mucosa. These lesions pose a cosmetic challenge. The involvement of the mucosa is less, but may be the first symptom of this pathology. Depigmentation in the lips can be more easily observed and patients can be counseled regarding the condition and guided for treatment.

Materials & Methods:

The study sample included 100 patients of lip vitiligo of all age groups and gender. Patients with a history of herpes labialis, and history suggestive of post inflammatory depigmentation of lips secondary to various causes were excluded from this study. Also, patient vitiligo patients without lip involvement were excluded. The frequency, site, extension, association with vitiligo elsewhere, were noted and tabulated.

Results:

100 patients, 57 were males and 43 were females. Majority of our study subjects (63%) had onset of vitiligo between 11 and 30 years and 24% between 31 and 50 years. In the present study, 41 patients had only lip vitiligo, 55 patients had lip and vitiligo in other parts, four had involvement of lip and genital mucosa. Out of 100 patients, 71 complained that the lips were the initial lesion. Involvement of lower lip was more common than the upper lip. Angle of the mouth was involved in 31 patients and five had marginal extension onto the skin.

Conclusion:

Though rare, lip vitiligo could be one of the earliest

presentations of vitiligo and will aid in counseling the patients regarding the chronicity and thereby reduce the

psychological morbidity. The data on lip vitiligo is sparse and to the best of our knowledge, there is no study on the

demographic characteristics and clinical patterns of lip vitiligo.

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Abstract N°: 6463

Rarity and Response: Case of generalized pigmentary disorder in a young patient of skin of colour

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Rarity and Response: Case of generalized pigmentary disorder in a young patient of skin of colour

Introduction:

Gray diseases, hereditary or acquired, are a group of skin disorders characterized by gray discoloration with or without involving the mucous membranes and nails. These disorders can be a source of social stigma particularly in young females in rural areas. Clinical examination, dermoscopy, and at times skin biopsy are needed for arriving at the diagnosis.

Report of case:

Erythema dyschromicum perstans (EDP) is an acquired pigmentary disorder of unknown etiology characterized by slowly progressive, polycyclic irregular ashy gray-colored macules and patches distributed symmetrically on the trunk and proximal extremities. It is more common in the 1st to 3rd decade of life with a higher frequency in females. Its occurrence in children, particularly in the Indian population, is rare. In this case report we describe a case of a 9-year old female child presenting with asymptomatic multiple progressive hyperpigmented flat lesions over the trunk, extremities, and face causing a significant impact on her social wellbeing. Dermoscopy and histopathological findings along with clinical correlation clinched the diagnosis.

Conclusion:

Acquired dermal macular hyperpigmentation (ADMH) is an umbrella term that unifies various dermatoses characterized by pigmented macules and/or patches clinically, and show ongoing or resolved interface dermatitis with pigment incontinence on histopathology. It particularly lacks any evidence of preceding inflammatory cutaneous disease. ADMH encompasses lichen planus pigmentosus, Riehl's melanosis, and EDP. There is a significant clinicopathologic similarities between the individual entities with few subtle differences.

This report highlights a rare pigmentary disorder, EDP, in childhood and describes successful clinical response with an unconventional treatment regimen.

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Abstract N°: 6470

actinic lichen of unusual presentation

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Introduction & Objectives:

Actinic lichen, also known as actinic lichen planus, is a rare dermatological condition that arises in response to prolonged sun exposure. It's considered a variant of lichen planus, commonly seen among young men.

Materials & Methods:

This concerns a 75-year-old female, phototype III (Fitzpatrick), with no relevant medical history, presenting with a pruritic rash on the face. The rash consists of symmetrical, brownish to purplish plaques in the mid-face and sub-eyelid region, evolving over the past 4 months. The patient reported no recent medication intake. The rest of the examination revealed no anomalies. Histological examination showed compact hyperkeratosis with an elastotic appearance of the dermis, along with a bandlike inflammatory cell infiltrate in the papillary dermis invading the lower layers of the epidermis. Additionally, hepatitis serologies were negative. The biopsy specimen and the clinical presentation were consistent with lichen planus. The patient was prescribed topical corticosteroids and advised on the importance of strict sun protection.

Results:

Actinic lichen is a distinct variant of lichen planus that occurs on sun-exposed and mainly involves teenagers with an Asian racial profile. The condition often manifests as pruritic, violaceous papules and plaques, resembling those seen in classic lichen planus. The unique aspect of actinic lichen is its predilection for sun-exposed regions such as the face, neck, and dorsal hands. Sunlight seems to be a triggering factor in most cases. Differential diagnoses include discoid lupus, sarcoidosis, and pigmentary lichen. It causes mainly aesthetic damage and requires adequate photoprotection.

Conclusion:

The significance of our case lies in the rarity of this entity, especially in elderly individuals.

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Abstract N°: 6511

Impact of demographic and clinical characteristics on health-related quality of life and mental well-being of patients with vitiligo

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Introduction & Objectives: Vitiligo has often been characterized as a cosmetic disease rather than a chronic, inflammatory, skin condition driven by immunologic dysregulation. Recent advances in the field have highlighted the significant impact vitiligo has on health-related quality of life (HRQoL) and mental health. Using the vitiligo-specific QoL instrument (VitiQoL), we assessed how patient (pt) and disease characteristics impact HRQoL in pts with vitiligo.

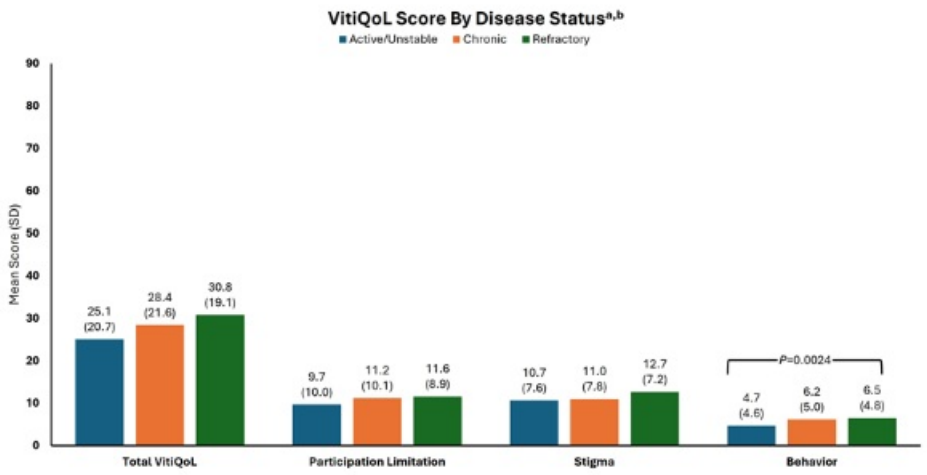
Materials & Methods: Data were collected from the Adelphi Real World Vitiligo Disease Specific Programme, a point-in-time survey of physicians and their pts in the United States, France, Germany, Spain, Italy, and United Kingdom, that combines clinical data with cross-sectional pt-reported outcome data. Pts ≥12 years old with a confirmed vitiligo diagnosis and who completed the VitiQoL were included; pts could not be participating in a vitiligo clinical trial. The VitiQoL assesses HRQoL in 3 domains (scored 0–30), participation limitation, behavior, and stigma, for a total score of 0–90, with higher scores denoting worse HRQoL. Data are stratified by sex, disease extent (ie, physician-rated [mild, moderate, severe, very severe] and by body surface area [BSA] <5% vs ≥5%), disease status (ie, active/unstable [defined as depigmentation spreading across 1%–2% BSA/month], chronic [defined as depigmentation for ≥1 year without repigmentation], and refractory [defined as <25% of BSA experiencing repigmentation with therapy]), and location of lesions (ie, face or hands). Disease extent was a physician-subjective assessment. Data are reported as mean score with standard deviation (SD) for those with valid, non-missing scores. P-values were determined using ANOVA for continuous variables and Chi squared tests for categorical variables.

Results: A total of 506 pts were included in this analysis; 52.4% were male, with 81.6% having ≥5% BSA affected and approximately half having vitiligo on their face (52.2%) or hands (44.7%). There were no differences in total VitiQoL score (±SD) when stratified by disease status (active/unstable: 25.1±20.7; chronic: 28.4±21.6; refractory: 30.8±19.1; p=0.140; **Figure 1A**). However, total VitiQoL and individual domain (ie, participation limitation, stigma, and behavior) scores increased with worsening disease extent (total – mild: 24.7±18.9; moderate: 29.2±22.8; severe: 36.8±25.3; very severe: 51.5±21.6; p<0.0001; **Figure 1B**). Similarly, pts with ≥5% BSA affected had significantly higher VitiQoL domain and total scores than those with <5% BSA (**Figure 1C**). Females reported highly significant HRQoL impairment versus males across all domains (total: 32.2±20.9 vs 23.1±20.5; p<0.0001). Likewise, pts with versus without lesions on the face had significantly higher domain and total VitiQoL scores (total: 31.3±22.0 vs 23.2±19.3, p<0.0001; **Figure 1D**); presence of lesions on the hands was associated with significantly higher total VitiQoL and stigma and behavior domain scores (total: 30.1±22.1 vs 25.3 ±20.1, p=0.011).

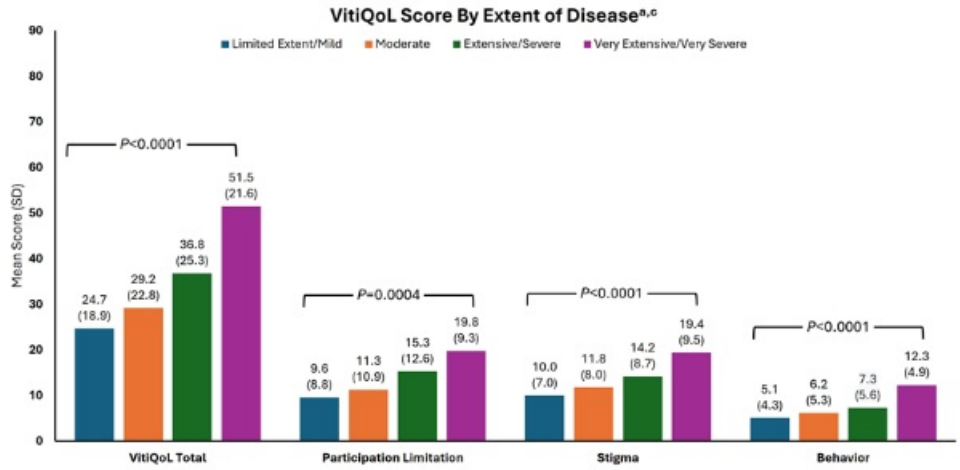
Conclusions: Using the VitiQoL assessment, we demonstrated the impact of vitiligo on pt HRQoL. Females, those with greater disease extent, ≥5% BSA and those with lesions on the face had significantly higher scores across all domains. These data highlight the detrimental impact of vitiligo on patients, identifying key clinical and demographic factors that should be considered when treating vitiligo to ensure patient HRQoL and mental wellbeing is protected.

Figure 1: VitiQoL Scores by Disease Status, Extent of Disease, Sex, and Location of Lesions

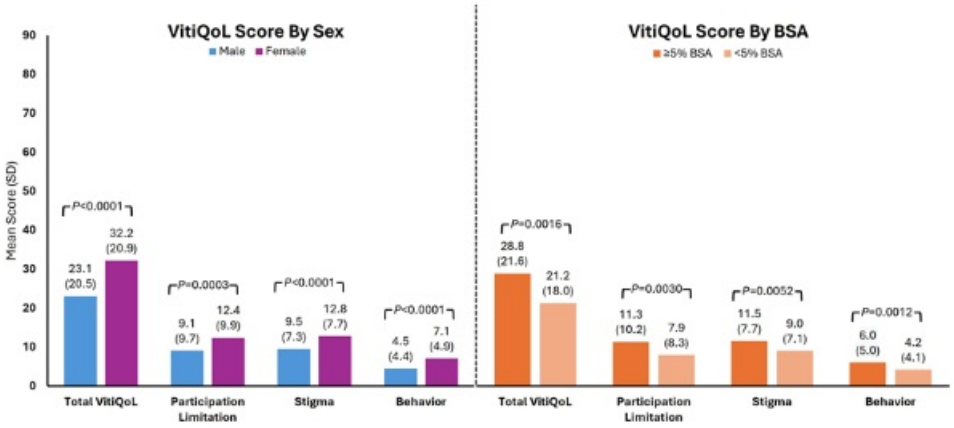
A)



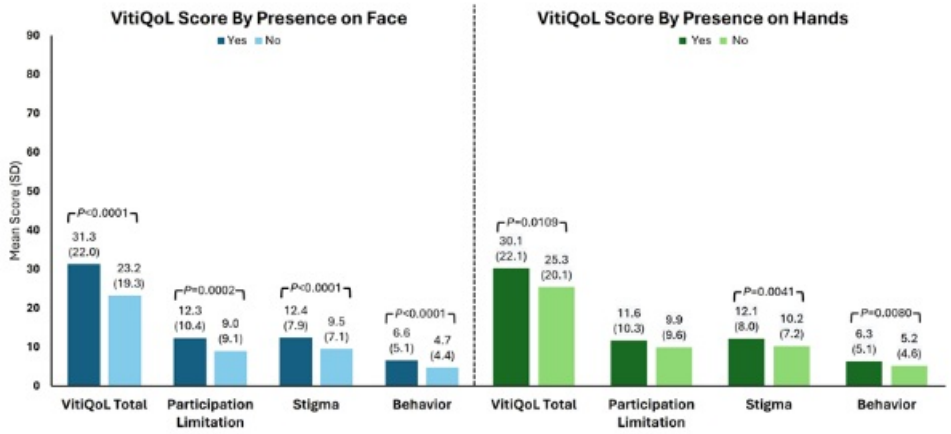
B)



C)



D)



Females, those with greater extent of disease, ≥5% BSA and those with lesions on the face had significantly higher scores across all domains, demonstrating the impact of vitiligo on health-related quality of life.
[a]P-value denotes significant trend among groups. [b]Disease status categorized as active/unstable [defined as depigmentation spreading across 1%-2% BSA/month], chronic [defined as depigmentation for ≥1 year without repigmentation], or refractory [defined as <25% of BSA experiencing repigmentation with therapy). [c]Disease severity was reported by physicians in response to the survey question "Currently: How would you describe the extent/severity of this patient's vitiligo?" BSA, body surface area; SD, standard deviation; VitiQoL, vitiligo-specific quality of life assessment.

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Abstract N°: 6771

Hyperpigmentation caused by azathioprine in 2 cases

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Introduction & Objectives: Immunosuppressive treatments have revolutionized the management of many chronic inflammatory diseases such as inflammatory bowel disease and rheumatoid arthritis. The combination of immunosuppresseurs with TNFα inhibitors has a risk of developing a tumor. These are mainly skin cancer and, to a lesser degree, melanomas for which the risk is increased in patients receiving azathioprine and TNFα inhibitors.

Through this work we report 2 cases of patients taking azathioprine and Infliximab presenting hypersensitivity lesions.

Materials & Methods: For the first case, it concerns a 29-year-old female patient followed in Gastroenterology departement for ulcerative colitis, initially put on corticosteroids and Azathioprines, without improvement. Currently, the patient has been on Remicade 5mg/kg every 8 weeks for 2 years combined with Imurel 2.5mg/kg.

Her history of the disease begins 6 months ago with the appearance of hyper-pigmented macules that do not increase in size at the lower lip and the neck. Dermoscopy of pigmented macules of the lower lip and neck reveals a regular, homogeneous pigmented network without signs of malignancy.

For the second case, it concerns a 58-year-old female patient followed for ulcerative colitis under Azathioprine for 5 years, she has had multiple hyper-pigmented macules on the face for 1 year.

The diagnosis of photosensitivity secondary to Azathioprine without signs of malignancy was reached.

Regular long-term dermatological monitoring of the lesions was indicated in these patients.

Results: Azathioprine is currently more widely prescribed in the treatment of active ulcerative colitis, associated with treatment with corticosteroids or TNFα inhibitors. The risk of lymphoma and the cancer is increase with the association of immunosuppresseurs and TNFα inhibitor drugs. The risk of skin cancer (squamous cell carcinoma, basal cell carcinoma and melanoma) is high with azathioprine because of not only its photo-sensitizing but also the mutating effect of 6-thioguanine in the DNA of epithelial cells under the effect of UVA. Thus, special long-term dermatological monitoring is recommended with Azathioprine.

Conclusion: The long-term risk of melanoma and non-melanoma tumors is increased with Azathioprine with or without concomitant use of other immunosuppressive treatments or TNFα inhibitors. During prolonged treatment with Azathioprine, an annual dermatological examination and effective photoprotection should be recommended.

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Abstract N°: 6815

Linear and Whorled Nevoid Hypermelanosis A New Pediatric Case.

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Introduction & Objectives:

Linear and whorled nevoid hypermelanosis (LWNHV) is a rare congenital dermatosis characterized by hyperpigmented macules arranged along the lines of Blaschko. Here, we report a case of LWNHV in a 10-year-old child.

Materials & Methods:

K.R., a 10-year-old child born at full term of non-consanguineous parents, presented since the age of six months with macular pigmentation starting at the neck and subsequently extending to the trunk and limbs. Upon examination, linear pigmentation along the lines of Blaschko was observed, sparing the face, palms, soles, and mucous membranes, without preceding inflammatory lesions. There was no family history of dermatological conditions. The remainder of the examination was unremarkable (particularly neurological and ophthalmological assessments). Routine hematological and biochemical tests were within normal limits. Skin histological examination revealed basal hyperpigmentation without pigmentary incontinence, and there were no melanocytic abnormalities. The diagnosis of LWNHV was made, and the family was reassured about the benign nature of this pigmentary disorder.

Results:

LWNHV is a rare pigmentation disorder, first described by Kalter et al.in 1988, although other cases have been reported under different names: reticulate zoniform hyperpigmentation , zoniform lentiginous nevus , zoniform hyperpigmentation . Clinical signs can manifest congenitally, but in some cases, cutaneous manifestations may occur later, up to the age of 2 years . The pigmented macules with Blaschkoid linear disposition are mainly distributed on the trunk and extremities, sparing the palms, soles, and mucous membranes , and they are not preceded by inflammatory lesions. Histopathological examination consistently reveals hyperpigmentation of the basal membrane; these clinical-histopathological characteristics found in our case correspond to the criteria of Kalter et al, thus allowing the diagnosis of LWNHV in our patient. The macules may become less apparent with age in some patients, and hemi-body involvement has been reported. Histopathological examination may sometimes show an increase in the number of melanocytes . Pigmentary incontinence is exceptionally rare, distinguishing LWNHV from Incontinentia Pigmenti in its pigmentary phase. Other differential diagnoses include hypomelanosis of Ito and epidermal nevus , which mainly occur in the neonatal period. The hypothesis of McCune-Albright syndrome could also be considered . LWNHV is considered a nonspecific manifestation of genetic mosaicism . Genetic studies suggest somatic mosaicism as a cause of LWNHV with mosaic trisomy of 7, 14, 18, 20; X chromosome mosaicism has also been found , as well as mosaic KITLG mutation. Congenital anomalies may be associated and should be sought, as some patients may be asymptomatic; they exist in 4/12 cases Thus, developmental delay, deafness, brachydactyly, skeletal involvement with body and facial asymmetry, ocular anomalies, and central nervous system abnormalities including microcephaly, arrhinencephaly, and epilepsy may be present , necessitating neurological evaluation with brain MRI/CT and EEG .Cardiac involvement includes ventricular septal defect and sometimes Tetralogy of Fallot .

Conclusion:

This is a new pediatric case of LWNHV, a rare congenital pigmentary dermatosis, the diagnosis of which allows for early detection of extracutaneous involvement and necessitates regular patient follow-up.

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Abstract N°: 6824

Tofacitinib Monotherapy for Acquired Dermal Hyperpigmentation: Results of a Pilot Study

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Introduction & Objectives:

Acquired dermal acquired hyperpigmentation (ADMH) encompasses challenging conditions such as lichen planus pigmentosus, pigmented contact dermatitis, and erythema dyschromicum perstans, all characterized by slate grey pigmentation in Fitzpatrick skin types III-V. Current management strategies for ADMH are suboptimal, necessitating innovative approaches for effective treatment. Aim of this study was to assess safety and efficacy of oral tofacitinib monotherapy for the management of ADMH.

Materials & Methods:

In this open-label pilot study, adult patients with ADMH affecting the face and/or neck were enrolled. Participants received Tofacitinib monotherapy at a dosage of 5 mg twice a day for 24 weeks, along with sun protective measures. Disease severity was assessed through the 'dermal pigmentation area and severity index' (DPASI) at four-week intervals. The primary endpoints included arrest of disease progression and reduction in hyperpigmentation. Adverse effects, laboratory evaluations, and subjective symptoms were monitored throughout the study.

Results:

Among the 19 initially recruited patients, 17 completed the 24-week follow-up. Of these, 15 were females and 2 were males. All participants achieved arrest of disease pigmentation, with 13 initially presenting with pruritus reporting relief within 4 weeks of therapy initiation. The mean age of the study population was 36.2±9.8 years (range: 18–48 years). At baseline, the mean DPASI was 17.3±5.7 (range: 8.5–25.1), which significantly reduced to 10.3±4.2 (range: 4.2–19.1) at week 24 ($p<0.001$). The mean percentage reduction in DPASI at week 24 was 39.4%±17.9 (range: 0–69.1%). Adverse effects were observed in 7 patients, including hypertriglyceridemia (n=3), transaminitis (n=2), nasopharyngitis (n=1), and acneiform eruption (n=1), none of which were severe enough to warrant treatment cessation.

Conclusion:

Tofacitinib monotherapy demonstrated safety and efficacy in managing ADMH, leading to disease arrest and a significant reduction in hyperpigmentation. The findings from this pilot study suggest a potential breakthrough in the treatment of these challenging dermatologic conditions, paving the way for further research and clinical applications.

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Abstract N°: 6912

Comparative efficacy of 4% retinol peel vs tranexamic acid-glutathione combination mesotherapy in the treatment of melasma

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Introduction & Objectives: Melasma is a stubborn pigmentary disorder characterized by brown or dark patches, primarily affecting facial areas. Despite varied treatment options, the effective management of melasma remains challenging. This study aims to fill a gap in the literature by comparing the effectiveness of a combination peel vs injectable mesotherapy solution over affected areas.

Materials & Methods: A randomized controlled trial was conducted involving patients who were clinically diagnosed with melasma. Participants were divided into two groups. Group A was treated with chemical peel containing 4% retinol, while B was on injectable mesotherapy containing tranexamic acid and glutathione. The primary measure of efficacy was the Melasma Area and Severity Index (MASI) score, recorded before and after the treatment series. Side effects were also documented and analysed.

Results: There was a significant reduction in MASI scores in group B. The average MASI score reduction was 8.0 points for the injectable group, and 5.0 points for the peel group. Side effects such as erythema and sensitivity were noted in Group A while pain, at the time of injection was commonly noted in Group B.

Conclusion: Our study indicates that combination mesotherapy injectable solution with tranexamic acid and glutathione is effective and showed a more rapid and significant improvement in reducing melasma pigmentation than 4% retinol peel. However, further research is warranted.

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Abstract N°: 6966

Efficacy of upadacitinib in adults with extensive non-segmental vitiligo: Subgroup analysis at 24 weeks of treatment

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Introduction & Objectives: Non-segmental vitiligo (NSV) is a skin disorder resulting in depigmentation and is believed to be the result of an autoimmune loss of melanocytes. The burden of vitiligo extends beyond cosmetic issues, with impacts to quality of life due to psychological effects and stigmatization. Upadacitinib (UPA) is an oral selective Janus kinase 1 (JAK1) inhibitor approved in multiple countries for the treatment of several immune-related dermatological, rheumatologic, and gastrointestinal conditions. Here we report efficacy subgroup analyses at 24 weeks from a Phase 2 study of UPA monotherapy on re-pigmentation of vitiligo skin lesions in adults with NSV.

Materials & Methods: This Phase 2, randomized, placebo-controlled study evaluated safety and efficacy of UPA 6 mg, 11 mg, and 22 mg administered once-daily through 52 weeks. Skin re-pigmentation was evaluated by change from baseline in the Facial Vitiligo Scoring Index (F-VASI) and Total Vitiligo Scoring Index (T-VASI) at 24 weeks. This analysis reports rates of re-pigmentation in pre-specified subgroups, based on key subject characteristics at baseline. No multiplicity control was performed, and all P values are nominal.

Results: A total of 164 patients were randomized to receive UPA (6 mg [N=45], 11 mg [N=43], 22 mg [N=33]) or placebo (PBO, N=43). At Baseline, treatment groups were generally well balanced based on subgroup characteristics. Overall, at Week 24 there was a greater improvement (decrease) of percentage change from Baseline in F-VASI and T-VASI scores for patients receiving UPA compared to PBO (Table 1). Patients in different Fitzpatrick phototypes were similarly likely to show improvements in F-VASI scores with UPA treatment compared to PBO (Figure 1). Patients were similarly likely to demonstrate improvements in percent change from Baseline in F-VASI scores or T-VASI scores with UPA vs PBO regardless of active NSV status, duration of NSV since diagnosis, or Baseline disease severity based on T-VASI scores of ≤10 or >10 (Figure 1). Comparisons based on Baseline disease severity showed that no notable differences were observed for UPA vs PBO in the subgroups defined by T-VASI <15 or T-VASI ≥15. No new safety signals were reported.

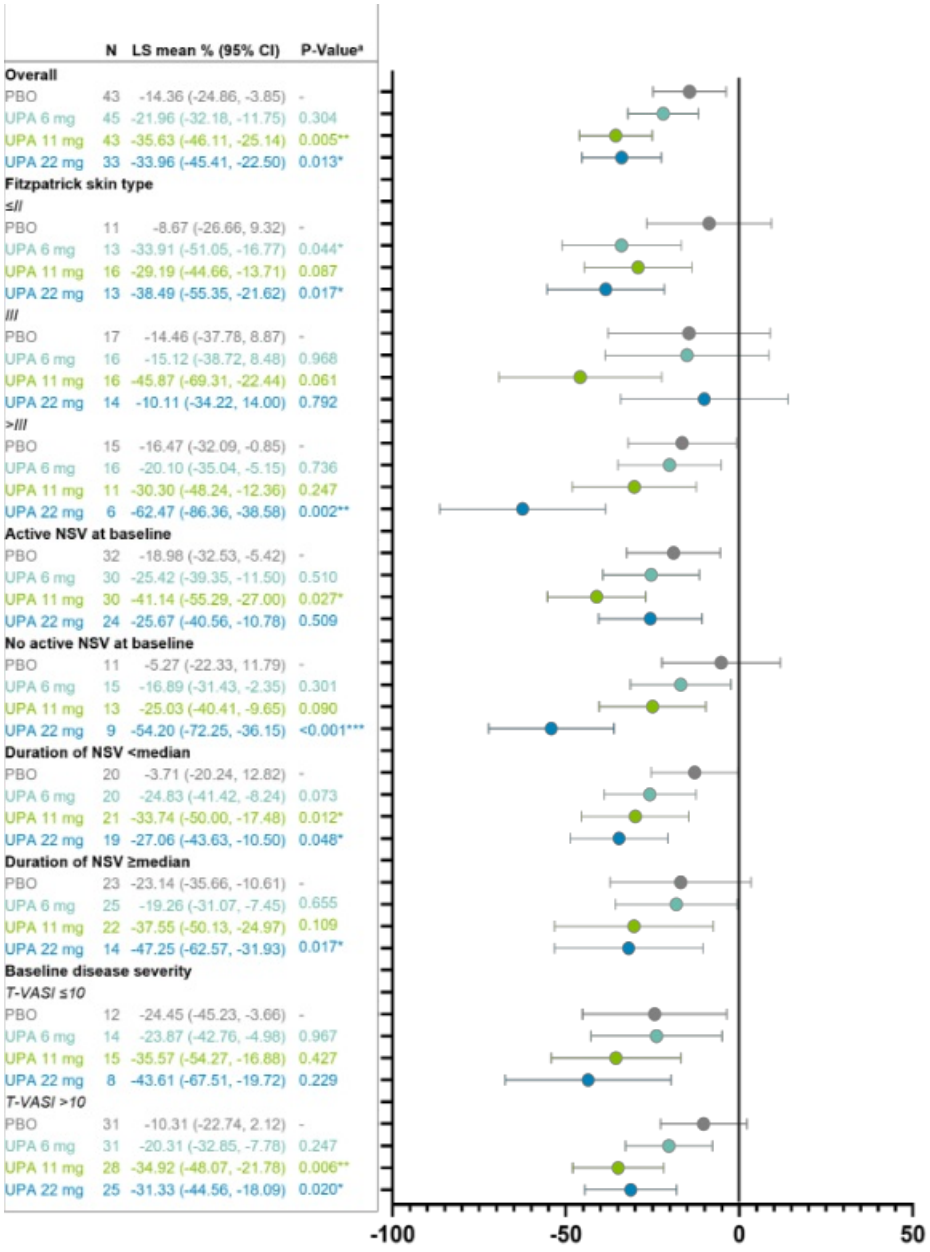
Conclusion: Treatment of NSV with UPA resulted in a greater improvement in re-pigmentation of vitiligo at 24 weeks vs PBO, with the most notable improvements occurring in those treated with UPA 11 mg and 22 mg. Patients were similarly likely to show improvements in percent change from Baseline in F-VASI and T-VASI scores, regardless of Fitzpatrick phototype, active baseline NSV status, or duration of NSV since diagnosis with UPA treatment compared to PBO. Similarly, patients with differing baseline disease severity, based on the prespecified disease severity designations of T-VASI ≤10 vs >10 and T-VASI <15 vs ≥15, were also similarly likely to show improvement in percent change from Baseline in F-VASI and T-VASI with UPA vs PBO. These findings suggest that UPA monotherapy holds potential for systemic therapy across important subpopulations of patients with NSV.

Table 1. Percent change from Baseline in F-VASI and T-VASI scores at Week 24 for patients receiving UPA compared to PBO (MMRM)

LS mean % (95% CI)	UPA 6 mg (N=45)	UPA 11 mg (N=43)	UPA 22 mg (N=33)
T-VASI	-7.45 [-16.86, 1.96] (P=0.120)	-10.84 [-20.37, -1.32] (P=0.026*)	-14.27 [-24.24, -4.30] (P=0.005**)
F-VASI	-7.60 [-22.18, 6.97] (P=0.304)	-21.27 [-36.02, -6.52] (P=0.005**)	-19.60 [-35.04, -4.16] (P=0.013*)

MMRM, Mixed-Effect Model Repeat Measurement; PBO, placebo; UPA, upadacitinib; T-VASI, Total Vitiligo Area Scoring Index; F-VASI, Facial Vitiligo Area Scoring Index. *P<0.05, **P<0.01, ***P<0.001

Figure 1. Percent change from Baseline in F-VASI score by subgroup analysis at Week 24 (MMRM)



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Abstract N°: 6988

Randomized Trial to Determine the Efficacy and Safety of Cysteamine Plus Heparan Sulfate Using Q-switched Nd:YAG Laser versus Cysteamine with Heparan Sulfate in the Treatment of Melasma.

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Introduction & Objectives:

Melasma is a chronic, acquired dermatosis with progressive and recurrent evolution, characterized by hyperchromic patches in sun-exposed areas. Cysteamine is an aminothiol used in melasma; it has been elucidated that it decreases the conversion of tyrosine into dopaquinone, furthermore, the depigmenting effect increases by amplifying intracellular glutathione levels.

Dos Santos-Neto A. et al. in 2022 conducted a meta-analysis to evaluate the efficacy of using depigmenting agents containing 5% cysteamine in patients with melasma, including six studies with 120 patients, it was demonstrated that 5% cysteamine is effective in treating melasma with a low probability of side effects with a 95% CI: 3.68-8.83 and p <0.0001.

Similarly, the 1,064 nm Q-switched Nd:YAG laser has been used in the treatment of pigmented lesions, as it decreases superficial and deep pigment through the principle of photothermolysis. Wattanakrai et al. conducted a study in patients with melasma using weekly sessions of Nd:YAG for 5 weeks plus 2% hydroquinone, observing a 76% improvement in the mMASI score. The aim of this study is to evaluate the efficacy and safety of cysteamine with heparan sulfate versus cysteamine with heparan sulfate plus Nd:YAG use in the treatment of melasma through subjective and objective methods.

Materials & Methods:

20 patients with melasma were randomized, 10 to receive cysteamine with heparan sulfate cream on the face for 16 weeks and 9 received cysteamine with heparan sulfate cream plus Q-switched Nd:YAG laser sessions on the face. Sunscreen was applied throughout the observation period, cysteamine with heparan sulfate cream was applied for 15 minutes at night; Group A received 4 sessions of Q-switched Nd:YAG laser starting from week 4 and monthly thereafter for 4 weeks, Group B only received cysteamine with heparan sulfate as monotherapy. They were evaluated using photographs to determine the degree of pigmentation, as well as subjetive scales initially and after treatment.

Results:

84% of patients showed pigmentation improvement with both treatments measures. Colorimetric use showed a statistically significant difference in favor of using cysteamine with heparan sulfate as monotherapy compared to combination with Nd:YAG laser. The present side effect was erythema in 10% with the use of cysteamine with heparan sulfate without the of Nd:Yag laser.

Conclusion:

The combination of cysteamine with heparan sulfate and Nd:YAG laser seems to be effective in patients with melasma of various phototypes, being more suitable for those patients refractory to conventional treatment

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Abstract N°: 7085

Clinico-demographic Attributes, Dermoscopic Findings and Histopathological Features among Patients with Stable and Unstable Vitiligo in a Tertiary Care Hospital in North-Eastern India

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Introduction & Objectives: Vitiligo is an acquired autoimmune condition characterized by well-defined depigmented macules, classified into stable and unstable types, which guides its treatment. The diagnosis is primarily clinical, however, dermatoscopy and histopathology are used in uncertain cases to determine disease activity. This study aims to describe the various dermatoscopic and histopathological findings and the clinico-demographic profile of patients with stable and unstable vitiligo to improve therapeutic strategies and enhance the understanding of the disease.

Materials & Methods: Hospital-based, cross-sectional study of 34 clinically diagnosed non-pregnant and non-lactating vitiligo cases. After ethical committee approval and the patient's consent, a detailed history with clinical and dermatological examination was done. Dermatoscopy and histopathological examination were done for all cases. Statistical analysis (IBM SPSS 28.0.1.0) was done with Chi-square test wherever relevant (statistically significant if p <0.05).

Results: Our study evaluated 18 stable and 16 unstable vitiligo cases, with the majority aged 21 to 40 years (56.25%) with a slight female preponderance (53.3%). Dermatoscopically, stable vitiligo displayed sharp borders, perifollicular, and perilesional hyperpigmentation. In contrast, unstable vitiligo showed ill-defined and trichrome borders, comet tails indicating micro-Koebner phenomenon, and tapioca sago patterns denoting satellite lesions. Histopathologically, unstable cases exhibited dense perivascular and periadnexal lymphocytic infiltration, epidermal spongiosis, and melanophages in the dermis. In contrast, stable lesions had mild lymphocytic infiltrates and epidermal hyperkeratosis. Statistically significant correlations were observed in stable vitiligo with the presence of a sharp border (17 cases, P <0.05), absent and reticular pigment network (10 and 7 cases, P <0.05), perilesional (14 cases, P <0.05), and perifollicular hyperpigmentation (14 cases, P <0.05). Unstable vitiligo correlated with ill-defined or trichrome borders (9 and 7 cases, P <0.05), comet tail patterns (10 cases, P <0.05), and tapioca sago patterns (10 cases, P <0.05). On the histopathological front, there was a significant association between stable vitiligo and the absence of functioning melanocytes (8 cases, P = 0.42) and epidermal thickening (16 cases, P = 0.14). Dense lymphocytic infiltration was significantly associated with unstable disease (8 cases, P <0.05). **Conclusion:** Dermatoscopic findings like tapioca sign, comet tail, and trichrome patterns and histopathological findings of dense perivascular and peri adnexal lymphocytic infiltration, spongiosis and melanophages can reliably differentiate unstable vitiligo from stable vitiligo. Thus both the tests can independently or in conjunction aid in the diagnosis and categorisation of vitiligo which is crucial for deciding treatment modality.

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Abstract N°: 7175

Navigating Hyperpigmentation in Ethnic Skin : Dermoscopy

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Introduction & Objectives:

As regards hyperpigmentary skin conditions, the individuals with skin of color constitute a distinctive demographic group among the world populations. The Asian skin in particular has heightened susceptibility to certain hyperpigmentary conditions Moreover, the common hyperpigmentary conditions present differently than those observed in lighter skin types. Notably, pathomechanisms in these individuals involve exaggerated follicular or sclerotic reactions and increased pigmentation against a darker background, posing challenges for accurate diagnosis by inexperienced observers. Thus, this study aims to comprehensively explore prevalent hyperpigmentary disorders among ethnic populations, focusing on their distinctive dermoscopic attributes, to enhance diagnostic precision and subsequently improve management strategies

Materials & Methods:

This analytical study was conducted among Indian patients of all age groups complaining of macular, patchy or papular hyperpigmentation on any part of the body. Dermoscopic examinations of hyperpigmentary lesions were conducted using the DL5 dermoscope, aiming to develop an algorithmic approach to pigmented lesions in ethnic skin based on dermoscopic presentations.

Results:

Various hyperpigmentary conditions commonly observed in skin of color were identified, including Post Inflammatory Inflammation, Acne Excorie, Post Acne Hyperpigmentation, Seborrheic Melanosis, Acquired Dermal Macular Hyperpigmentation, Hair Dye Dermatitis, Pigmented Contact Dermatitis, Acanthosis Nigricans, Exogenous Ochronosis, Transverse Nasal Groove, Periocular Pigmentation, Pigmented Demarcation Lines, Macular Amyloidosis, Idiopathic Eruptive Macular Pigmentation. Dermoscopic evaluation revealed characteristic features such as pigment dots, exaggerated pseudo network, follicular opening, and prominent vasculature, contributing to the development of a flowchart for diagnosing hyperpigmentary lesions in ethnic skin based on dermoscopic presentations.

Conclusion:

Dermoscopy emerges as a valuable corroborative tool in the diagnosis of hyperpigmentary skin lesions among individuals with skin of color, facilitating accurate diagnosis.

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Abstract N°: 7326

Clinical and Dermoscopic Assesment of Periorbital Hyperpigmentation

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Introduction & Objectives: Periorbital hyperpigmentation (POH) is a common condition encountered in dermatology practice. Periorbital hyperpigmentation is defined as bilateral, homogeneous hyperchromic macules and patches primarily involving the lower eyelids but also sometimes extending towards the upper eyelids, eyebrows, malar regions, temporal regions and lateral nasal root. The age of onset is usually after puberty or in early adulthood. POH is caused by multiple etiologic factors that include genetic/constitutional, dermal melanin deposition, post inflammatory hyperpigmentation, secondary to atopic or allergic contact dermatitis, anemia, stress, faulty habits, periorbital edema, superficial location of vasculature, and shadowing due to skin laxity, etc.

It can affect an individual's emotional well-being and influence quality of life. This was undertaken to study etiology and dermoscopic patterns of POH.

Materials & Methods: 50 patients aged between 18 and 60 years attending OPD with POH as presenting complaint were included after approval of Institutional Ethical Committee .

Detailed history was taken including duration of the condition, family history, history of atopy or drug intake, associated faulty habit or lifestyle, use of cosmetics, precipitating factor such as photosensitivity, allergies, seasonal variations, presence of associated pigmentation in other areas of the face and the body and presence of any concomitant illness such as anemia, gastrointestinal diseases, hepato-biliary diseases, renal diseases, thyroid diseases, etc. Clinical photographs of all patients were taken. Dermoscopy over both lower eyelids was performed using Dermlite DL4.

Results: The most common clinical type was post-inflammatory. On dermoscopy, 38% had epidermal pigmentation, 12% had dermal, and 50% had mixed type. Majority(50%) of the patients had multicomponent pattern which included more than one pattern of pigmentation and vasculature. The different patterns of pigmentation were blotches (28%), exaggerated pigment network (24%), coarse speckled (20%) and fine speckled (16%). Pattern of vasculature included telangiectases (26%). Reticular pattern was the only type of vascular pattern observed in all mixed pigmentation. Patterns of skin changes included exaggerated skin markings (16%).

Conclusion: POH has multifactorial etiology**.** The treatment of POH depends upon the etiology which is established through a dermoscope. Hence, it can be included as routine investigation for patients with POH as it is a non- invasive tool which carries both diagnostic and prognostic value for its management.

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Abstract N°: 7428

reticulate hyperpigmentation induced by chemotherapy in a child with neuroblastoma

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Introduction & Objectives:

Reticulate hyperpigmentation is a rare and heterogeneous group of dermatological conditions. So far, there have been few reports linking chemotherapeutic agents to the occurrence of reticulate hyperpigmentation. We report a case of chemotherapy-related reticulate hyperpigmentation in a child treated with chemotherapy.

Materials & Methods: Case report

Results:

A 13 year-old girl with a history of neuroblastoma was treated with chemotherapy including carboplatine,etoposide et doxorubicine.After four cycles ,she developped an asymptomatic reticulate eruption associated with linear streaks on her abdomen . There was no chronic heat exposure and no topical application preceding the development of the lesions. Dermoscopy analysis of the lesions showed a hyperpigmented reticulate network. Skin biopsy showed an atrophic epidermis surmounted by orthokeratosic keratosis, a faint increase of basal keratinocyte pigmentation , the dermis is fibrous and contains thickened bundles of collagen.No symptomatic treatment was introduced. The lesions faded spontaneously within 3 months after discontinuation of the chemotherapy.

Discussion:

Reticulate pigmentary disorders are uncommon heterogeneous group of pigmentary disorders with no clear consensus. Globally, they include inherited reticulate disorders with a freckle-like aspect and acquired disorders with a reticulate pattern of pigmentation. The pathogenesis of reticulate hyperpigmentation is still poorly understood . More recently, a few sporadic cases of drug induced reticulate hyperpigmentation have been reported with chemotherapy regi- men containing bleomycin, fluorouracil or a combination of idarubicin and cytarabine. In our case it was caused by a combination of carboplatine,etoposide et doxorubicine. Their clinical manifestations can vary from a progressive diffuse cutaneous hyperpigmentation to hyperpigmentation confined to the areas of skin trauma or reticulate hyperpigmented eruption associated with linear streaks. Dermoscopy revealed an hyperpigmented reticulate network with an increased melanin content in basal keratinocytes. Histopathological findings can also include a localized increase in melanogenesis with melanin incontinence, as well as the presence of melanophages in the papillary dermis. No symptomatic treatment was recommanded. The lesions disappear spontaneously and progressively after discontinuation of the chemotherapy.

Conclusion:

Reticulate hyperpigmentation is an underestimated but characteristic complication of chemotherapy, which does not require specific management, dose reduction or discontinu- ation of cancer therapy .

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Abstract N°: 7498

Vasoactive intestinal peptide is a novel negative regulator of human hair follicle pigmentation

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Introduction & Objectives:

The immunoinhibitory neuropeptide, vasoactive intestinal peptide (VIP), regulates human hair follicle (HF) immune privilege, while intrafollicular VIP receptor expression is defective in alopecia areata. In the current study, we have explored whether and how VIP also impacts on HF pigmentation.

Materials & Methods:

Microdissected anagen VI scalp HFs were collected from healthy female donors and cultured for 6 days in a serum-free medium in presence or absence of VIP (100nM, 1uM). After 6 days of organ culture, the samples were frozen in liquid nitrogen. 6µm of tissue cryosections were performed and processed for quantitative (immuno)-histomorphometry analyses.

Results:

Quantitative (immuno-)histomorphometry revealed that 100 nM VIP significantly reduced melanin production (Warthin-Starry histochemistry) and tyrosinase activity in situ, i.e., the rate-limiting enzyme of melanogenesis, in the HF pigmentary unit (HFPU) of anagen VI HFs. Instead, the intrafollicular protein expression levels of other in melanogenesis-regulatory enzymes, such as tyrosinase hydroxylase and dopachrome tautomerase, remained largely unaffected. The VIP-induced inhibition of melanogenesis in the HFPU did not reflect a decline in the number of HF melanocytes (MITF/gp100 and gp100/TUNEL double-immunostaining showed no significant difference between VIP- and vehicle-treated control HFs). Since MITF protein expression was unchanged, MITF reduction may not be the key mechanism for melanogenesis inhibition by VIP. Additionally, it was surprising that the application of VIP did not result in an upregulation of VPAC2 protein expression.

Conclusion:

Our pilot study introduces VIP as a novel, physiologically relevant, negative neuroendocrine/ neuroimmunological regulator of human HF pigmentation that has been missed by mainstream pigment cell research and deserves full exploration, e.g. in the context of hair graying.

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Abstract N°: 7549

Vitiligo and lichenoid reaction following antiretroviral therapy: A case report.

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Introduction & Objectives:

Infection with the human immunodeficiency virus is a public health concern. Antiretroviral therapy prevents HIV-related illnesses and disabilities and saves lives. Globally, the number of AIDS-related deaths has declined by 43% since 2003. However, this treatment is not without side effects.

Several case reports have described vitiligo associated with retroviral infection, with only one published observation in 2012 reporting vitiligo in a 30-year-old man who was HIV positive, appearing seven weeks after starting antiretroviral treatment.

The induction of autoimmune diseases by antiretrovirals has been described, especially with sarcoidosis, Still disease, Graves-basedow disease, and autoimmune hepatitis.

In our patient, the diagnosis of non-segmental vitiligo is based on classical clinical and histopathological features.

Antiretroviral treatment can rarely be responsible for photosensitive lichenoid reactions. This presents a diagnostic challenge, particularly in differentiating from actinic lichen planus due to its localization in sun-exposed areas.

The patient is undergoing photoprotection and is prescribed tacrolimus for the face and potent topical corticosteroids for the lesions on the hands and neck.

Materials & Methods:

We report a case of vitiligo associated with a photosensitive lichenoid reaction following antiretroviral therapy.

Results:

A 70 years old patient with no particular medical history, followed for retroviral infection for 2 months, who presented with dyschromia characterized by poorly defined hypochromic and hyperchromic patches on the face, neck, and hands, which were pruritic but non-painful and developed 1.5 months after starting antiretroviral treatment.

On dermoscopy of the hand: depigmentation, scales, perifollicular halo. On facial dermoscopy: erythema, telangiectasia, achromia, pseudo-pigmented network, peppered appearance in some areas. Pearly white contrast enhancement observed under Wood's light.

Viral load: 10,000,000 copies/mL, CD4 T cell count: 314 cells/µl at the time of diagnosis.

Two skin biopsies were realized, one from the pigmented lesion and the other from the hypochromic lesion.

Histological examination of the pigmented lesion revealed a slightly atrophic epidermis covered by orthokeratotic keratin, with rare vacuolated keratinocytes. The superficial dermis showed melanophages arranged around blood vessels, along with rare lymphocytes and significant elastolytic degeneration suggestive of a drug-induced photosensitive lichenoid reaction.

Histology of the hypochromic lesion confirmed the diagnosis of vitiligo.

The patient was treated by photoprotection, Tacrolimus for the face, and potent topical corticosteroid for the lesions on the hands and neck.

Conclusion:

To our knowledge, this is the first reported case combining vitiligo and a photosensitive lichenoid reaction following antiretroviral therapy.

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Abstract N°: 7576

Hypopigmented diffuses plaques : what's your diagnosis ?

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Introduction & Objectives:

Hypopigmented diffuse plaques can be due to several etiologies such as hypochromic vitiligo, hypopigmented mycosis fungoides, pityriasis alba, leprosy…

Materials & Methods:

We report the case of a patient presenting diffuses hypopigmented plaques .

Results:

20-year-old female patient with no previous medical history has been experiencing pruritic hypochromic and achromic lesions for the past 3 years. The lesions began on the neck and have spread to the rest of the body, with no other associated signs.

The clinical examination revealed a patient in good general condition. Skin examination identified diffuse pruritic hypochromic macules and patches that were non-scaly, non-atrophic, and without sensory disturbances. Achromic macules were also observed on the palms and soles. Dermoscopy revealed a whitish background without leukotrichia.The Wood's light examination showed no particularities.

The histology was suggestive of hypopigmented parapsoriasis en plaque, with immunohistochemistry showing positive staining for anti-CD3 antibodies, negative staining for anti-CD4 antibodies, and positive staining for anti-CD8 antibodies.

The patient was treated with UVB phototherapy, twice a week, along with a preparation containing very potent topical corticosteroids. There was a significant clinical improvement, and the hypopigmented lesions completely resolved.

Conclusion:

Hypopigmented parapsoriasis en plaque can progress to mycosis fungoides. Awareness of this possibility is essential, especially when evaluating patients with idiopathic hypopigmented macular lesions. It is important to keep in mind that these patients require biopsy and follow-up to assess any potential progression to mycosis fungoides.

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Abstract N°: 7659

Prevalence of thyroid disease in patients with vitiligo in a Latin American hospital.

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Introduction & Objectives: Vitiligo is an acquired chronic depigmentation disorder of the skin that results from the destruction selective of melanocytes, this destruction is measured by autoimmune, cytotoxic, neuronal and oxidant-antioxidant mechanisms. Thyroid disease has been associated with vitiligo. However, the results of prevalence studies vary widely. The objective of this research is to measure the prevalence of thyroid diseases in patients with vitiligo in a hospital in Latin America.

Materials & Methods: Observational, cross-sectional, single-center study, carried out over a period of 5 years (2017-2022), included patients with a clinical diagnosis of vitiligo who had antithyroid antibodies determined and a thyroid profile. The type of sampling was simple random. Non-parametric statistics were used to describe the variables, to compare the means (Mann-Whitney U) and to evaluate independent variables with the presence of antithyroid antibodies using logistic regression. Microsoft Excel 365 and STATA statistical software version 16 were used.

Results: 147 patients were studied, 55% (n=85) were men, the median age was 52 years, 23.8% (n= 35) corresponded to a population under 18 years of age. The determination of antibodies requested in this total population studied was: at least 1 antibody 9.5% (n=14), 2 antibodies 23% (n=34), 3 antibodies 7.5% (n=11), no antibodies requested 60% (n=88). No thyroid function tests or antibodies were determined in 20 patients. Thyroid function tests were completed in 86.4% (n=127), of which 11 patients have 3 antibodies, 34 patients have 2 antibodies, 14 patients have 1 antibody and 68 patients do not have antibodies. 70% of the population has normal studies, 14% has subclinical hypothyroidism, 7% has Hashimoto's thyroiditis, 5% has subclinical hyperthyroidism, 3% has Graves' disease and 1% has primary hypothyroidism.

Conclusion: The association of vitiligo with thyroid disease and/or positivity for antithyroid antibodies was more common in women; however, a significant association could not be demonstrated; however, we consider that the search for thyroid disease should be more strict in this population.

EADV CONGRESS
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Abstract N°: 7755

Secreted phosphoprotein 1-CD44 axis downregulation promotes melanocyte senescence through ROS generation

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Introduction & Objectives:

Melanocyte senescence is a key factor in the aging process of skin, particularly in middle-aged and older individuals, primarily affecting sun-exposed areas. Previous studies have highlighted the involvement of various pathways in this process, but the role of secreted phosphoprotein 1 (SPP1) in melanocyte senescence remains unclear. Given the known interactions between SPP1 and the CD44 receptor in other cell types, we aimed to investigate the significance of the SPP1-CD44 axis in melanocyte aging and explore potential anti-aging interventions.

Materials & Methods:

We analyzed the gene expression and protein levels of SPP1 in UVB-induced senescent melanocytes. To assess the functional role of SPP1, we conducted knockdown experiments using short-hairpin SPP1 (shSPP1) infected lentivirus in normal human melanocytes. We then measured senescence markers and reactive oxygen species (ROS) levels. Furthermore, we examined the expression of CD44 during the senescence process and tested the effects of SPP1 synthetic peptide, SPP1 overexpression, and glutathione (GSH) treatment on melanocyte senescence.

Results:

Our study revealed a significant reduction in SPP1 levels in UVB-induced senescent melanocytes compared to controls. The knockdown of SPP1 in normal melanocytes induced senescence phenotypes, characterized by increased expression of senescence markers and elevated ROS production. The effects of SPP1 were found to be dependent on the presence of an intact CD44 receptor. However, CD44 expression was downregulated during melanocyte senescence, which rendered both SPP1 synthetic peptide and SPP1 overexpression ineffective in delaying the senescence process. Conversely, treatment with GSH, a substrate of glutathione peroxidase 1 (GPX1) and a downstream product of SPP1-CD44 signaling, successfully suppressed the senescence of melanocytes.

Conclusion:

The findings of this study suggest that the SPP1-CD44 axis is a critical regulator of melanocyte senescence. The downregulation of this axis during senescence impairs the protective effects of SPP1, leading to increased oxidative stress and cellular aging. Importantly, agents that activate SPP1 signaling, such as GSH, may offer potential as therapeutic strategies to delay skin aging and combat melanocyte senescence.

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Abstract N°: 8074

Randomized controlled investigator-blinded comparative study of the efficacy and tolerability of a new 2-MNG containing serum versus Cysteamine 5% in the treatment of melasma

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Introduction & Objectives:

Melasma is a common acquired disorder of hyperpigmentation characterized by irregular light to dark brown patches on the forehead, nose, cheeks, upper lip, and chin areas of the face. Its pathogenesis is complex, involving the epidermal but also dermal component. There are some known triggering factors such as sun exposure and hormonal changes. There is also a clear genetic predisposition, since over 40% of patients reported having relatives affected with the disease. The prevalence is more common in skin of colour population. With an increase in mixed colour or skin of colour population, melasma is a global concern. Initial treatment typically involves topical solutions. Standard treatments remain topical preparations including hydroquinone which are usually not prescribed for long term for safety reasons, with a risk of relapse once the treatment is discontinued. This study aimed to evaluate and compare the efficacy and safety of a new 2-MNG containing dermocosmetic serum versus Cysteamine 5% cream for treating melasma.

Materials & Methods:

Participants with melasma, ranging from mild to severe based on Investigator Global Assessment (IGA), were enrolled for a 4-month treatment period. Following a 2-4 weekswash-out period, baseline assessments, including digital imaging, dermatological examination, and spectrophotometer readings, were performed. Subjects were then randomized into either the 2-MNG-containing serum tested product (TP) or Cysteamine-containing marketed product (MP) group, ensuring balanced severity. Both groups received the same high SPF/UVA sunscreen to be applied twice a day. Primary endpoint was mMASI score improvement at 4 months. Secondary endpoints included mMASI at each visit, IGA scoring, Investigator Global Assessment of Improvement (IGAI), Subject Global Assessment of Improvement (SGAI), and additional skin quality parameters.

Results:

127 subjects were included in the ITT/LOCF analysed population. At baseline mMASI score was 11.15 and 10.93 for TP and MP groups respectively. At 4 months, mMASI score decreased significantly with both TP and MP (-4.19 vs -3.81 respectively), with no statistical differences between groups. IGA also decreased significantly over time with a significantly higher reduction with TP compared to MP (-51.85% vs -39.06%; $p=0.0163$), and significantly more subjects clear/almost clear with TP vs MP (17.46% vs 7.81% respectively; $p=0.0163$). Similar results were observed in the IGAI and SGAI scores. Significant difference at month 2 and/or month 4, in favor of TP was seen in evenness of skin tone and skin brightness respectively ($p<0.05$). Significant improvements in ITA were observed over time without reaching a plateau. No side effects or skin irritations were observed.

Conclusion:

After 4 months of treatment, both products significantly improved melasma,with no statistical difference on mMASI score. The TP demonstrated statistically superior improvement of IGA, skin brightness, evenness compared

to the MP, as reported by both the investigator and the subjects. Additionally, the TP was well tolerated, with no adverse events reported.

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Abstract N°: 8077

Impact of treatment duration on response durability: A post hoc analysis of the TRuE-V long-term extension study of ruxolitinib cream in vitiligo

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Introduction & Objectives:

Vitiligo is a chronic autoimmune disease that targets melanocytes, causing skin depigmentation. Ruxolitinib (RUX), a Janus kinase (JAK) 1/JAK2 inhibitor, cream demonstrated statistically superior repigmentation vs vehicle (VEH) at Wk 24 in the TRuE-V1/TRuE-V2 phase 3 studies, with continued improvement in outcomes through Wk 52. This post hoc analysis of the rollover TRuE-V long-term extension (LTE) study assessed the impact of RUX cream treatment duration on the durability of near complete facial repigmentation (ie, ≥90% improvement in facial Vitiligo Area Scoring Index [F-VASI90]) after randomized treatment withdrawal.

Materials & Methods:

TRuE-V1/TRuE-V2 (NCT04052425/NCT04057573) enrolled 674 patients (pts) ≥12 y old with nonsegmental vitiligo and depigmentation covering ≤10% total body surface area. Pts were randomized 2:1 to twice daily 1.5% RUX cream or VEH for 24 wks; pts could then apply open label RUX cream through Wk 52. TRuE-V LTE (NCT04530344) was a rollover randomized withdrawal and treatment extension study enrolling pts who completed TRuE-V1/TRuE-V2. Pts who attained F-VASI90 in TRuE-V1/TRuE-V2 were randomized 1:1 to twice daily VEH (withdrawal arm) or RUX cream (continuation arm). For this analysis, pts in the withdrawal arm were stratified into 3 groups based on their duration of RUX cream application when they achieved F-VASI90 response in TRuE-V1/TRuE-V2: VEH/RUX (after Wk 24), ≤24RUX/RUX (before/at Wk 24), and >24RUX/RUX (after Wk 24). F-VASI90 response durability was assessed as time to loss of near complete facial repigmentation (ie, <F-VASI90).

Results:

A total of 57 pts were included (VEH/RUX, n=12; ≤24RUX/RUX, n=25; >24RUX/RUX, n=20). Following RUX cream withdrawal, median (range) F-VASI90 response was more durable in pts with longer vs shorter treatment duration (≤24RUX/RUX, 365 [120–not estimable (NE)] d vs VEH/RUX, 91 [58–NE] d; HR [95% CI], 0.45 [0.17, 1.18]) and for earlier vs later F-VASI90 response attainment (≤24RUX/RUX, 365 [120–NE] d vs >24RUX/RUX [136 (85–NE) d]; HR [95% CI], 0.61 [0.27, 1.37]). F-VASI90 response was maintained for ≥180 d in significantly more pts with longer vs shorter treatment duration (≤24RUX/RUX, 60.0% [15/25] vs VEH/RUX, 18.2% [2/11]; P<0.05) and numerically more pts with earlier vs later F-VASI90 response (≤24RUX/RUX 60.0% [15/25] vs >24RUX/RUX [35.0% (7/20)]). Treatment-emergent adverse events (TEAEs) were reported in 58.3% (7/12) of the VEH/RUX group and 60.0% (27/45) of the RUX/RUX groups; application site reactions occurred in 25.0% and 22.2%, respectively. Treatment-related TEAEs were reported in 8.3% (1/12; skin papilloma) and 24.4% (11/45; mainly application site reactions, n>1: acne [n=4]; erythema, exfoliation, and pruritis [each n=2]); none were serious or lead to treatment discontinuation.

Conclusion:

Application of RUX cream for a longer duration (ie, 52 vs 28 wks) was associated with more durable near-complete facial repigmentation after treatment withdrawal, per F-VASI90 response maintenance. Repigmentation durability was ≥6 mo for over 3 times as many pts who applied RUX cream for 52 vs 28 wks. There was also a trend towards more durable response among pts who applied RUX cream for 52 wks and achieved F-VASI90 response earlier vs later (ie, before/at vs after Wk 24). Results suggest that continued application of RUX cream beyond achieving complete/near complete facial repigmentation may be beneficial for prolonged maintenance of effect.